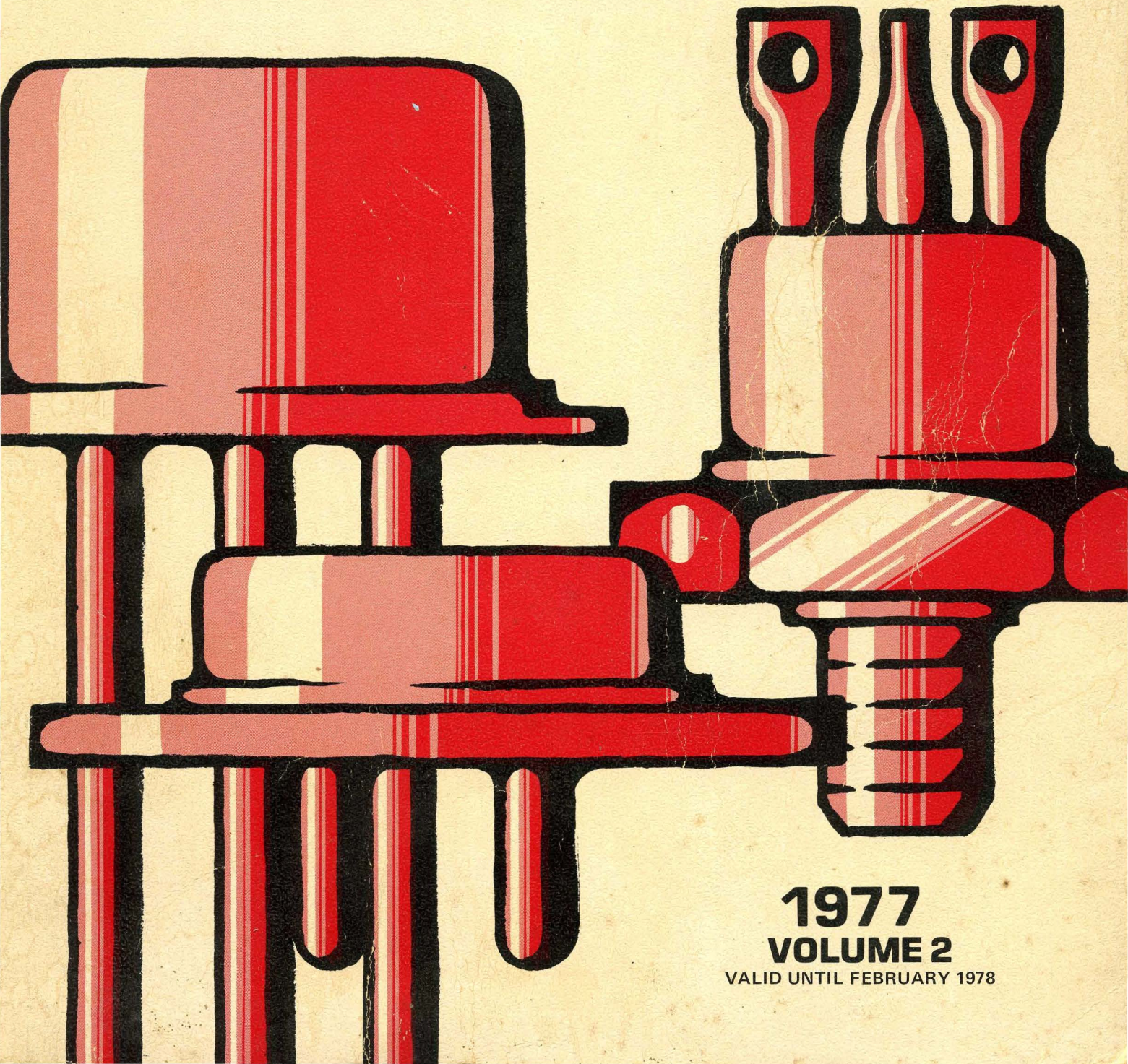




D.A.T.A. BOOK® ELECTRONICS INFORMATION SERIES

TRANSISTORS



1977
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EDITORIAL POLICY AND PROCEDURES

Purpose	<p>This D.A.T.A.BOOK is designed to report comprehensively on what is presently being produced throughout the world in the field of Transistor devices. While a book such as this can not provide 100% of the information you might need, its primary aims are those of facilitating the selection of types suitable to your technical requirements, and of directing you to the sources of their manufacture.</p>
Technical Data Acquisition	<p>D.A.T.A. acquires and processes the information presented in this D.A.T.A.BOOK with the cooperation of the participating manufacturers who supply us with their latest technical information. Manufacturers are not charged for the listing of their products.</p>
JEDEC Outlines	<p>The electrical, mechanical and environmental characteristics tabulated for the standard 2N and 3N type numbers are derived directly from the JEDEC registration releases. The particular manufacturer or manufacturers for whom such types are registered are so indicated by the use of a symbol next to their manufacturer codes in the Type No. Cross-Index. In general, the JEDEC-designated types produced by the various manufacturers, whether registered or not, do conform with the registered specifications; however, there may be exceptions, and it is recommended that the individual manufacturers be consulted.</p>
Military Type Numbers	<p>The electrical, mechanical and environmental information tabulated for the military types in the technical sections is derived directly from the applicable military specifications and standards. The source information, showing the particular manufacturers qualified for each type, is derived from the QPL (Qualified Parts List) associated with the governing specification, or from the manufacturers Qualification Test Letters.</p>
Substitute Types And Compatibility	<p>This D.A.T.A.BOOK can not truly claim to be an interchangeability chart; however, because of the sequencing arrangement of selected characteristics in the technical sections, types with the same or similar characteristics are grouped together. For purposes of replacement, this means of thorough, convenient technical comparison should prove superior to, and safer than, a mere listing of possible substitute type numbers.</p>
Price And Availability	<p>Because of the rapidly-changing and complex nature of this field, current price and delivery information should be obtained direct from the manufacturers. The list of manufacturers and the Local Offices Section in back of the book will assist you in this.</p>
Manufacturers' Specifications	<p>This book includes currently-manufactured devices with their major characteristics, drawings and manufacturers. Every effort is made to ensure the accuracy of the entries herein; however, the publisher can not be held responsible nor guarantee against the possibility of error or omission. Only the manufacturers or their authorized representatives can provide you with complete technical details and current prices.</p>

USE OF POWERS-OF-TEN MULTIPLIERS AND SYMBOLS & CODES IN THE TECHNICAL SECTIONS

To present a maximum amount of information in a minimum amount of space, use is made in this book of the following data modifiers:

POWERS-OF-TEN MULTIPLIERS

The powers-of-ten multipliers shown below are used in numeric columns when the value being entered is many times greater or smaller than the units of measure indicated in the column heading. Usually, the latter are the so-called 'basic' units; such as V (volts), A (amperes) and s (seconds). The multipliers and an explanation of their use are given below:

MULTIPLIERS						EXPLANATION		
PREFIXES & SYMBOLS			Recommended by International Committee on Weights and Measures			Value of Data To Be Entered	Basic Unit In Column Heading	Actual Entry
Indicating Powers of Ten			Adopted by National Bureau of Standards					
Power	Prefix	Symbol	Power	Prefix	Symbol			
10 ¹²	tera	T	10	deka	da	10 ⁻⁹	nano	n
10 ⁹	giga	G	10 ⁻¹	deci	d	10 ⁻¹²	pico	p
10 ⁶	mega	M	10 ⁻²	centi	c	10 ⁻¹⁵	femto	f
10 ³	kilo	k	10 ⁻³	milli	m	10 ⁻¹⁸	atto	a
10 ²	hecto	h	10 ⁻⁶	micro	μ			
						3 milliamperes	A (amperes)	3.0m
						9 megaohms	Ω (ohms)	9.0M
						0.5 volt	V (volts)	500m *
						10 amperes	A (amperes)	10
						* May also be written as 0.5, with no multiplier		

SYMBOLS & CODES

Symbols — Symbols such as #, Δ, and \$ are used in all columns, numeric or otherwise, whenever the data entries differ in some way from the entity defined in the column heading. For instance, if a given heading specifies Max. Power (in Watts) and the numeric value being entered for a given type represents the minimum power instead, the variance is denoted by the appearance of a special symbol alongside the numeric entry.

NOTE: The symbols and codes used herein are explained on the cards in back of the book.

Codes — Codes are used in some columns as means to abbreviate the data being entered. The codes may be alphabetic (A,B,C, etc.) numeric (1,2,3, etc.) or some combination of both.

HOW TYPE NUMBERS ARE SEQUENCED IN THE TYPE NO. CROSS INDEX

Sequencing of type numbers in the Type Number Cross-Index is governed by the following rules:

	EXAMPLES
Rules: 1) Type numbers are listed in numeric-alphabetic sequence; i.e., type numbers beginning with a number (decimal, fraction, or whole) precede type numbers beginning with a letter.	13A01 143 1202 A147 AN127 B2000
2) Decimals and fractions precede whole numbers. An equivalent decimal precedes the fraction when the remainder of type number is identical.	25Z150 1/4Z150 3/4M12Z 1T3
3) Zeros are ignored in sequencing except when the zero is the only basis for distinguishing one type number from another. In this case the type number containing the zero is listed first.	0112 112 0113 00115 AP01 AP1 AP02
4) Number and/or letter groupings preceding hyphens or slashes are the controlling factors in sequencing. The hyphens and slashes themselves precede any identically positioned letters also having the same beginning number/letter groupings.	66-0706 66M1 70/10 70A9
5) Military prefix (JAN) is ignored in the numeric-alphabetic sequencing of type numbers. A military type number directly follows its equivalent JEDEC type number.	2N645 JAN2N645

1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line
2AC128	PHIN 339-52	2N34A	NJS	2N61	ETC	2N107	CSR	2N130A	CSR	108-55	CSR
2AC128-01	BELI 339-53	(cont.)	STI	(cont.)	NJS	(cont.)	NJS		STI	107-38	ETC
2AC132	PHIN 339-54	2N35	SPE	IDI	SPE	ETC	SPE	2N131	CSR		STI
2AC188	BELI 339-55		DI	SEI	CEN	SEI	UPI	IDI	CSR		UPI
2AC188-01	PHIC 339-56	DIT	UPI	STI	CSR	SEI	SST	SPE	UPI		ETC
2ACY17	BELI 339-57	IDC	UPI	CRI	CSR	CSR	UPI	DI	CSR	108-56	STI
2ACY18	PHIN 339-58	SEI	UPI	IDI	CSR	CSR	CSR	DI	CSR		UPI
2ACY19	NTLB 339-59	SST	UPI	SEI	CSR	CSR	CSR	CSR	CSR		UPI
2AD139	NTLB 339-60	STI	UPI	STI	CSR	CSR	CSR	CSR	CSR		UPI
2AD149	PHIN 339-61	CSR	UPI	STI	CSR	CSR	CSR	CSR	CSR		UPI
2AD162	PHIN 339-62	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BD124	PHIN 339-63	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BD131	MULB 339-64	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BD181	RTCF 339-65	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BD182	RTCF 339-66	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BD183	RTCF 339-67	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BDY20	PHIN 339-68	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2BDY38	PHIN 339-69	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2CY30	CSI 126-26	2N43	CSR	2N63	CSR	2N111	CSR	2N132	CSR	107-40	CEN
2CY33	CSI 126-28		CSR	CSR	CSR	CSR	CSR	IDI	CSR		ETC
2G101	STI 108-45	DIT	UPI	CSR	CSR	2N109	CRI	SPE	CSR		UPI
2G102	STI 108-47	GTC	UPI	CSR	CSR	CSR	DIT	CSR	CSR		UPI
2G103	STI 112-62	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G104	STI 112-63	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G106	STI 112-63	STI	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G108	STI 109-82	2N43A	CSR	2N65	CSR	2N112	CSR	2N133	CSR	107-39	CEN
2G109	STI 109-83		CSR	CSR	CSR	CSR	CSR	IDI	CSR		ETC
2G110	STI 117-5	ETC	UPI	CSR	CSR	CSR	CSR	SPE	CSR		UPI
2G138	STI 114-105	IDC	UPI	CSR	CSR	CSR	CSR	SPE	CSR		UPI
2G139	STI 114-107	NJS	UPI	CSR	CSR	CSR	CSR	SPE	CSR		UPI
2G140	STI 115-5	SPE	UPI	CSR	CSR	CSR	CSR	SPE	CSR		UPI
2G141	STI 115-6	STR	UPI	CSR	CSR	CSR	CSR	UPI	CSR		UPI
2G210	STI 210-57	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G303	STI 114-69	GTC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G304	STI 115-7	IDC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G306	STI 115-9	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G322	STI 110-108	SSE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G339A	STI 119-58	STR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G345	STI 111-42	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G377	STI 111-43	GTC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G381	STI 115-104	IDC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G382	STI 115-105	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G383	STI 115-106	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G384	STI 115-107	STR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G385	STI 115-108	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G386	STI 115-109	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G387	STI 115-110	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G396	STI 111-71	ETC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G401	STI 115-13	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G402	STI 115-14	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G403	STI 115-15	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G404	STI 115-12	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G413	STI 108-29	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G414	STI 108-32	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G415	STI 108-33	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G416	STI 108-34	CRI	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G417	STI 108-28	DIT	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G508	STI 111-39	IDI	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G509	STI 111-40	SEI	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G524	STI 115-37	STI	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G525	STI 325-6	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G526	STI 323-108	ETC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G527	STI 115-44	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G603	STI 323-20	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G605	STI 115-54	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G1024	STI 111-84	ETC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G1025	STI 115-38	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G1026	STI 325-7	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2G1027	STI 323-109	ETC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2H1254	CSI 115-45	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2H1255	CSI 115-49	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2H1256	CSI 323-80	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2H1257	CSI 323-6	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2H1258	CSI 126-72	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2H1259	CSI 292-95	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2L08	CTR 126-77	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2L15	CTR 350-32	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2L25	CTR 350-33	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2MA509	IMTM 138-45	NJS	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2MC509	IMTM 177-70	SPE	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2N2X	TIIF 339-70	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2N34	AMR 104-71	CSR	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
2N34A	CSR 104-82	ETC	UPI	CSR	CSR	CSR	CSR	CSR	CSR		UPI
	SEI			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	STI			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	CSR			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	ETC			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	CSR			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	ETC			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	CSR			CSR	CSR	CSR	CSR	CSR	CSR		UPI
	ETC			CSR	CSR	CSR	CSR	CSR	CSR		UPI

1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
2N296 (cont.)	DC NJS SPE STI UPI CEN		2N316 (cont.)	SPE UPI CEN		2N328B (cont.)	SPE SST STR		2N335A (cont.)	NJS SLD SSI STI TADI		2N342	CRJ ETC SES SSI	187-9
2N297	CSR GPD LTE SES SST	204-77	2N316A	CSR GTC NJS STI	109-91 319-95	2N329	SPE	130-33	JAN2N335A	TEC TEC CSR	171-96 171-108	JAN2N342	TEC ETC SES SSI	187-15 187-10
2N297A	CSR GPD IDC LTE SPE SST	204-78	2N317	CSR GDC IDI SPE	319-21 108-18	2N329A	CEC CRI DIT ETC IDI NJS SDE SPE SST STR TCY	133-78	2N335B	ESE NJS SPE STI TADI		JAN2N342A	NJS SPE STI STR TEC ETC SSI	187-16 181-70
JAN2N297A	CEN CSR GPD IDC LTE SPE SST	205-34	2N317A	CSR GTC NJS SPE STI	109-92 318-85	2N330A	CSR SCA SLD SPE SST STR	133-107	2N336	CEC CSI ESE IDI SCA SES SPE SST STR TADI	145-14	JAN2N343	CSR NJS SPE STR TEC CEC ETC SES SSI STR UPI	187-17 187-12
2N299	STI	104-21	2N319	CEN ETC LTE SPE STI	115-39	2N330A	CSR SCA SLD SPE SST STR	134-47	JAN2N336	AMR CSR ESE IDI NJS SCA SLD SPE SST STR TADI	144-106	2N343B	ETC SES STR	181-71
2N301	CSR ETC GTC LTE NJS SLD SST STR	207-6	2N320	CEN ETC LTE SPE STI	115-46	2N331	CRI ETC IDC LTE NJS SPE STR	117-3	2N336A	CSR ESE NJS SLD SPE SST STR TADI	171-109	2N343B	ETC SES STR	104-16
2N301A	CEN CSR GPD IDI MOTA SPE SST UPI	207-7	2N321	CEN ETC LTE SPE STI	115-50	2N330A	CSR SCA SLD SPE SST STR	133-79	JAN2N336A	AMR CSR ESE IDI NJS SCA SLD SPE SST STR TADI	171-97 144-17 298-78	2N345	NJS SPE SST STR TEC CEC ETC SES SSI STR UPI	104-17
2N302	CSR NJS	111-63	2N322	CEN CSR IDI NJS SPE	114-6	2N331	CRI ETC IDC LTE NJS SPE STR	117-3	2N337	CSR ESE NJS SLD SPE SST STR TADI	313-19 144-16 172-2	2N346	CSR SCA SPE	104-20
2N303	ETC SPE	112-3	2N323	CEN CSR IDI NJS SPE	114-42	JAN2N331	none	113-87	JAN2N337	AMR CSR ESE IDI NJS SCA SLD SPE SST STR TADI	144-17 298-78	2N350	CSR ETC LTE SEI SPE	207-8
2N306	ETC SEI	118-8	2N324	CEN CSR IDI NJS SPE	114-55	2N332	CSR SCA SLD SPE SST STR	171-104	2N337A	CSR ESE NJS SLD SPE SST STR TADI	313-19 144-16 172-2	2N350A	CSR GPD IDI NJS SPE SST STR UPI	207-90
2N307	CSR GPD IDI NJS SPE SST STR	203-1	2N326	GPD SPE	212-16	2N332A	ETC SES SPE SST STR	171-104	2N338	CEC ESE GTC NJS SCA SLD SPE SST STR TADI	144-23 300-77	2N351	CSR GPD IDI NJS SPE SST	207-9
2N307A	CEN CSR GPD IDI NJS SPE SST UPI	205-35	JAN2N326	none	212-14	2N333	CEC CSR ESE IDI SCA SLD SPE SST STR	145-7	JAN2N338	CSR ESE NJS SLD SPE SST STR TADI	313-21 144-18 172-12	2N351A	CSR GPD IDI NJS SPE SST STR UPI	207-91
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2N310	ETC SPE	104-36	2N327B	CEN ESE NASB	134-37	2N333A	CSR ESE NJS SLD SPE SST STR	171-95	2N339A	CSR ESE NJS SLD SPE SST STR TADI	153-48	2N357	CSR GTC NJS SPE SST STR UPI	322-97 118-92
2N311	CRI ETC SPE	106-13	2N328	SPE	130-32	2N334	CRI ESE NJS SLD SPE SST STR	145-18	2N340	CSR ESE NJS SLD SPE SST STR TADI	187-7	2N357A	CSR GTC NJS SPE SST STR UPI	119-20 320-52
2N312	CRI CSR NJS SPE SST	118-58	2N328A	CEC CSI DIT ESE IDI NJS SDE SPE SST STR	133-77	2N334A	ETC SES SPE SST STR	171-106	2N340A	CSR ESE NJS SLD SPE SST STR TADI	153-49	2N358	CEN CSR GTC NJS SPE SST STR UPI	320-108 118-95
2N315	CRI ETC NJS SST	107-110 323-90	2N328A	CSR GDC IDI SPE		2N335	CRI CSR ESE IDI SCA SLD SPE SST STR	145-11	2N341	CSR ESE NJS SLD SPE SST STR TADI	187-8	2N358A	CRI CSR GTC NJS SPE SST STR UPI	119-21 320-53
2N315A	CSR GTC NJS SLD SST TII	322-49 109-89	JAN2N328A	RTN TCY	133-106	JAN2N335A	ESE	171-107	JAN2N341	CSR ESE NJS SLD SPE SST STR TADI	181-78 153-50	JAN2N358A	CSR GTC NJS SPE SST STR UPI	320-54 119-22
2N315B	SPE	109-90	2N328B	CEN ESE NASB SCA SPE SST	134-40	2N335A	ESE		2N341A	CSR ESE NJS SLD SPE SST STR TADI				
2N316	CRI ETC IDI NJS	108-14												

1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
2N442 (cont.)	CSR DIT LTE NJS SEI SLD SST UTS	207-12	2N457B (cont.)	GPD IDC LTE SEI SLD SST	210-62 328-70 329-54 207-2	2N472	TEC CSR DIT NJS SEI SST	148-41	2N484	CEN NJS STI UPI CEN CSR	111-93	2N492A (cont.)	CSR SCA SLD SSI UPI	344-86
2N443	CRI DIT IDC NJS SEI SLD SST UTS	207-13 328-37	JAN2N457B	CSR DIT IDC NJS SEI SLD SST	210-62 328-70 329-54 207-2	2N472A	TEC CRI DIT NJS SEI SST	148-42	2N485	CRI DIT NJS STI	111-69	JAN2N492A	CSR SCA SLD SSI UPI	344-86
2N444	CRI DIT IDC NJS SEI SLD SST UTS	118-75	2N458	CSR DIT IDC NJS SEI SLD SST	210-63	2N473	TEC CRI DIT NJS SEI SST	148-43	2N486	CRI DIT NJS STI	111-105	2N492B	CSR SCA SLD SSI UPI	344-87
2N444A	CRI DIT IDC NJS SEI SLD SST	119-31	2N458A	CSR DIT IDC NJS SEI SLD SST	210-63	2N474	TEC CRI DIT NJS SEI SST	148-44	2N487	CSR DIT NJS	108-12	2N492C	CSR SCA SLD SSI UPI	344-88
2N445	CSR DIT IDC NJS SEI SLD SST	118-77	2N458B	CSR DIT IDC NJS SEI SLD SST	210-63	2N474A	TEC CSR DIT NJS SEI SST	148-45	2N489	AMR CRI ESE SLD SST	344-71	2N493	AMR CRI ESE SLD SST	344-89
2N445A	CRI DIT IDC NJS SEI SLD SST	119-39	JAN2N458B	CSR DIT IDC NJS SEI SLD SST	210-64 328-71 329-42 206-55	2N475	TEC CSR DIT NJS SEI SST	148-46	2N489A	CEC CRI ESE SLD SST	344-72	2N493A	CSR SCA SLD SSI UPI	344-90
2N446	CSR DIT IDC NJS SEI SLD SST	118-90	2N459	CRI DIT IDC NJS SEI SLD SST	210-64 328-71 329-42 206-55	2N475A	TEC CRI DIT NJS SEI SST	148-47	2N490	AMR CRI ESE SLD SST	344-73	JAN2N493A	CSR SCA SLD SSI UPI	344-91
2N446A	CRI DIT IDC NJS SEI SLD SST	119-62	2N459A	CSR DIT IDC NJS SEI SLD SST	210-64 328-71 329-42 206-55	2N476	TEC CRI DIT NJS SEI SST	148-53	2N490A	CEC CRI ESE SLD SST	344-74	2N493B	CSR SCA SLD SSI UPI	344-92
2N447	CSR DIT IDC NJS SEI SLD SST	118-96	2N460	CSR DIT IDC NJS SEI SLD SST	114-29	2N476A	TEC CSR DIT NJS SEI SST	148-55	2N490B	CEN CSR ESE SLD SST	344-75	2N494	CSR SCA SLD SSI UPI	344-93
2N447A	CRI DIT IDC NJS SEI SLD SST	119-86	2N461	CSR DIT IDC NJS SEI SLD SST	114-30	2N477	TEC CSI DIT NJS SEI SST	148-54	2N490C	AMR CRI ESE SLD SST	344-76	2N494A	CSR SCA SLD SSI UPI	344-94
2N447B	NJS	313-71	2N461	CSR DIT IDC NJS SEI SLD SST	114-30	2N478	TEC CRI DIT NJS SEI SST	148-56	2N490D	CEC CRI ESE SLD SST	344-77	JAN2N494A	CSR SCA SLD SSI UPI	344-95
2N448	CSR DIT IDC NJS SEI SLD SST	118-44	JAN2N461	CSR DIT IDC NJS SEI SLD SST	115-97 204-86 325-70 205-40 110-45	2N479	TEC CRI DIT NJS SEI SST	148-57	2N490E	CEN CSR ESE SLD SST	344-78	2N494B	CSR SCA SLD SSI UPI	344-96
2N449	CSR DIT IDC NJS SEI SLD SST	118-49	2N462	CSR DIT IDC NJS SEI SLD SST	110-33 110-53	2N479A	TEC CRI DIT NJS SEI SST	148-58	JAN2N490A	AMR CRI ESE SLD SST	344-77	2N494C	CSR SCA SLD SSI UPI	344-97
2N450	CSR DIT IDC NJS SEI SLD SST	111-92	2N463	CSR DIT IDC NJS SEI SLD SST	110-35 110-63	2N480	TEC CRI DIT NJS SEI SST	148-59	2N490B	CEN CSR ESE SLD SST	344-78	2N494D	CSR SCA SLD SSI UPI	344-97
2N451	SPE	267-93	2N464	CSR DIT IDC NJS SEI SLD SST	110-36 110-82	2N480A	TEC CRI DIT NJS SEI SST	148-60	2N490C	CEN CSR ESE SLD SST	344-79	2N495	CSR SCA SLD SSI UPI	122-18
2N456	CEN CSR DIT IDC NJS SEI SLD SST	206-110 329-52	2N465	CSR DIT IDC NJS SEI SLD SST	110-36 110-82	2N481	TEC CRI DIT NJS SEI SST	111-10	2N490D	AMR CRI ESE SLD SST	344-80	2N496	CSR SCA SLD SSI UPI	122-12
2N456A	CRI DIT IDC NJS SEI SLD SST	205-37	2N466	CSR DIT IDC NJS SEI SLD SST	110-36 110-82	2N482	TEC CRI DIT NJS SEI SST	111-23	2N490E	CEN CSR ESE SLD SST	344-81	2N497	CSR SCA SLD SSI UPI	235-38
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JAN2N456B	CSR DIT IDC NJS SEI SLD SST	210-60 328-69 329-53	2N468	CSR DIT IDC NJS SEI SLD SST	110-46 148-38	2N484	TEC CRI DIT NJS SEI SST	148-61	2N491	CEN CSR ESE SLD SST	344-82	2N499	CSR SCA SLD SSI UPI	182-70
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2N457A	CSR DIT IDC NJS SEI SLD SST	205-38	2N471	CSR DIT IDC NJS SEI SLD SST	148-39	2N486	TEC CRI DIT NJS SEI SST	148-63	2N491B	CEN CSR ESE SLD SST	344-84	2N500	CSR SCA SLD SSI UPI	182-70
2N457B	CSR DIT IDC NJS SEI SLD SST	210-61	2N471A	CSR DIT IDC NJS SEI SLD SST	148-40	2N487	TEC CRI DIT NJS SEI SST	148-64	2N492	CEN CSR ESE SLD SST	344-85	2N501	CSR SCA SLD SSI UPI	182-70

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2N570	CEN CSR IDI SPE	108-75	2N592	CSR	338-8	2N618 (cont.)	GTG LTE NJS SPE STC SCA	153-46 168-62	2N638A (cont.)	GTG LTE NJS SPE STC	328-19 204-93	2N656 (cont.)	SLD SSI STI TADI TIIB	SGAI SST TADI TIIB
2N571	CSR NJS	111-12	2N594	SEI SPE STI	338-10	2N621 2N622	SCA	104-67 347-29	2N638B	CSR GTG LTE NJS SPE	204-94 328-20	JAN2N656 TEC	TRW UPI RTN TII CRI	182-72 236-60
2N572	CRI ETC NJS	108-76	2N595	SEI SPE STI	338-11	2N623 2N626 2N627	CRI ETC IDC NJS SPE	207-95	2N639	CRI GTG LTE NJS SPE	204-94 328-20	2N656A	CSR IDI NJS SDE SEI SPE SST STR TADI TII	ETC KER SCA SEI SDE SST STR TADI TII
2N573	CRI ETC NJS	113-64	2N596	IDC SLD SST	338-12	2N628	CRI DIT GTG IDC NJS SPE	207-96	2N639A	CRI GTG LTE NJS SPE	328-21 204-95	2N656S 2N657	AMR CEN CSR ETC GTG IDC IDI KER MOTA	235-41 235-42
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JAN2N574 2N574A	GTG SPE	211-82 211-83	2N598	CRI ETC IDI SPE STR	116-10 309-69	2N630	CRI DIT GTG IDC NJS SPE	207-98	2N645	CSR GTG LTE NJS SPE	109-6 288-92 118-69 118-70	JAN2N657	AMR CEN CSR ETC GTG IDC IDI KER MOTA	
2N575	SEI SPE SST	211-84	2N599	CEN CSR GTG IDC NJS SPE STR	309-70 116-11 116-15 308-2	2N631	CRI DIT GTG IDC NJS SPE	113-13	2N646 2N647	STI CEN ETC SPE	118-71	2N657S 2N658	AMR CEN CSR ETC GTG IDC IDI KER MOTA	235-43 113-21
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JAN2N575A 2N575A	SEI SPE SST	211-85 211-86	2N603A	SPE	308-3 116-16 117-54 309-73	2N638	CRI DIT GTG IDC NJS SPE	113-11	2N655	CRI GTG LTE NJS SPE	114-8	2N662	AMR CEN CSR ETC GTG IDC IDI KER MOTA	113-23 113-24
JAN2N575A 2N575A	SEI SPE SST	211-85 211-86	2N604	IDI SPE	308-3 116-16 117-54 309-73	2N639	CRI DIT GTG IDC NJS SPE	113-11	2N656	CRI GTG LTE NJS SPE	114-8	2N663	AMR CEN CSR ETC GTG IDC IDI KER MOTA	113-23 113-24
JAN2N575A 2N575A	SEI SPE SST	211-85 211-86	2N604A	CSR	308-3 116-16 117-54 309-73	2N640	CRI DIT GTG IDC NJS SPE	113-11	2N657	CRI GTG LTE NJS SPE	114-8	2N664	AMR CEN CSR ETC GTG IDC IDI KER MOTA	113-23 113-24
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JAN2N575A 2N575A	SEI SPE SST	211-85 211-86	2N606	CSR	308-3 116-16 117-54 309-73	2N642	CRI DIT GTG IDC NJS SPE	113-11	2N659	CRI GTG LTE NJS SPE	114-8	2N666	AMR CEN CSR ETC GTG IDC IDI KER MOTA	113-23 113-24
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JAN2N575A 2N575A	SEI SPE SST	211-85 211-86	2N609	CSR NJS	308-3 116-16 117-54 309-73	2N645	CRI DIT GTG IDC NJS SPE	113-11	2N662	CRI GTG LTE NJS SPE	114-8	2N669	AMR CEN CSR ETC GTG IDC IDI KER MOTA	113-23 113-24
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2N730 (cont.)	TADI TIID TIIF ♦TEC		2N744	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE STI TADI TIIF TIID	159-100 291-36	2N760A (cont.)	CEN DEF GTC IDC ITT NJS ♦RTN SDE ♦SES SST SPE STI TADI RTN RTN ETC SPE SPE SST SPE SST SPE SST	172-62 172-31	2N828	♦SES IDC SPE	112-66 302-32	2N860 (cont.)	SPE ♦TCY TSC CEN CSR IDC ♦SES SSI ♦TCY CEN IDC NJS ♦SES SSI TSC CEN IDC NJS SPE ♦TCY TSC CEN IDC NJS SPE ♦TCY TSC CEN IDC NJS SPE ♦TCY TSC CEN IDC NJS SPE ♦TCY TSC CEN IDC NJS SPE ♦TCY TSC	122-16 307-47 308-62 122-19 122-23 306-62 303-84 122-26 126-63 307-49 302-58 122-34	
2N731	CEN ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE STI TADI TIIF TIID	172-18	2N744A	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST SPE SST	291-37 159-101 168-13 289-99	2N760B	2N761	CSR NJS SSI	172-32	2N828A	IDC SPE	112-90	2N861	CRI IDC NJS ♦SES SSI ♦TCY	122-16 307-47
2N734	CSR IDC SPE	171-3	JAN2N744	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST SPE SST	291-37 159-101 168-13 289-99	JAN2N760A	2N762	ETC SPE	172-33	2N829	SPE	112-67 300-36 296-31 160-77	2N862	CSR IDC NJS ♦SES SSI	308-62 122-19
2N735	CRI ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	171-4	2N744A	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N761	2N762	ETC SPE	172-33	2N830	SPE	112-67 300-36 296-31 160-77	2N863	CSR IDC NJS ♦SES SSI	122-23 306-62
2N735A	♦ETC ♦SES	172-58	2N744B	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N762	2N763	ETC SPE	172-33	2N831	♦SES SST SPE	112-67 300-36 296-31 160-77	2N864	CRI IDC NJS ♦SES SSI	303-84 122-26
2N736	♦ETC IDC SPE	171-5	2N745	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N763	2N764	ETC SPE	172-33	2N832	♦SES SST SPE	112-67 300-36 296-31 160-77	2N865	CEN IDC NJS ♦SES SSI	126-63 307-49 302-58 122-34
2N736A	♦ETC SPE TADI	173-12	2N746	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N764	2N765	ETC SPE	172-33	2N833	♦SES SST SPE	112-67 300-36 296-31 160-77	2N866	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N736B	♦ETC ♦SES	173-13	2N747	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N765	2N766	ETC SPE	172-33	2N834	♦SES SST SPE	112-67 300-36 296-31 160-77	2N867	CRI IDC NJS ♦SES SSI	126-63 307-49 302-58 122-34
2N738	♦ETC NJS SEI SSI	171-6	2N748	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N766	2N767	ETC SPE	172-33	2N835	♦SES SST SPE	112-67 300-36 296-31 160-77	2N868	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N739	CRI ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	171-7	2N749	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N767	2N768	ETC SPE	172-33	2N836	♦SES SST SPE	112-67 300-36 296-31 160-77	2N869	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N739A	♦ETC ♦SES	172-59	2N750	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N768	2N769	ETC SPE	172-33	2N837	♦SES SST SPE	112-67 300-36 296-31 160-77	2N870	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N740	CRI ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	171-8	2N751	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N769	2N770	ETC SPE	172-33	2N838	♦SES SST SPE	112-67 300-36 296-31 160-77	2N871	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N740A	♦ETC NJS ♦SES	173-14	2N752	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N770	2N771	ETC SPE	172-33	2N839	♦SES SST SPE	112-67 300-36 296-31 160-77	2N872	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N741	SPE SSI	109-100	2N753	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N771	2N772	ETC SPE	172-33	2N840	♦SES SST SPE	112-67 300-36 296-31 160-77	2N873	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N741A	SPE	112-65	2N754	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N772	2N773	ETC SPE	172-33	2N841	♦SES SST SPE	112-67 300-36 296-31 160-77	2N874	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N742	♦ETC IDC SPE	171-9	2N755	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N773	2N774	ETC SPE	172-33	2N842	♦SES SST SPE	112-67 300-36 296-31 160-77	2N875	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N742A	ETC NJS	171-10	2N756	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N774	2N775	ETC SPE	172-33	2N843	♦SES SST SPE	112-67 300-36 296-31 160-77	2N876	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N743	CRI ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	159-99 291-35	2N757	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N775	2N776	ETC SPE	172-33	2N844	♦SES SST SPE	112-67 300-36 296-31 160-77	2N877	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
2N743A	CSR IDC NJS SDE	289-98 168-12	2N758	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N776	2N777	ETC SPE	172-33	2N845	♦SES SST SPE	112-67 300-36 296-31 160-77	2N878	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
			2N759	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N777	2N778	ETC SPE	172-33	2N846	♦SES SST SPE	112-67 300-36 296-31 160-77	2N879	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
			2N760	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N778	2N779	ETC SPE	172-33	2N847	♦SES SST SPE	112-67 300-36 296-31 160-77	2N880	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46
			2N760A	CEN AMR CSI CSR ♦DEF GTC ♦ITT MEHK ♦MOTA NASB NJS NTR SCA SDE ♦SES SST SPE SST	291-37 159-101 168-13 289-99	2N779	2N780	ETC SPE	172-33	2N848	♦SES SST SPE	112-67 300-36 296-31 160-77	2N881	CRI IDC NJS ♦SES SSI	172-9 288-54 288-55 172-34 132-46

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2N997 (cont.)	RTN SCAI SSI STI TIIB		2N1015F (cont.)	KER SPE	280-73	2N1025 (cont.)	SLD SSI STI TADI		2N1038 (cont.)	GPD LFE SSI UPI		2N1046A	CSR ETC GTC NJS SSI STR	207-17
2N998	CSR RTN SCAI SSI TADI	347-30	2N1016	CRI ESE GTC SEI SPC	280-74 326-84	JAN2N1025	ETC CRI	124-44 124-60	2N1038-1	GPD STC STR	203-33	2N1046B	CSR ETC GTC SSI STR	207-18
2N999	CSR SCAI SPE SSI TADI	347-31	2N1016A	CSR ESE GTC SEI SPC	326-85 280-75	2N1026	ETC NASB RTN SCAI SSI SSI STR		2N1038-2	GPD STC STR	203-34	2N1047	CSR ETC GTC SSI STR	254-84
2N1000	CSR IDI	119-77 320-22	2N1016B	CSR ESE GTC SEI SPC	280-76 326-86	2N1027	CSR IDI RTN SCAI SSI SSI STR		2N1039	CEN GPD LFE MISI SPC	203-50	2N1047A	CSR ETC GTC SSI STR	254-85
2N1005	SPE	144-47	2N1016C	CSR ESE GTC SEI SPC	280-77	2N1028	ETC CRI	124-82	2N1039-1	GPD STC STR	203-35	2N1047B	CSR ETC GTC SSI STR	254-86
2N1006	CSR	206-3	2N1016D	CSR ESE GTC SEI SPC	280-78 326-87	2N1028A	ETC CRI	124-82	2N1039-2	GPD STC STR	203-36	JAN2N1047A	CSR ETC GTC SSI STR	254-86
2N1007	CSR GPD		JAN2N1016B	CSR ESE GTC SEI SPC	280-77	2N1028B	ETC CRI	124-82	2N1040	CEN GPD LFE MISI SPC	203-51	2N1047C	CSR ETC GTC SSI STR	254-87
2N1008	CRI DIT GTC LFE SSES	116-39	2N1016E	CSR ESE GTC SEI SPC	280-78 326-87	2N1028C	ETC CRI	124-82	2N1040-1	CEN GPD LFE MISI SPC	203-37	2N1047D	CSR ETC GTC SSI STR	254-87
2N1008A	CSR GTC LFE SSES	116-40	JAN2N1016C	CSR ESE GTC SEI SPC	280-79	2N1031	CSR GPD LFE MISI SPC	207-110	2N1040-2	CEN GPD LFE MISI SPC	203-38	2N1048	CSR ETC GTC SSI STR	254-88
2N1008B	CEN SCAI SSI TADI	116-41	2N1016F	CSR ESE GTC SEI SPC	280-80 326-88	2N1031A	CSR GPD LFE MISI SPC	208-1	2N1041	CSR IDC MISI SPC	203-52	2N1048A	CSR ETC GTC SSI STR	254-89
JAN2N1008B	CSR none	113-10	JAN2N1016D	CSR ESE GTC SEI SPC	280-81	2N1031B	CSR GPD LFE MISI SPC	208-2	2N1041-1	CSR IDC MISI SPC	203-39	JAN2N1048A	CSR ETC GTC SSI STR	254-90
2N1009	CSR	117-28	2N1016G	CSR ESE GTC SEI SPC	280-82 326-89	2N1031C	CSR GPD LFE MISI SPC	208-3	2N1041-2	CSR IDC MISI SPC	203-40	2N1048B	CSR ETC GTC SSI STR	254-91
2N1010	CSR	118-1	2N1016H	CSR ESE GTC SEI SPC	280-83	2N1032	CSR GPD LFE MISI SPC	208-4	2N1042	CSR GTC LFE SPC	203-53 315-45	2N1049	CSR ETC GTC SSI STR	254-92
2N1011	CRI DIT GPD IDI NJS SLD SSI	205-41	2N1017	CSR ESE GTC SEI SPC	112-22	2N1032A	CSR GPD LFE MISI SPC	208-5	2N1042-1	CSR GTC LFE SPC	203-41	2N1049A	CSR ETC GTC SSI STR	254-93
JAN2N1011	CSR	205-42	2N1018	CSR ESE GTC SEI SPC	115-10	2N1032B	CSR GPD LFE MISI SPC	208-6	2N1042-2	CSR GTC LFE SPC	203-42	JAN2N1049A	CSR ETC GTC SSI STR	254-94
2N1012	CSR	307-46	2N1021	CSR ESE GTC SEI SPC	207-108	2N1032C	CSR GPD LFE MISI SPC	208-7	2N1043	CSR GTC LFE SPC	203-55 315-46	2N1049B	CSR ETC GTC SSI STR	254-95
2N1014	CSR	205-43	2N1022	CSR ESE GTC SEI SPC	210-74	2N1034	CSR GPD LFE MISI SPC	124-22	2N1043-1	CSR GTC LFE SPC	203-43	2N1050	CSR ETC GTC SSI STR	254-96
2N1015	CSR	326-77 280-67	2N1022A	CSR ESE GTC SEI SPC	210-76	2N1034A	CSR GPD LFE MISI SPC	124-22	2N1043-2	CSR GTC LFE SPC	203-44	2N1050A	CSR ETC GTC SSI STR	254-97
2N1015A	CSR	280-68 326-78	2N1022B	CSR ESE GTC SEI SPC	210-77	2N1034B	CSR GPD LFE MISI SPC	124-22	2N1044	CSR GTC LFE SPC	203-47	2N1050B	CSR ETC GTC SSI STR	254-97
2N1015B	CSR	326-79 280-69	2N1022C	CSR ESE GTC SEI SPC	210-78	2N1034C	CSR GPD LFE MISI SPC	124-22	2N1044-1	CSR GTC LFE SPC	203-45	2N1050C	CSR ETC GTC SSI STR	254-98
2N1015C	CSR	280-70 326-80	2N1022D	CSR ESE GTC SEI SPC	210-79	2N1034D	CSR GPD LFE MISI SPC	124-22	2N1044-2	CSR GTC LFE SPC	203-46	JAN2N1050A	CSR ETC GTC SSI STR	254-98
2N1015D	CSR	326-81 280-71	2N1022E	CSR ESE GTC SEI SPC	210-80	2N1034E	CSR GPD LFE MISI SPC	124-22	2N1045	CSR GTC LFE SPC	203-59 315-48	2N1050D	CSR ETC GTC SSI STR	254-99
2N1015E	CSR	280-72 326-82	2N1022F	CSR ESE GTC SEI SPC	210-81	2N1034F	CSR GPD LFE MISI SPC	124-22	2N1045-1	CSR GTC LFE SPC	203-60 203-47	2N1050E	CSR ETC GTC SSI STR	254-99
2N1015F	CSR	326-83	2N1022G	CSR ESE GTC SEI SPC	210-82	2N1034G	CSR GPD LFE MISI SPC	124-22	2N1045-2	CSR GTC LFE SPC	203-48	2N1050F	CSR ETC GTC SSI STR	254-99
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2N1159 (cont.)	♦SES SPE UPI		JAN2N1173	none	315-55 120-25	2N1193 (cont.)	CSR GTC LTE		2N1220 (cont.)	STI TSI		2N1244	♦SES STI	215-15
2N1160	♦ETC GTC LTE ♦SES SPE	327-90 206-64	JAN2N1174	none	116-13 316-16 315-56 115-71 114-86	2N1194	♦ETC IDJ NJS SPE	113-69	2N1221	♦TCY CSR GTC NJS SCA SST ♦TCY	124-79	2N1245 2N1246 2N1247	CEN CEN ♦TEC CSR NJS SLD	203-100 203-101 143-24
2N1162	♦ETC GTC LTE ♦SES SPE	208-19	2N1175	Δ♦GESY CEN CSR GTC IDJ NJS SPE	114-87	2N1195	CSR GTC LTE SPE	115-63	2N1222	ETC IDJ NJS ♦SES SST ♦TCY	124-63	2N1248	ETC SES SST TADI	143-22
2N1162A	♦ETC GTC LTE ♦SES SPE	208-20	2N1175A	♦ETC IDJ NJS SPE	116-42	JAN2N1195 2N1196	CSR GTC LTE SPE	116-21 130-43	2N1223	ETC IDJ NJS ♦SES SST ♦TCY	124-64	2N1249	ETC SES SST	143-23
2N1163	♦ETC GTC LTE ♦SES SPE	208-21	2N1176	♦ETC IDJ NJS SPE	116-43	2N1197	CSR GTC LTE SPE	130-44	2N1224	CSR GTC NJS SLD SST ♦TCY	108-102	2N1250	♦TEC CSR NJS ♦SPC	263-81
2N1163A	♦ETC GTC LTE ♦SES SPE	208-22	2N1176A	♦ETC IDJ NJS SPE	107-16 107-17 107-18 107-13 208-32	2N1198	CSR GTC LTE SPE	145-51 302-18 204-62	JAN2N1224 2N1225	CSR GTC NJS SLD SST ♦TCY	108-103 109-10	2N1251	♦TEC CSR NJS ♦SPC	177-58
2N1164	♦ETC GTC LTE ♦SES SPE	208-23	2N1176B	♦ETC IDJ NJS SPE	202-71	2N1199	♦ETC IDJ NJS SPE	296-29 115-16 145-34	2N1227	CSR GTC NJS SCA SST ♦TCY	206-41	2N1252	CEN CSR GTC NJS SST ♦TEC	125-110 292-97
2N1164A	♦ETC GTC LTE ♦SES SPE	208-24	JAN2N1183A	♦GPD STR SPE ♦STC	202-72	2N1200	♦ETC IDJ NJS SPE	263-77	2N1228	CSR GTC NJS SCA SST ♦TCY	134-27	2N1253	CEN CSR GTC NJS SST ♦TEC	292-104 126-4
2N1165	♦ETC GTC LTE ♦SES SPE	208-25	2N1183B	♦GPD STR SPE ♦STC	202-75	2N1201	♦ETC IDJ NJS SPE	260-104	2N1229	CSR GTC NJS SCA SST ♦TCY	134-28	2N1254	CSR GTC NJS SST ♦TEC	292-103 126-3
JAN2N1165	♦ETC GTC LTE ♦SES SPE	208-26	JAN2N1183B	♦GPD STR SPE ♦STC	202-76	2N1202	♦ETC IDJ NJS SPE	260-105	2N1230	CSR GTC NJS SCA SST ♦TCY	134-29	2N1255	CEN CSR GTC NJS SST ♦TEC	126-1 292-98
2N1165A	♦ETC GTC LTE ♦SES SPE	208-27	2N1184	♦GPD STR SPE ♦STC	202-77	2N1203	♦ETC IDJ NJS SPE	260-106	2N1231	CSR GTC NJS SCA SST ♦TCY	134-30	2N1256	CSR GTC NJS SST ♦TEC	292-102 126-2
2N1166	♦ETC GTC LTE ♦SES SPE	208-28	JAN2N1184A	♦GPD STR SPE ♦STC	202-78	2N1204	♦ETC IDJ NJS SPE	260-107	2N1232	CSR GTC NJS SCA SST ♦TCY	134-6	2N1257	CSR GTC NJS SST ♦TEC	292-101 126-5 292-105
2N1166A	♦ETC GTC LTE ♦SES SPE	208-29	2N1184B	♦GPD STR SPE ♦STC	202-79	2N1205	♦ETC IDJ NJS SPE	260-108	2N1233	CSR GTC NJS SCA SST ♦TCY	134-7	2N1258	CSR GTC NJS SST ♦TEC	292-100 126-6
2N1167	♦ETC GTC LTE ♦SES SPE	208-30	JAN2N1184B	♦GPD STR SPE ♦STC	202-82	2N1206	♦ETC IDJ NJS SPE	260-109	2N1234	CSR GTC NJS SCA SST ♦TCY	133-110	2N1259	CSR GTC NJS SST ♦TEC	292-102 126-7
2N1167A	♦ETC GTC LTE ♦SES SPE	208-31	2N1185	♦GPD STR SPE ♦STC	114-50	2N1207	♦ETC IDJ NJS SPE	260-110	2N1235	CSR GTC NJS SCA SST ♦TCY	263-80	2N1260	CSR GTC NJS SST ♦TEC	204-64
2N1168	♦ETC GTC LTE ♦SES SPE	205-45	2N1185A	♦GPD STR SPE ♦STC	113-97	2N1208	♦ETC IDJ NJS SPE	260-111	2N1236	CSR GTC NJS SCA SST ♦TCY	134-30	2N1261	CSR GTC NJS SST ♦TEC	204-65
2N1169	♦ETC GTC LTE ♦SES SPE	338-13	2N1185B	♦GPD STR SPE ♦STC	114-10	2N1209	♦ETC IDJ NJS SPE	260-112	2N1237	CSR GTC NJS SCA SST ♦TCY	134-30	2N1262	CSR GTC NJS SST ♦TEC	204-66
2N1170	♦ETC GTC LTE ♦SES SPE	338-14	2N1186	♦GPD STR SPE ♦STC	114-34	2N1210	♦ETC IDJ NJS SPE	260-113	2N1238	CSR GTC NJS SCA SST ♦TCY	215-9	2N1263	CSR GTC NJS SST ♦TEC	107-85
2N1171	♦ETC GTC LTE ♦SES SPE	113-20	2N1186A	♦GPD STR SPE ♦STC	114-34	2N1211	♦ETC IDJ NJS SPE	260-114	2N1239	CSR GTC NJS SCA SST ♦TCY	215-10	2N1264	CSR GTC NJS SST ♦TEC	104-88
2N1172	♦ETC GTC LTE ♦SES SPE	202-57 324-71	2N1186B	♦GPD STR SPE ♦STC	114-89	2N1212	♦ETC IDJ NJS SPE	260-115	2N1240	CSR GTC NJS SCA SST ♦TCY	215-11	2N1265	CSR GTC NJS SST ♦TEC	106-79
2N1173	♦ETC GTC LTE ♦SES SPE	120-27 316-15	2N1187	♦GPD STR SPE ♦STC	113-67	2N1213	♦ETC IDJ NJS SPE	260-116	2N1241	CSR GTC NJS SCA SST ♦TCY	215-12	2N1266	CSR GTC NJS SST ♦TEC	143-47
			2N1187A	♦GPD STR SPE ♦STC	113-68	2N1214	♦ETC IDJ NJS SPE	260-117	2N1242	CSR GTC NJS SCA SST ♦TCY	215-13	2N1267	CSR GTC NJS SST ♦TEC	143-49
			2N1187B	♦GPD STR SPE ♦STC	113-68	2N1215	♦ETC IDJ NJS SPE	260-118	2N1243	CSR GTC NJS SCA SST ♦TCY	215-14	2N1268	CSR GTC NJS SST ♦TEC	144-49 143-97

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2N1958	CSR NJS SSI STI	177-73 301-74	2N1985 (cont.)	SES STI UPI TEC		2N2001	CEN CSR IDI	319-11 116-109	2N2040	ΔTEC CSR IDI	176-62	2N2067B	ETC GPD	204-43
2N1958A	CSI CSR NJS SSI	300-85 177-74	2N1986	SGAI CEN CSI CSR	176-92	2N2002	CRI IDI NJS SSI	124-31	2N2041	ΔTEC CSR IDI	176-63	2N2067G	GPD ETC	204-44
2N1959	CSR IDI SCA SSI	177-75 301-75	2N1987	CRI CEN CSR GTC	176-93	2N2003	CSR IDI NJS SSI	124-32	2N2042	CSR GTC NJS SSI	113-88	2N2067W	GPD ETC	204-45
2N1959A	CSR IDI SCA SSI	300-86 177-76	2N1988	STI UPI TEC CEN	176-94	2N2004	CSR IDI NJS SSI	124-33	2N2043	CSR IDI NJS SSI	113-98	2N2068	CRI GPD	204-46
2N1969	CSR IDI	322-87 111-98	2N1989	CSR GDC NJS RTN	176-95	2N2005	CSR IDI NJS SSI	124-34	2N2044A	CSR IDI NJS SSI	113-99	2N2068-O	ETC NJS	204-47
2N1970	CSR GPD NJS SLD SST UPI	209-5	2N1990	CSR GDC NJS RTN	176-97	2N2006	CSR IDI NJS SSI	124-35	2N2044B	CSR IDI NJS SSI	113-99	2N2068G	GPD ETC	204-48
2N1971	CSR GPD IDI	204-103	2N1991	CSR GDC NJS RTN	176-99	2N2007	CSR IDI NJS SSI	124-36	2N2045	CSR IDI NJS SSI	112-41	2N2070	GPD ETC	207-22
2N1972	CRI CSR IDI SCA SSI	176-109	2N1992	CSR GDC NJS RTN	176-99	2N2008	CSR IDI NJS SSI	183-11	2N2046	CSR IDI NJS SSI	300-90	2N2071	CEN CEN	207-24
2N1973	CEN CSR GDC IDI NJS RTN SEI SPE STI TEC TIID	183-86	2N1993	CSR GDC NJS RTN	176-37	2N2009	CSR IDI NJS SSI	274-20	2N2047	CSR IDI NJS SSI	292-13 112-42 183-38	2N2072	CEN CEN	207-25
2N1974	AMR CRI ETC GTC NTR SDE SSI TEC TIID	183-37	2N1994	CSR GDC NJS RTN	176-37	2N2010	CSR IDI NJS SSI	274-20	2N2048	CSR IDI NJS SSI	292-13 112-42 183-38	2N2073	CRI GPD	210-88
2N1975	CEN CSR GDC IDI NJS RTN SEI SSI TIID	183-10	2N1995	CSR GDC NJS RTN	176-37	2N2011	CSR IDI NJS SSI	274-20	2N2049	CSR IDI NJS SSI	292-13 112-42 183-38	2N2074	CRI GPD	210-89
2N1980	CRI GPD NJS SSI UPI	210-84	2N1996	CSR GDC NJS RTN	176-37	2N2012	CSR IDI NJS SSI	274-20	2N2050	CSR IDI NJS SSI	292-13 112-42 183-38	2N2075	CRI GPD	210-91
2N1981	CRI GPD NJS SSI UPI	210-85	2N1997	CSR GDC NJS RTN	176-37	2N2013	CSR IDI NJS SSI	274-20	2N2051	CSR IDI NJS SSI	292-13 112-42 183-38	2N2076	CRI GPD	210-91
2N1982	CRI GPD NJS SSI UPI	210-86	2N1998	CSR GDC NJS RTN	176-37	2N2014	CSR IDI NJS SSI	274-20	2N2052	CSR IDI NJS SSI	292-13 112-42 183-38	2N2077	CRI GPD	210-91
2N1983	CSI ETC GTC NJS SCA SGAI TEC	176-89	2N1999	CSR GDC NJS RTN	176-37	2N2015	CSR IDI NJS SSI	274-20	2N2053	CSR IDI NJS SSI	292-13 112-42 183-38	2N2078	CRI GPD	210-93
2N1984	CRI CSR GSE IDI NJS SEI SGAI TEC	176-90	2N2000	CSR GDC NJS RTN	176-37	2N2016	CSR IDI NJS SSI	274-20	2N2054	CSR IDI NJS SSI	292-13 112-42 183-38	2N2079	CRI GPD	210-93
2N1985	CRI ETC IDI NJS RTN	176-91	2N2001	CSR GDC NJS RTN	176-37	2N2017	CSR IDI NJS SSI	274-20	2N2055	CSR IDI NJS SSI	292-13 112-42 183-38	2N2080	CRI GPD	210-93

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2N2194A (cont.)	MEHK NASB NPC SCA ♦SES SST STR THCF TIIB		2N2212	CSR GTC LTE	209-13	2N2219A (cont.)	IDI ITT MEHK NASB NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD ♦SPR SST STR TADI THCF TIIB TIIF		2N2222 (cont.)	♦RTCF SCA SEI SGAI SPE SST STR TADI THCF TIIF		2N2238	CRI ♦DEF NASB SCA SDE SSI ♦SES	294-6 177-3
2N2194B	CSR IDI NJS SCA ♦SES SST STR	183-47 301-104	2N2217	CRI ♦DEF ESE IDI NASB ♦RTN SEI SGAI SST STR TADI ♦TEC TIIF	185-54	JAN2N2219A	♦GTC ♦INTG IDI ITT MEHK NASB NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD ♦SPR SST STR TADI THCF TIIF	185-61 295-90	JAN2N2222	♦PHIN ♦RTN SDE SSI ♦SPR SST STR TADI THCF TIIF	174-17 297-70	2N2239	CRI ♦DEF NASB SCA SDE SSI ♦SES	177-77 292-108
2N2195	CRI ♦DEF GTC MEHK NASB NPC NTR SCA ♦SES SLD SST STR	176-110	2N2218	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-55	2N2220	CRI CSR DIT ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-11	2N2222A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	293-47 174-63	2N2240	CRI ♦DEF GTC MEHK NASB NPC NTR SCA ♦SES SLD SST STR TADI THCF TIIF	177-4 177-5
2N2195A	CSR ETC IDI MISI NJS NSC ♦RTN SDE SGAI SST TADI	177-1	JAN2N2218	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-56 297-67	2N2220A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	175-14	JAN2N2222A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-18 295-92	2N2241	CRI ♦DEF GTC MEHK NASB NPC NTR SCA ♦SES SLD SST STR TADI THCF TIIF	167-47
2N2195B	CSR ETC IDI MISI NJS NSC ♦RTN SDE SGAI SST TADI	177-2	2N2218A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	293-19 185-57	2N2221	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-12	2N2223	AMR CEC CSR FERB ♦MOTA NPC SCA SES SPE SST STR TADI THCF TIIF	172-39 339-76	2N2243	CEN CSR ♦GDC GTC MEHK NASB NTR ♦RTN SCA SDE SSI SST TADI TEC TIIB TIIF	183-49
2N2196	CSR NPC ♦SES SST STR THCF	249-45	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	JAN2N2221A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2224	AMR CEC CSR FERB ♦MOTA NPC SCA SES SPE SST STR TADI THCF TIIF	339-77 172-40	2N2256	CSI IDI NASB SPE	159-63 288-103
2N2197	CSR NPC ♦SES SST STR THCF	249-46	JAN2N2218A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2221A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	293-20 174-14	2N2225	GTC NASB CEN	115-11 303-104 282-110	2N2257	♦MOTA CEN CSI ♦DEF ETC FSC GTC MEHK NASB NTR ♦RTN SCA SDE SSI SST TADI TEC TIIB TIIF	288-104 159-64
2N2198	♦ETC NJS CSR	176-75	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2222	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2226	♦WESY GTC ♦SES SPE	283-1	2N2258	IDI CSI ♦GPD SST STC	112-59 289-7 289-8 112-60 204-108 328-45
2N2199	♦ETC NJS CSR	106-44	JAN2N2218A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2222A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2227	♦WESY GTC ♦SES SPE	283-2	2N2267	♦GPD SST STC	328-46 204-109
2N2200	♦ETC NJS CSR	106-45	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2223	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2228	♦WESY GTC ♦SES SPE	283-3	2N2270	♦GPD SST STC	328-46 204-109
2N2201	CSR SCA SLD SST STR	243-87	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2224	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2229	♦WESY GTC ♦SES SPE	283-4	2N2271	CSI IDI NASB SPE	204-110 328-47 328-48 205-1
2N2202	♦SES SST STR THCF	243-88	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2225	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2230	♦WESY GTC ♦SES SPE	283-5	2N2272	CSI IDI NASB SPE	231-35 115-94
2N2203	SCA SSI	243-89	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2226	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2231	♦WESY GTC ♦SES SPE	283-6	2N2273	CSI IDI NASB SPE	167-48 297-103 108-30
2N2204	SSI	243-90	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2227	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2232	♦WESY GTC ♦SES SPE	283-7	JAN2N2273	none	108-37
2N2205	CEN CSR ♦DEF ♦FERB IDI NASB RTN SDE SGAI SPE	296-105 158-102	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2228	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2233	♦WESY GTC ♦SES SPE	283-8	2N2274	IDI SPE SSI	122-6 345-105
2N2206	CEN ♦FERB IDI MOTA SES	158-103 296-106	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2229	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2234	♦WESY GTC ♦SES SPE	283-9	2N2275	♦TCY TSI AMR IDI SSI	345-106 122-7
2N2207	PHIC SPE	116-32	2N2219A	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	293-46 185-99	2N2230	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2235	♦WESY GTC ♦SES SPE	283-10	2N2276	♦TCY TSI AMR IDI SSI	345-106 122-7
2N2208	SPE STI	108-66	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2231	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2236	♦WESY GTC ♦SES SPE	283-11	2N2277	♦TCY TSI AMR IDI SSI	345-106 122-7
2N2209	CEN	111-62	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2232	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2237	♦WESY GTC ♦SES SPE	283-12	2N2278	♦TCY TSI AMR IDI SSI	345-106 122-7
2N2210	CEN	207-26	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2233	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2238	♦WESY GTC ♦SES SPE	283-13	2N2279	♦TCY TSI AMR IDI SSI	345-106 122-7
2N2211	CSR IDC CEN	209-12	2N2219	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	185-58 295-89	2N2234	♦ALGG BELI CEN CRI ♦DEF ESE ♦FSC GTC IDI INTG ♦ITT ITT ♦MEHK NASB ♦NPC ♦NTLB ♦PHIN ♦RTN SDE ♦SES SLD SST STR TADI THCF TIIF	174-13 297-69	2N2239	♦WESY GTC ♦SES SPE	283-14	2N2280	♦TCY TSI AMR IDI SSI	345-106 122-7

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2N2416	SLD SSI STI TIID	106-50	2N2432A (cont.)	TEC TSI TCY		2N2479	CEN CSR DEF ETC	177-102 305-85	2N2493	CEN GPD MOTA	329-47 211-16	2N2528 (cont.)	GTC SES	GPD LTE SPE SST none
2N2417	AMR ESE SST	344-106	JAN2N2432A TEC	SSI SCA SSI	156-54 172-96 173-6	2N2480A	NASB NTR SDE		2N2496	PHIC SSI	107-55	JAN2N2528	none	325-47 207-31 145-12
2N2417A	WAB CEN SLD SST	344-107	2N2435	SCA TEC SCA	172-97 173-7	2N2481	RTN SES SSI	156-77 339-83	2N2497	INL NTR SODI	190-29	2N2529	SPE STI STI	145-20 145-28 145-33
JAN2N2417A	none	344-108	2N2437	SCA TEC	172-86	2N2482	CSR RTN SES SSI	339-84 156-78	JAN2N2497	SPE TIIB TIIF TIID		2N2530	TIIB TSC	145-21 145-36 185-63 297-71
2N2417B	ESE SLD SST	344-109	2N2438	SCA TEC	172-98	2N2483	SSI TADI		2N2498	INL NASB	190-30 190-31	2N2531	STI	145-20
2N2418	ESE SLD SST	344-110	2N2439	SCA SSI TEC	173-8	2N2484	CRI DEF ETC	167-50 297-104	JAN2N2498	TIIF TSC	190-32	2N2532	STI	145-33
2N2418A	WAB CEN SLD SST	345-1	2N2440	SCA SSI GTC	184-48	2N2485	SSI TADI		2N2499	INL NASB SODI	190-33	2N2533	STI	145-21
JAN2N2418A	none	345-2	2N2443	GTC SCA	183-50	JAN2N2481	FSC RTN	302-86 167-51	JAN2N2499	TIIF TSC	190-34	2N2534	STI	145-36
2N2418B	ESE SLD SST	345-3	2N2444	SSI TEC	207-27	2N2482	SSI TADI	119-107	2N2500	INL NASB SODI	190-35	2N2537	CSR ETC	297-71
2N2419	WAB CEN SLD SST	345-4	2N2445	CEN GPD	209-17	2N2483	SSI TADI		JAN2N2500	TIIB TSC	190-36	2N2538	CSR ETC	297-72
2N2419A	ESE SLD SST	345-5	2N2446	CSR GTC	209-18 329-58 349-1	2N2484	CRI DEF ETC	166-44	2N2501	INL NASB SODI	190-37	2N2539	CSR ETC	174-19 297-73
JAN2N2419A	none	345-6	2N2451	SPR IDC	104-30	2N2485	SSI TADI		JAN2N2501	TIIB TSC	190-38	2N2540	CSR ETC	174-20
2N2419B	ESE SLD SST	345-7	2N2453	CRI GDC	148-90 339-81	2N2486	MEHK MOTA	166-45	2N2509	INL NASB SODI	166-32	2N2541	CSR ETC	115-18 293-106
2N2420	AMR ESE SST	345-8	2N2455	CSR GTC IDC	112-96 295-16 291-28	2N2487	SSI TADI		2N2510	CSR GTC DEF ETC	166-33	2N2542	CSR ETC	203-61
2N2420A	WAB CEN SLD SST	345-9	2N2456	SSI TEC	112-106 169-28	2N2488	SSI TADI		2N2511	INL NASB SODI	166-34	2N2543	CSR ETC	203-62
JAN2N2420A	none	345-10	2N2459	SCA SSI SCA	169-36 169-43	2N2489	SSI TADI		2N2512	CSR GTC DEF ETC	166-34	JAN2N2543	GPD STC	117-62
2N2420B	ESE SLD SST	345-11	2N2460	SSI TEC	173-18	2N2490	SSI TADI		2N2513	INL NASB SODI	166-34	2N2544	CSR ETC	203-63
2N2421	WAB CEN SLD SST	345-12	2N2461	SSI TEC	173-44	2N2491	SSI TADI		2N2514	CSR GTC DEF ETC	166-34	2N2545	CSR ETC	203-64
2N2421A	ESE SLD SST	345-13	2N2462	SSI TEC	173-67	2N2492	SSI TADI		2N2515	INL NASB SODI	166-34	2N2546	CSR ETC	203-65
JAN2N2421A	none	345-14	2N2463	SSI TEC	173-79	2N2493	SSI TADI		2N2516	CSR GTC DEF ETC	166-34	2N2547	CSR ETC	203-66
2N2422	WAB CEN SLD SST	345-16	2N2464	SSI TEC	173-82 148-91	2N2494	SSI TADI		2N2517	INL NASB SODI	166-34	2N2548	CSR ETC	203-67
2N2422A	ESE SLD SST	345-17	2N2465	SSI TEC	112-96 295-16 291-28	2N2495	SSI TADI		2N2518	CSR GTC DEF ETC	166-34	2N2549	CSR ETC	203-68
JAN2N2422A	none	345-18	2N2466	SSI TEC	112-106 169-28	2N2496	SSI TADI		2N2519	INL NASB SODI	166-34	2N2550	CSR ETC	203-69
2N2422B	ESE SLD SST	345-19	2N2467	SSI TEC	169-36 169-43	2N2497	SSI TADI		2N2520	CSR GTC DEF ETC	166-34	2N2551	CSR ETC	203-70
2N2423	WAB CEN SLD SST	210-18	2N2468	SSI TEC	173-44	2N2498	SSI TADI		2N2521	INL NASB SODI	166-34	2N2552	CSR ETC	203-71
2N2424	CSR LTE	133-69	2N2469	SSI TEC	173-67	2N2499	SSI TADI		2N2522	CSR GTC DEF ETC	166-34	2N2553	CSR ETC	203-72
2N2425	SCA SSI	311-26	2N2470	SSI TEC	173-79	2N2500	SSI TADI		2N2523	INL NASB SODI	166-34	2N2554	CSR ETC	203-73
2N2426	STI CSI	119-103	2N2471	SSI TEC	173-82 148-91	2N2501	SSI TADI		2N2524	CSR GTC DEF ETC	166-34	2N2555	CSR ETC	203-74
2N2427	WAB CEN SLD SST	172-42	2N2472	SSI TEC	112-96 295-16 291-28	2N2502	SSI TADI		2N2525	INL NASB SODI	166-34	2N2556	CSR ETC	203-75
2N2428	APX PHIC SPE	113-7	2N2473	SSI TEC	169-36 169-43	2N2503	SSI TADI		2N2526	CSR GTC DEF ETC	166-34	2N2557	CSR ETC	203-76
2N2429	WAB CEN SLD SST	113-9	2N2474	SSI TEC	173-44	2N2504	SSI TADI		2N2527	INL NASB SODI	166-34	2N2558	CSR ETC	203-77
2N2430	APX PHIC SPE	120-29	2N2475	SSI TEC	173-67	2N2505	SSI TADI		2N2528	CSR GTC DEF ETC	166-34	2N2559	CSR ETC	203-78
2N2431	WAB CEN SLD SST	115-36	2N2476	SSI TEC	173-79	2N2506	SSI TADI		2N2529	INL NASB SODI	166-34	2N2560	CSR ETC	203-79
2N2432	APX PHIC SPE	339-80	2N2477	SSI TEC	173-82 148-91	2N2507	SSI TADI		2N2530	CSR GTC DEF ETC	166-34	2N2561	CSR ETC	203-80
2N2433	WAB CEN SLD SST	346-5	2N2478	SSI TEC	112-96 295-16 291-28	2N2508	SSI TADI		2N2531	INL NASB SODI	166-34	2N2562	CSR ETC	203-81
2N2434	APX PHIC SPE	156-11	2N2479	SSI TEC	112-106 169-28	2N2509	SSI TADI		2N2532	CSR GTC DEF ETC	166-34	2N2563	CSR ETC	203-82
2N2435	WAB CEN SLD SST	346-6	2N2480	SSI TEC	169-36 169-43	2N2510	SSI TADI		2N2533	INL NASB SODI	166-34	2N2564	CSR ETC	203-83
JAN2N2432	none	156-53	2N2481	SSI TEC	173-44	2N2511	SSI TADI		2N2534	CSR GTC DEF ETC	166-34	2N2565	CSR ETC	203-84
2N2432A	WAB CEN SLD SST	346-6	2N2482	SSI TEC	173-67	2N2512	SSI TADI		2N2535	INL NASB SODI	166-34	2N2566	CSR ETC	203-85
cont.next.col.			2N2483	SSI TEC	173-79	2N2513	SSI TADI		2N2536	CSR GTC DEF ETC	166-34	2N2567	CSR ETC	203-86

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2N3070	AMX CEN CSR MEHK NSC SODI STR	197-88	2N3109 (cont.)	SDE SGAI SST TEC	309-18 183-89	2N3125	CEN GPD SPE CEN GPD	209-24	2N3147 (cont.)	LTE SST STI SLD	283-50	2N3186 (cont.)	CSR SCA SOD SSI	224-55
2N3071	AMX INL NASB SODI STR	197-69	2N3110	CRI DEF GDC ITT MOTA NSC RTN SDE SGAI SST TEC	188-96 183-12	2N3126	CSR	209-25	2N3149	AMC CRI PTI SPC TEC	283-51	2N3187	AMC SCA SSI	224-56
2N3072	CSI DEF GTC MEHK NJS NTR SCA SES	141-100 296-87	2N3112	CEC CEN CSR GDC IDI MOTA NSC SEI	169-78 302-76	2N3127	SEI	108-48	2N3150	AMC CRI PTI SPC TEC	283-52	2N3188	AMC SCA SSI	224-57
2N3073	CRI DEF GTC MEHK NASB NTR RTN SDE SGAI	296-88 132-66	2N3114	CEC CEN CSR GDC IDI MOTA NSC SEI SGAI SPE SST TEC TIIB	188-96 183-12	JAN2N3127	none	108-49	2N3151	AMC CRI PTI SPC TEC	283-52	2N3189	AMC SCA SSI	224-58
2N3074	STI	109-80	2N3115	CRI DEF GTC ITT NASB NJS NTR SCA SES	169-78 302-76	2N3132	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	209-26 329-30 138-80 302-67	2N3152	AMC CRI PTI SPC TEC	283-52	2N3190	AMC SCA SSI	224-59
2N3075	STI	109-81	2N3116	CRI DEF GTC ITT NASB NJS NTR SCA SES	302-77 169-79	2N3133	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	138-81	2N3153	AMC CRI PTI SPC TEC	283-52	2N3191	AMC SCA SSI	224-60
2N3076	TRW CRI	274-97	2N3117	CRI DEF GTC ITT NASB NJS NTR SCA SES	166-49	2N3134	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-68 138-81	2N3154	AMC CRI PTI SPC TEC	283-52	2N3192	AMC SCA SSI	224-61
2N3077	IDI SES	166-47	2N3118	CRI DEF GTC ITT NASB NJS NTR SCA SES	235-44	2N3135	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	135-72 302-69	2N3155	AMC CRI PTI SPC TEC	283-52	2N3193	AMC SCA SSI	224-62
2N3078	IDI SES	166-48	2N3119	CRI DEF GTC ITT NASB NJS NTR SCA SES	235-45	2N3136	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3156	AMC CRI PTI SPC TEC	283-52	2N3194	AMC SCA SSI	224-63
2N3079	CRI SLD SPE	326-93 280-91	2N3120	CRI DEF GTC ITT NASB NJS NTR SCA SES	296-89 141-101	2N3137	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3157	AMC CRI PTI SPC TEC	283-52	2N3195	AMC SCA SSI	224-64
2N3080	KER SPC	280-92 326-94	2N3121	CRI DEF GTC ITT NASB NJS NTR SCA SES	132-67 296-90	2N3138	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3158	AMC CRI PTI SPC TEC	283-52	2N3196	AMC SCA SSI	224-65
2N3081	GTC NASB RTN SDE	138-62 300-91	2N3122	CRI DEF GTC ITT NASB NJS NTR SCA SES	183-90	2N3139	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3159	AMC CRI PTI SPC TEC	283-52	2N3197	AMC SCA SSI	224-66
2N3084	INL	200-20	2N3123	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3140	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3160	AMC CRI PTI SPC TEC	283-52	2N3198	AMC SCA SSI	224-67
2N3085	INL	200-21	2N3124	CRI DEF GTC ITT NASB NJS NTR SCA SES	209-23	2N3141	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3161	AMC CRI PTI SPC TEC	283-52	2N3199	AMC SCA SSI	224-68
2N3086	INL	200-22	2N3125	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3142	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3162	AMC CRI PTI SPC TEC	283-52	2N3200	AMC SCA SSI	224-69
2N3087	INL	200-23	2N3126	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3143	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3163	AMC CRI PTI SPC TEC	283-52	2N3201	AMC SCA SSI	224-70
2N3088	INL	200-24	2N3127	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3144	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3164	AMC CRI PTI SPC TEC	283-52	2N3202	AMC SCA SSI	224-71
2N3088A	INL	200-25	2N3128	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3145	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3165	AMC CRI PTI SPC TEC	283-52	2N3203	AMC SCA SSI	224-72
2N3089	INL	200-26	2N3129	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3146	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3166	AMC CRI PTI SPC TEC	283-52	2N3204	AMC SCA SSI	224-73
2N3089A	INL	200-27	2N3130	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3147	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3167	AMC CRI PTI SPC TEC	283-52	2N3205	AMC SCA SSI	224-74
2N3107	CRI DEF GTC ITT NASB NTR SCA SES SLD SST TADI	184-18 309-34	2N3131	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3148	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3168	AMC CRI PTI SPC TEC	283-52	2N3206	AMC SCA SSI	224-75
2N3108	CRI DEF GTC ITT NASB NTR SCA SES SLD SST TADI	309-17 183-88	2N3132	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3149	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3169	AMC CRI PTI SPC TEC	283-52	2N3207	AMC SCA SSI	224-76
2N3109	CRI DEF GTC ITT NASB NTR	184-19 309-35	2N3133	CRI DEF GTC ITT NASB NJS NTR SCA SES	186-8	2N3150	CEN CSI DEF GTC MEHK NJS NTR SCA SPE SLD SPR SST TADI	302-70 135-73	2N3170	AMC CRI PTI SPC TEC	283-52	2N3208	AMC SCA SSI	224-77

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2N3511 (cont.)	IDC SCA SPE	289 - 63	2N3564	CEN DEF IDC MEHK NJS SDE SPE STI	150 - 75	2N3578	AMX INL THID SCA SPE	189 - 1	2N3600	APX CRI ETC FERB IDC IDR NTR SES SSI	151 - 50	2N3622 (cont.)	SCA SSI SOD GTC SCA SSI SCA SSI SCA SSI CSR KER SPE SSI CSR KER SDE SSI	241 - 17
2N3512	ETC NJS	292 - 89 185 - 75	2N3565	CEN DEF IDC MEHK NJS SDE SPE STI	148 - 72	2N3581	AMC GTC INR KER MISA NPC SPE STI	135 - 19	2N3605	MEHK MISI NPC NTR SPE THCF	150 - 36 296 - 12	2N3624	SSI CSR KER SPE SSI CSR KER SDE SSI	241 - 18
2N3513	IDC	340 - 37	2N3566	CEN DEF IDC MEHK NJS SDE SPE STI	156 - 55	2N3582	AMC GTC INR KER MISA NPC SPE STI	135 - 20	2N3606	MEHK MISI NPC NTR SPE THCF	296 - 13 163 - 43 150 - 37 297-106	2N3625	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 98
2N3516	IDC	340 - 38	2N3567	CEN DEF IDC MEHK NJS SDE SPE STI	157 - 10	2N3583	AMC GTC INR KER MISA NPC SPE STI	133 - 83	2N3607	MEHK MISI NPC NTR SPE THCF	252 - 91	2N3626	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 99
2N3521	IDC	340 - 39	2N3568	CEN DEF IDC MEHK NJS SDE SPE STI	157 - 11	2N3584	AMC GTC INR KER MISA NPC SPE STI	252 - 92	2N3608	MEHK MISI NPC NTR SPE THCF	252 - 92 325 - 13	2N3627	SSI CSR KER SPE SSI CSR KER SDE SSI	241 - 19
2N3522	IDC	340 - 40	2N3569	CEN DEF IDC MEHK NJS SDE SPE STI	157 - 12	2N3585	AMC GTC INR KER MISA NPC SPE STI	252 - 94	2N3609	MEHK MISI NPC NTR SPE THCF	325 - 14	2N3628	SSI CSR KER SPE SSI CSR KER SDE SSI	241 - 20
2N3526	IDC	183 - 13	2N3570	CEN DEF IDC MEHK NJS SDE SPE STI	152 - 20	2N3586	AMC GTC INR KER MISA NPC SPE STI	325 - 26	2N3610	MEHK MISI NPC NTR SPE THCF	325 - 26 252 - 93 252 - 94 325 - 14	2N3629	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 100
2N3527	IDC	134 - 54	2N3571	CEN DEF IDC MEHK NJS SDE SPE STI	151 - 108	2N3587	AMC GTC INR KER MISA NPC SPE STI	252 - 95	2N3611	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3630	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3543	SCA SSI	261 - 12	2N3572	CEN DEF IDC MEHK NJS SDE SPE STI	151 - 66	2N3588	AMC GTC INR KER MISA NPC SPE STI	252 - 96	2N3612	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3631	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3544	GTC SCA	161 - 35	2N3573	CEN DEF IDC MEHK NJS SDE SPE STI	188 - 4	2N3589	AMC GTC INR KER MISA NPC SPE STI	252 - 97	2N3613	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3632	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3545	CEN CSR IDC NTR SDE SPE TADI	133 - 14 294 - 90	2N3574	CEN DEF IDC MEHK NJS SDE SPE STI	188 - 8	2N3590	AMC GTC INR KER MISA NPC SPE STI	252 - 98	2N3614	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3633	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3546	GTC IDC MEHK NTR SDE SPE TADI	291 - 10 133 - 60	2N3575	CEN DEF IDC MEHK NJS SDE SPE STI	188 - 15	2N3591	AMC GTC INR KER MISA NPC SPE STI	252 - 99	2N3615	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3634	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3547	CEN GTC MEHK NTR SDE SPE TADI	134 - 107	2N3576	CEN DEF IDC MEHK NJS SDE SPE STI	133 - 37 291 - 71	2N3592	AMC GTC INR KER MISA NPC SPE STI	252 - 100	2N3616	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3635	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3548	CEN GTC MEHK NTR SPE	135 - 11	2N3577	CEN DEF IDC MEHK NJS SDE SPE STI	188 - 4	2N3593	AMC GTC INR KER MISA NPC SPE STI	252 - 101	2N3617	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3636	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3549	CEN GTC MEHK NTR SPE	135 - 12	2N3578	CEN DEF IDC MEHK NJS SDE SPE STI	188 - 15	2N3594	AMC GTC INR KER MISA NPC SPE STI	252 - 102	2N3618	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3637	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3550	CEN GTC NASB SSI	135 - 13	2N3579	CEN DEF IDC MEHK NJS SDE SPE STI	291 - 71	2N3595	AMC GTC INR KER MISA NPC SPE STI	252 - 103	2N3619	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3638	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3551	GTC PPC SSI	265 - 90 311 - 90	2N3580	CEN DEF IDC MEHK NJS SDE SPE STI	188 - 4	2N3596	AMC GTC INR KER MISA NPC SPE STI	252 - 104	2N3620	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3639	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3552	GTC PPC SSI	311 - 91 265 - 91	2N3581	CEN DEF IDC MEHK NJS SDE SPE STI	291 - 71	2N3597	AMC GTC INR KER MISA NPC SPE STI	252 - 105	2N3621	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3640	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3553	APX CRI FERB MEHK MULB PHIC RTN SEI SSS TADI UPI	239 - 49	2N3582	CEN DEF IDC MEHK NJS SDE SPE STI	291 - 71	2N3598	AMC GTC INR KER MISA NPC SPE STI	252 - 106	2N3622	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3641	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
JAN2N3553	GTC PPC SSI	265 - 90 311 - 90	2N3583	CEN DEF IDC MEHK NJS SDE SPE STI	291 - 71	2N3599	AMC GTC INR KER MISA NPC SPE STI	252 - 107	2N3623	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3642	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3554	CEN GTC NASB SDE TADI TIID	295 - 40 185 - 18	2N3584	CEN DEF IDC MEHK NJS SDE SPE STI	291 - 71	2N3600	AMC GTC INR KER MISA NPC SPE STI	252 - 108	2N3624	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3643	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101
2N3563	CEN CSR DIT IDI NASB NSC SEI SES SPR SST STR	151 - 12	2N3585	CEN DEF IDC MEHK NJS SDE SPE STI	291 - 71	2N3601	AMC GTC INR KER MISA NPC SPE STI	252 - 109	2N3625	MEHK MISI NPC NTR SPE THCF	325 - 27 252 - 95 157 - 51 340 - 41	2N3644	SSI CSR KER SPE SSI CSR KER SDE SSI	252 - 101

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2N3720 (cont.)	CSR KER PPC SES SOD SST TEC		2N3730 (cont.)	GPD IDI SPE STI		2N3741A (cont.)	SES		JAN2N3762	MOTA	215-58	2N3773 (cont.)	DIT GTC IDI MISI NASB NPC RCAB SDE SEN SOD SPE SST STR UPI	
2N3721	CEN CSR MEHK NSC SES SPR	147-109	2N3731	CRI GPD IDI SPE STR	202-99	2N3742	ETC GTC IDI NASB SCA STC	236-108	2N3762A	ΔMOTA	296-46	2N3774	AMC CSR SOD SST TSI	216-109
2N3722	CSR NASB RTN SDE SSI	185-100 300-46	2N3732	CRI GPD GTC SST	202-84	2N3742S	KER MOTA	236-109	2N3762S	MOTA	215-82	2N3775	AMC CSR SOD SST TSI	324-101
2N3723	CSR IDI NTR SPE	302-33 185-101	2N3733	CRI GTC SST	249-34	2N3743	CSR GTC IDI SSI STI	215-98	2N3763	CRI GTC NASB SCA SPE SST TADI	215-59 296-47 295-53 137-48	2N3776	CRI CSR SOD SST TSI	217-1 324-103
2N3724	CEN CSR ETC GTC ITT MEHK NASB NPC NTR SEI SGAI SPR TADI THCF TIIB TIIF	185-102 294-106	2N3734	CRI ETC IDI MEHK NJS NTR RTN SCA SEI SPE SST TADI	235-47 297-108	2N3743S	AMC GSE IDI PPC SCA SLD SST STR TRW	215-100 306-45 259-50	2N3764	ΔMOTA	137-49	2N3777	AMC CSR SOD SST TSI	324-104 217-2
2N3724A	CEN ESE IDI MEHK NSC RTN SES TIIB TIIF	294-107 236-106	2N3735	CEC CRI ETC IDI NJS SCA SST TADI	297-109 235-48 235-49 297-78	2N3744	AMC GSE IDI PPC SCA SLD SST STR TRW	306-47 259-52	2N3764A	ΔMOTA	296-48 295-43 136-29 137-12 295-44	2N3778	CRI CSR SOD SST TSI	217-3 324-105
2N3725	CEN CSR ESE FSC GTC IDI ITT MEHK NASB NPC NTR RTN SES SLD SPE SPR TADI THCF TIIB TIIF	294-108 185-103	2N3736	CRI TSI	174-27 297-79	2N3745	AMC GSE IDI PPC SCA SLD SST STR TRW	259-51 306-46	2N3765	CRI SSI TADI UPI	296-49 137-13 249-58	2N3779	AMC CSR SOD SST TSI	324-106 217-4
2N3725A	CEN CSR ESE FSC GTC IDI ITT MEHK NASB NPC NTR RTN SES SLD SPE SPR TADI THCF TIIB TIIF	294-109 236-107	2N3737	CEC RTN SSI	298-28 174-28 249-56	2N3746	AMC GSE IDI PPC SCA SLD SST STR TRW	302-103 259-54	2N3766	ΔMOTA	250-53 310-55 249-59	2N3780	AMC CSR SOD SST TSI	217-5 324-107
2N3726	GTC MEHK NSC SCA SGAI SSI TADI	135-14	2N3738	AMC GDC IDI MISI SPE STC	249-57	2N3747	AMC GSE IDI PPC SCA SLD SST STR TRW	259-53 302-102	2N3767	ΔMOTA	274-38 327-98	2N3781	AMC CSR SOD SST TSI	324-108 217-6
2N3727	GTC MEHK NSC SCA TADI	135-15	2N3739	AMC GDC KER SPE STC	248-48 323-75 219-98	2N3748	AMC GSE IDI PPC SCA SLD SST STR TRW	311-28 257-90	2N3767A	AMC CSR DIT FSC GSE IDI KER NJS SDE SEI SLD SOD SPE SST TEC UPI	250-54 310-56 273-17	2N3782	AMC CSR SOD SST TSI	217-7 324-109
2N3728	RTN STI	170-61 340-43	2N3740	AMC AMR CEC CSR GTC IDI MISI NPC PPC SES SOD SPE SSI SST TEC THCF	219-99 314-80	2N3749	AMC GSE IDI PPC SCA SLD SST STR TRW	259-55 302-104	2N3768	ΔMOTA	273-18	2N3783	AMC CSR SOD SST TSI	268-16
2N3729	RTN SPE TADI	340-44 170-62	2N3740A	AMC KER SES SSI	219-100	2N3750	AMC GSE IDI PPC SCA SLD SST STR TRW	302-108 259-57	2N3769	AMC CSR DIT FSC GSE IDI KER NJS SDE SEI SLD SOD SPE SST TEC UPI	274-39 327-50	2N3784	AMC CSR SOD SST TSI	217-8 324-110
2N3730	cont.next col.		2N3741	AMC CRI FSC KER MISI NPC PPC SES SOD SPE SSI SST TEC THCF	219-101	2N3751	AMC GSE IDI PPC SCA SLD SST STR TRW	295-51 215-81	2N3770	AMC CSR DIT FSC GSE IDI KER NJS SDE SEI SLD SOD SPE SST TEC UPI	273-19	2N3785	AMC CSR SOD SST TSI	324-110
			2N3741A	AMC KER NASB	219-103	2N3752	AMC GSE IDI PPC SCA SLD SST STR TRW	302-109	2N3771	ΔMOTA	273-18	2N3786	AMC CSR SOD SST TSI	226-67
						2N3753	AMC GSE IDI PPC SCA SLD SST STR TRW	295-51 215-81	2N3772	AMC CSR DIT FSC GSE IDI KER NJS SDE SEI SLD SOD SPE SST TEC UPI	274-39 327-50	2N3787	AMC CSR SOD SST TSI	226-68
						2N3754	AMC GSE IDI PPC SCA SLD SST STR TRW	295-51 215-81	2N3773	ΔMOTA	338-49	2N3788	AMC CSR SOD SST TSI	226-69
						2N3755	AMC GSE IDI PPC SCA SLD SST STR TRW	295-51 215-81	2N3774	AMC CSR DIT FSC GSE IDI KER NJS SDE SEI SLD SOD SPE SST TEC UPI	274-39 327-50	2N3789	AMC CSR SOD SST TSI	226-69

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2N4062 (cont.)	CRI GDC ITT NASB NSC SEI SLD ♦SPR TIIB		2N4090	CRI MISI ♦TSC	189-8 201-48	2N4114 (cont.)	SSI STC		2N4126 (cont.)	SEI SLD ♦SPR SST STI TIIB UPI ♦TII		2N4208	♦FSC CEN CNR GTC MEHK NASB NTR SPE	281-11 129-92
2N4063	♦RCA ♦GDC RCAB SPE STC	242-96	2N4091	AMEN CEN CSR INL ♦MOTA NPC ♦PHIN ♦SIX ♦SODI TADI THCF TIIB TIIF ♦VALG		2N4115	AMC GSE GTC IDI SSI TRW UNI	260-98	2N4127	♦TRW FERB SPE TIC	250-55	2N4209	♦FSC CEN CNR GTC MEHK NASB NTR	129-96 291-24
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2N4065	GIC	307-44	2N4092	AMEN CEN CSR INL MISI NASB ♦NSC ♦PHIN ♦SIX ♦RTCF SLD SPE TADI THCF TIIB TIIF ♦VALG		2N4117	♦SIX ♦MOTA NASB SODI TSC	194-9	2N4129	CRI NSC AMC IDI KER SCA	271-74	2N4211	AMC GSE IDC ISA SDE SOD SST ♦STC	274-109
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2N5624	CRI AMC ♦GSE CSR IDI GTC ♦PPC SCA SDE SOD SSI STC TRW	270- 24	2N5639	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	288- 63 197- 18	2N5662	Δ♦UNI AMC CRI GSE IDI ♦KER SCA ♦KER SOD SSI ♦STC	232- 73 310- 49 309-104 250- 76	2N5680	AMC CEC CSR FSC GTC IDC IDI KER NASB SCA SES SSI STC STI TADI TEC	214- 45	2N5696	CRI GPD GPD	210- 39 210- 37
2N5625	CRI AMC PPC CSR SOD SCA STC	226- 5	2N5640	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	197- 19 289- 4	2N5663	Δ♦UNI AMC CRI GSE IDI ♦KER SCA ♦KER SOD SSI ♦STC	232- 74 310- 50 309-105 257- 97	2N5681	AMC AMR CSR FSC GTC IDC IDI KER NASB SCA SES SSI STC STI TADI TEC	231- 55	2N5697	ΔTRW CRI CSI SPE TIC	237- 23
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2N5628	CRI AMC ♦GSE CSR IDI GTC ♦PPC SCA SDE SOD SSI STC TRW	270- 26	2N5643	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	260- 50	JAN2N5665	Δ♦UNI AMC CRI GSE IDI ♦KER SCA ♦KER SOD SSI ♦STC	310- 53 232- 75 250- 78 309-108	2N5684	AMC INR PPC PPC ♦STC TEC TIIB	227- 71 323- 66 282- 98	2N5700	CRI GPD GPD	210- 42 210- 40
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2N5631	AMC CRI CSR GTC IDI INR ♦KER PPC SCA ♦SEN SOD SOD ♦SPC SSI SST STC TEC TRW	278- 5	2N5646	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	252- 58	2N5668	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	197- 24	2N5687	AMC CRI INR INR PPC PPC ♦STC TEC TIIB	227- 74 323- 69 282- 101	2N5703	CRI GPD GPD	210- 45 210- 43
2N5632	AMC CRI CSR FSC GTC IDI INR ♦KER PPC SCA SDE ♦SEN SLD SOD ♦SPC SSI SST STC TEC TRW	274- 41	2N5647	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	194- 69	2N5669	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	197- 25	JAN2N5688	AMC CRI INR INR PPC PPC ♦STC TEC TIIB	227- 75 323- 70 282- 102	2N5704	CRI GPD GPD	210- 46 210- 44
2N5633	AMC CRI CSR GTC IDI INR ♦KER PPC SCA ♦SEN SOD SOD ♦SPC SSI SST STC TEC TRW	274- 42	2N5648	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	194- 70	2N5670	Δ♦MOTA CRI INL MEHK NASB NSC ♦SIX SODI SPE SST TSC	197- 26	2N5688	AMC CRI INR INR PPC PPC ♦STC TEC TIIB	227- 76 323- 71 282- 103	2N5705	CRI GPD GPD	210- 47 210- 45

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2N5886	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	320-17 278-7	2N5928	PTI KER PTI	327-4 283-85 283-86 327-5	2N5959	AMC GTC KER SOD SSI none	322-43 275-22 226-103 322-36	2N6003	SST	291-52 135-110	2N6041	AMR CSR GSE	319-50 278-8
2N5887	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-22	2N5929	CRI KER SCA SES SST TEC	275-10 317-27	JAN2N5959	AMC GTC KER SOD SSI none	322-44 226-104 179-55	2N6004	SPE	169-96 290-82	2N6042	AMR CSR GSE	319-52 278-10
2N5888	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-23	2N5930	GSE SCA SES SST TEC	317-28 275-11	2N5960	AMC CRI SCA SSI STC none	278-44 322-45 322-38 227-41	2N6005	SPE	174-107 293-63	2N6043	AMR CSR GSE	319-52 278-10
2N5889	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-24	2N5931	GSE SCA SES SST TEC	275-12 317-29	JAN2N5960	AMC CRI SCA SSI STC none	278-44 322-45 322-38 227-41	2N6006	SPE	174-107 293-63	2N6044	AMR CSR GSE	319-52 278-10
2N5890	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-25	2N5932	GSE SCA SES SST TEC	275-13 319-47	2N5961	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6007	SPE	174-108 293-64	2N6045	AMR CSR GSE	319-52 278-10
2N5891	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-26	2N5933	GSE SCA SES SST TEC	275-14 319-49	2N5962	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6008	SPE	174-108 293-64	2N6046	AMR CSR GSE	319-52 278-10
2N5892	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-27	2N5934	GSE SCA SES SST TEC	275-15 319-49	2N5963	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6009	SPE	174-108 293-64	2N6047	AMR CSR GSE	319-52 278-10
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2N5895	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-30	2N5937	GSE SCA SES SST TEC	275-18	2N5966	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6012	SPE	174-108 293-64	2N6050	AMR CSR GSE	319-52 278-10
2N5896	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-31	2N5938	GSE SCA SES SST TEC	275-19	2N5967	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6013	SPE	174-108 293-64	2N6051	AMR CSR GSE	319-52 278-10
2N5897	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-32	2N5939	GSE SCA SES SST TEC	275-20	2N5968	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6014	SPE	174-108 293-64	2N6052	AMR CSR GSE	319-52 278-10
2N5898	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-33	2N5940	GSE SCA SES SST TEC	275-21	2N5969	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6015	SPE	174-108 293-64	2N6053	AMR CSR GSE	319-52 278-10
2N5899	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-34	2N5941	GSE SCA SES SST TEC	275-22	2N5970	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6016	SPE	174-108 293-64	2N6054	AMR CSR GSE	319-52 278-10
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2N5901	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	206-36	2N5943	GSE SCA SES SST TEC	275-24	2N5972	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6018	SPE	174-108 293-64	2N6056	AMR CSR GSE	319-52 278-10
2N5902	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	200-2 341-42	2N5944	GSE SCA SES SST TEC	275-25	2N5973	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6019	SPE	174-108 293-64	2N6057	AMR CSR GSE	319-52 278-10
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2N5904	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	200-4 341-44	2N5946	GSE SCA SES SST TEC	275-27	2N5975	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6021	SPE	174-108 293-64	2N6059	AMR CSR GSE	319-52 278-10
2N5905	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	341-45 200-5	2N5947	GSE SCA SES SST TEC	275-28	2N5976	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6022	SPE	174-108 293-64	2N6060	AMR CSR GSE	319-52 278-10
2N5906	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	200-6 341-46	2N5948	GSE SCA SES SST TEC	275-29	2N5977	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6023	SPE	174-108 293-64	2N6061	AMR CSR GSE	319-52 278-10
2N5907	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	341-47 200-7	2N5949	GSE SCA SES SST TEC	275-30	2N5978	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6024	SPE	174-108 293-64	2N6062	AMR CSR GSE	319-52 278-10
2N5908	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	200-8 341-48	2N5950	GSE SCA SES SST TEC	275-31	2N5979	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6025	SPE	174-108 293-64	2N6063	AMR CSR GSE	319-52 278-10
2N5909	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	341-49 200-9	2N5951	GSE SCA SES SST TEC	275-32	2N5980	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6026	SPE	174-108 293-64	2N6064	AMR CSR GSE	319-52 278-10
2N5910	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	130-27 291-15	2N5952	GSE SCA SES SST TEC	275-33	2N5981	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6027	SPE	174-108 293-64	2N6065	AMR CSR GSE	319-52 278-10
2N5911	AMC FSC IDI KER SCA SOD SPE SST TEC TIIB	200-10 341-50	2N5953	GSE SCA SES SST TEC	275-34	2N5982	AMC CEN SPE	278-44 322-45 322-38 227-41	2N6028	SPE	174-108 293-64	2N6066	AMR CSR GSE	319-52 278-10
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2N6277	Δ♦MOTA AMC GTC KER SSI	280-101 313-32	2N6307	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC ♦STC	270-93	JAN2N6341	none	318-61 278-19	JAN2N6384	AMC ♦INR ♦PMN ♦RCAB	335-10 324-53 334-95	2N6448	Δ♦MOTA STI	341-66
JAN2N6277	none	318-59 280-102 280-103	2N6308	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	270-94 319-9	2N6350	ΔUNI ♦STC	318-8 331-62	2N6385	Δ♦RCA AMC ♦INR ♦PMN ♦RCAB	335-11 324-54 334-16	2N6449	Δ♦MOTA STI	175-90
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2N6283	Δ♦MOTA GTC KER	336-89	2N6316	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	265-56	JAN2N6353	UNI	318-11 332-44 318-71	2N6390	♦PPC	245-34	2N6455	Δ♦MOTA CRI	260-52
2N6284	Δ♦MOTA GTC KER	336-90	2N6317	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	225-13 320-20	2N6354	Δ♦RCA AMC KER SCA ♦STC ♦RCA SCA ♦STC	312-53 271-94	2N6391	♦PPC	249-61	2N6456	Δ♦MOTA CRI	262-100
2N6285	Δ♦MOTA CRI ♦PMN	336-91	2N6318	Δ♦MOTA AMC KER	225-14	2N6355	Δ♦RCA AMC KER SCA ♦STC	337-67	2N6406	Δ♦MOTA GTC	218-108	2N6466	Δ♦RCA CRI ♦MOTA ♦PPC	272-97
2N6286	Δ♦MOTA GTC KER	336-92	2N6322	Δ♦MOTA AMC KER	283-87	2N6356	Δ♦RCA AMC KER SCA ♦STC	337-72	2N6407	Δ♦MOTA GTC	218-109	2N6467	Δ♦RCA CRI ♦MOTA ♦PPC	276-101
2N6287	Δ♦MOTA GTC KER	336-93	2N6323	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	283-88	2N6357	Δ♦RCA AMC KER SCA ♦STC	337-68	2N6408	Δ♦MOTA GTC	218-110	2N6468	Δ♦RCA CRI ♦MOTA ♦PPC	270-67
2N6288	Δ♦RCA GTC MEHK RCAB	258-38	2N6324	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	283-89	2N6358	Δ♦RCA AMC KER SCA ♦STC	337-73	2N6409	Δ♦MOTA GTC	218-111	2N6469	Δ♦RCA CRI ♦MOTA ♦PPC	271-98
2N6289	Δ♦RCA NSC RCAB	258-39	2N6325	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	283-90	2N6359	Δ♦RCA AMC KER SCA ♦STC	337-74	2N6410	Δ♦MOTA GTC	218-112	2N6470	Δ♦RCA CRI ♦MOTA ♦PPC	244-15
2N6290	Δ♦RCA GTC MEHK RCAB	258-40	2N6326	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	278-11	JAN2N6365	none	274-51	2N6411	Δ♦MOTA GTC	218-113	2N6471	Δ♦RCA CRI ♦MOTA ♦PPC	244-16
2N6291	Δ♦RCA CRI	258-41	2N6327	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	278-12	2N6365A	none	274-52	2N6412	Δ♦MOTA GTC	218-114	2N6472	Δ♦RCA CRI ♦MOTA ♦PPC	244-17
2N6292	Δ♦RCA GTC MEHK RCAB	258-42	2N6328	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	278-13	JAN2N6365A	none	274-53	2N6413	Δ♦MOTA GTC	218-115	2N6473	Δ♦RCA CRI ♦MOTA ♦PPC	244-18
2N6293	Δ♦RCA NSC RCAB	258-43	2N6329	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-27	2N6366	Δ♦MOTA GTC	112-53 112-54 112-55	2N6414	Δ♦MOTA GTC	218-116	2N6474	Δ♦RCA CRI ♦MOTA ♦PPC	255-8
2N6294	Δ♦MOTA KER	332-58	2N6330	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-28	2N6366A	none	112-56	2N6415	Δ♦MOTA GTC	218-117	2N6475	Δ♦RCA CRI ♦MOTA ♦PPC	255-9
2N6295	Δ♦MOTA KER	332-59	2N6331	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-29	2N6367	Δ♦MOTA GTC	243-4	2N6416	Δ♦MOTA GTC	218-118	2N6476	Δ♦RCA CRI ♦MOTA ♦PPC	221-77
2N6296	Δ♦MOTA CRI	222-44	2N6332	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-30	2N6368	Δ♦MOTA GTC	248-58	2N6417	Δ♦MOTA GTC	218-119	2N6477	Δ♦RCA CRI ♦MOTA ♦PPC	221-78
2N6297	Δ♦MOTA KER	222-45	2N6333	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-31	2N6369	Δ♦MOTA GTC	248-59	2N6418	Δ♦MOTA GTC	218-120	2N6478	Δ♦RCA CRI ♦MOTA ♦PPC	221-79
2N6298	Δ♦MOTA KER	333-35	2N6334	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-32	2N6370	Δ♦MOTA GTC	278-48 248-59	2N6419	Δ♦MOTA GTC	218-121	2N6479	Δ♦RCA CRI ♦MOTA ♦PPC	258-44
2N6299	Δ♦MOTA KER	333-36	2N6335	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	227-33	2N6371	Δ♦MOTA GTC	278-49	2N6420	Δ♦MOTA GTC	218-122	2N6480	Δ♦RCA CRI ♦MOTA ♦PPC	258-45
2N6300	Δ♦MOTA KER	333-37	2N6336	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	278-14 311-98	2N6372	Δ♦MOTA GTC	270-29	2N6421	Δ♦MOTA GTC	218-123	2N6481	Δ♦RCA CRI ♦MOTA ♦PPC	226-22
2N6301	Δ♦MOTA KER	333-38	2N6337	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	278-15	2N6373	Δ♦MOTA GTC	274-51	2N6422	Δ♦MOTA GTC	218-124	2N6482	Δ♦RCA CRI ♦MOTA ♦PPC	226-23
2N6302	Δ♦MOTA SPE	274-50	2N6338	Δ♦MOTA AMC KER ♦RCA ♦SCA ♦STC	278-16	JAN2N6373	none	274-52	2N6423	Δ♦MOTA GTC	218-125	2N6483	Δ♦RCA CRI ♦MOTA ♦PPC	226-24
2N6303	Δ♦MOTA GTC SGAI	301-73 214-46	JAN2N6338	none	318-60 278-15 311-99	2N6374	Δ♦MOTA AMC PPC SSI	274-53	2N6424	Δ♦MOTA GTC	218-126	2N6484	Δ♦RCA CRI ♦MOTA ♦PPC	226-25
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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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3N117	Δ SPR		346-100		Δ RCAs			Δ TII		92PU53	NSC	234-99		STI	279-58
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	AMR				Δ RCAs		3N232	Δ TII	192-17	92PU70	NSC	234-99	154-12	STI	279-68
JAN3N127	none		148-79		Δ RCAs			Δ TII		92PU71	NSC	234-99		STI	279-69
			346-106		Δ RCAs		3N233	Δ TII	192-18	92PU72	NSC	234-99	154-12SPC	SPC	324-91
3N128	Δ RCAs		197-44		Δ RCAs			Δ TII		92PU73	NSC	234-99		STI	279-70
	Δ RCAs				Δ RCAs		3N234	Δ TII	192-19	92PU74	NSC	234-99	154-14	STI	279-71
3N129	STR		126-55		Δ RCAs			Δ TII		92PU75	NSC	234-99		STI	279-72
	STR														

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
1763-0420	SSI	273-58	1776-1680	KER	319-38	2849-2	UNI	186-64	40238	186-64	(cont.)	40314	(cont.)	
1763-0610	KER	273-59	SSI	STC	281-63			306-98	NSC	306-98		RCAB	◆RCA	
	SSI	311-54	1776-1840	KER	281-64			259-101		259-101		SCA	SSI	
1763-0620	KER	315-21	SSI	STC	316-87	2849-3	UNI	306-97	40239	306-97		GTC	SCA	
	SSI	273-60	1776-1860	KER	319-39			244-40	NSC	244-40	147-43	NSC	SPE	
1763-0630	KER	273-61	SSI	STC	281-65			186-65	40240	186-65		SCA		40314L
	SSI	317-46	1814-2001	◆SSI	311-68	2850-1	KER	245-40	NSC	245-40	147-44	NSC	SCA	KER
1763-0810	KER	311-55	273-62	◆SSI	256-3	2850-2	◆UNI	304-50	40241	304-50		GTC	STI	237-50
	SSI	273-62	1814-2002	◆SSI	314-45			304-51	NSC	304-51		SCA	KER	237-51
1763-0820	KER	273-63	273-63	◆SSI	317-56	2850-3	◆UNI	257-103	40242	257-103	147-59	GTC	SCA	237-52
	SSI	315-22	1814-2005	◆SSI	256-5	2851-1	◆UNI	304-52	NSC	304-52		NSC	SCA	
1763-0830	KER	317-47	273-64	◆SSI	311-69			245-41	40243	245-41	147-56	GTC	STI	237-53
	SSI	273-65	1814-2201	◆SSI	314-46	2851-2	KER	245-42	NSC	245-42		SCA	RCAB	
1763-1010	KER	273-65	311-69	◆UNI	304-53		◆UNI	304-53	NSC	304-53		STI	RCAB	
	SSI	311-56	1814-2202	◆SSI	256-7	2851-3	◆UNI	304-54	NSC	304-54		SCA	STI	237-54
1763-1020	KER	315-23	273-66	◆SSI	317-57		◆UNI	257-104	40244	257-104	147-45	GTC	SCA	237-55
	SSI	273-67	1814-2205	◆SSI	311-70	2852-1	◆UNI	304-55	NSC	304-55		NSC	SSA	252-47
1763-1030	KER	273-67	317-48	◆SSI	256-9			245-43	40245	245-43	147-46	GTC	STI	237-56
	SSI	273-68	1814-2501	◆SSI	256-9	2852-2	◆UNI	304-26	NSC	304-26		SCA	RCAB	
1763-1210	KER	311-57	273-68	◆SSI	317-58	2852-3	◆UNI	304-27	NSC	304-27		SCA	STI	237-57
	SSI	273-69	1814-2502	◆SSI	256-11			245-44	40246	245-44	147-47	GTC	SSA	237-58
1763-1220	KER	273-69	315-24	◆SSI	256-12	2853-1	◆UNI	304-28	NSC	304-28		NSC	RCAB	
	SSI	273-69	1814-2505	◆SSI	311-71			245-45	40250	245-45	251-102	GTC	STI	237-55
1763-1230	KER	317-49	273-70	◆SSI	314-48	2853-2	KER	245-46	AMC	245-46		SCA	RCAB	
	SSI	273-71	1814-2701	◆SSI	256-13		◆UNI	304-56	KER	304-56		RCAB	STI	237-56
1763-1410	KER	311-58	1814-2702	◆SSI	256-13	2853-3	◆UNI	304-57	◆PPC	304-57		◆RCA	RCAB	237-57
	SSI	273-72	1814-2705	◆SSI	317-59	2853-3	◆UNI	257-106	RCAB	257-106		SPE	STI	253-74
1763-1420	KER	315-25	317-59	◆SSI	311-72	2854-1	KER	304-58	SSA	304-58		STI	◆PPC	◆RCA
	SSI	273-72	1814-3001	◆SSI	256-15	2854-2	◆UNI	245-47	40250V1	245-47	238-96	◆RCA	RCAB	◆STC
1763-1430	KER	273-73	317-59	◆SSI	311-72	2854-1	KER	245-48	40251	245-48	268-87	AMC	STI	
	SSI	317-50	1814-3002	◆SSI	256-16	2854-2	◆UNI	304-72	CEN	304-72		SCA	AMC	216-4
1763-1610	KER	311-59	317-59	◆SSI	314-49	2854-3	◆UNI	304-73	BELI	304-73		STI	AMC	
	SSI	273-74	1814-3005	◆SSI	256-17			257-107	GTC	257-107		GTC	IDI	216-4
1763-1620	KER	273-75	317-60	◆SSI	256-18	2855-1	◆UNI	304-74	KER	304-74		KER	NSC	
	SSI	315-26	1814-3201	◆SSI	311-73			245-49	◆RCA	245-49		SCA	RCAB	
1763-1630	KER	273-76	256-17	◆SSI	314-50	2855-2	KER	245-50	SFC	245-50		SPE	STI	
	SSI	273-77	1814-3202	◆SSI	314-50	2855-2	◆UNI	304-59	◆SSI	304-59		STC	STI	216-5
1763-1810	KER	273-77	311-73	◆SSI	256-19	2855-3	KER	304-60	40254	304-60	205-56	STI	KER	216-6
	SSI	311-60	1814-3205	◆SSI	317-61		◆UNI	257-108	SPE	257-108		STI	STI	
1763-1820	KER	315-27	317-61	◆SSI	256-20	2856-1	◆UNI	304-61	40255	304-61	244-41	STI	KER	216-6
	SSI	273-78	1814-3501	◆SSI	311-74	2856-1	KER	245-51	40256	245-51	244-42	STI	AMC	237-58
1763-1830	STI	273-79	256-21	◆SSI	256-22	2856-2	◆UNI	245-52	40261	245-52	107-8	STI	IDI	
	SSI	230-103	1814-3502	◆SSI	314-51	2856-3	◆UNI	304-29	40262	304-29	106-109	STI	SCA	
1768-0420	SSI	275-78	314-51	◆SSI	256-23		KER	304-30	40263	304-30	108-86	STI	RCAB	
1768-0610	KER	311-61	1814-3701	◆SSI	256-23		◆UNI	257-109	40264	257-109	108-86	STI	SSA	
	SSI	311-61	1814-3701	◆SSI	316-109	3000	CTR	304-31	40268	304-31	237-60	STI	STI	237-59
1768-0620	KER	315-28	316-109	KER	3001	3000	CTR	245-53	40269	245-53	238-97	STI	GTC	238-97
	SSI	275-79	1843-2005	◆SSI	273-80	3001	CTR	234-67	40279	234-67	244-43	STI	NSC	
1768-0630	KER	275-80	273-80	◆SSI	3003	3003	CTR	242-70	40280	242-70	239-89	STI	◆RCA	◆RCAB
	SSI	317-51	1843-2010	◆SSI	3005	3005	CTR	248-98	◆RCA	248-98		GTC	SCA	◆STC
1768-0810	KER	311-62	316-110	◆SSI	5552-4	5552-4	◆UNI	232-79	◆RCA	232-79		SCA	STI	
	SSI	275-81	1843-2020	◆SSI	317-82	6232-4	◆UNI	304-32	STI	304-32		STI	STI	238-98
1768-0820	KER	275-82	317-82	◆SSI	317-83			250-81	◆RCA	250-81	244-44	KER	STI	238-99
	SSI	315-29	1843-2205	◆SSI	317-2	40004	STI	108-106	40282	108-106	249-87	KER	KER	253-75
1768-0830	KER	317-52	317-2	◆SSI	317-3	40005	STI	109-12	◆RCA	109-12		SSA	◆PPC	◆RCAB
	SSI	275-83	1843-2210	◆SSI	317-3	40006	STI	109-18	40283	109-18	292-90	SSA	SPE	◆STC
1768-1010	KER	275-84	317-3	◆SSI	317-4	40007	STI	205-53	GPD	205-53	169-80	STI	STI	237-61
	SSI	311-63	1843-2220	◆SSI	317-4	40008	STI	205-54	40290	205-54	239-90	KER	IDI	◆RCA
1768-1020	KER	315-30	317-4	◆SSI	317-5	40050	SPE	205-55	◆RCA	205-55		SPE	RCAB	◆SCA
	SSI	275-85	1843-2505	◆SSI	317-6	40051	SPE	205-55	40291	205-55	244-45	SSA	SSA	237-62
1768-1030	KER	275-86	317-6	◆SSI	317-7	40080	IDI	172-1	◆RCA	172-1	249-88	KER	STI	237-63
	SSI	317-53	1843-2510	◆SSI	273-88		GTC	317-8	◆RCA	317-8		SSA	SCA	252-48
1768-1210	KER	311-64	273-88	◆SSI	317-9	40081	IDI	233-27	40295	233-27	152-4	STI	AMC	268-88
	SSI	275-87	1843-2520	◆SSI	317-10		SCA	◆RCA	40296	40296	152-35	STI	AMC	
1768-1220	KER	275-88	317-10	◆SSI	317-11	40082	SCA	237-42	40305	237-42	239-91	KER	GTC	
	SSI	315-31	1843-2705	◆SSI	317-12	40084	IDI	173-24	40307	173-24	249-36	KER	STI	238-103
1768-1230	KER	317-54	317-12	◆SSI	317-13		SCA	◆RCA	40309	◆RCA	237-43	SSA	AMC	238-100
	SSI	275-89	1843-3020	◆SSI	273-94	40217	STI	160-110	GTC	160-110		SSA	IDI	◆RCA
1768-1410	KER	275-90	317-14	◆SSI	317-15	40218	STI	301-50	KER	301-50		SSA	RCAB	
	SSI	311-65	1843-3210	◆SSI	317-16	40219	STI	297-22	SCA	297-22		SSA	STI	238-101
1768-1420	KER	315-32	317-16	◆SSI	273-96			159-2		159-2		STI	◆PPC	◆RCAB
	SSI	275-91	1843-3220	◆SSI	273-97	40219	STI	297-23	40309L	297-23	237-44	STI	STI	238-102
1768-1430	KER	275-92	317-16	◆SSI	273-98			159-3	40309S	159-3	237-45	STI	GTC	
	SSI	315-33	1843-3220	◆SSI	273-98	40220	STI	160-83	40310	160-83	252-45	STI	IDI	238-103
1768-1620	KER	275-93	273-98	◆SSI	273-99	40221	STI	167-62	GTC	167-62	237-45	STI	◆RCA	◆RCAB
	SSI	315-34	1843-3205	◆SSI	273-99	40222	STI	293-51	KER	293-51	237-45	STI	◆PPC	◆RCAB
1768-1630	KER	275-94	317-17	◆SSI	273-99	40221	STI	296-33	40310	296-33	252-45	STI	SPE	◆STC
	SSI	275-95	1843-3510	◆SSI	273-99	40221	STI	167-63		167-63		STI	◆RCA	◆RCAB
1768-1810	KER	275-96	317-18	◆SSI	273-99	40221	STI	298-2	◆RCA	298-2	237-46	STI	◆RCA	◆RCAB
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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
A5T3496	♦TII	140-34	A5T6463	♦TII	182-14	AC121VII	SIEG	116-74	AC125	BELI	110-30	AC121VII	SIEG	116-74
A5T3497	♦TII	312-81	A5T6464	♦TII	182-15	PHIC	♦PHIN	110-30	PHIC	♦PHIN	110-30	AC125	BELI	110-30
A5T3504	♦TII	140-35	A5T6538	♦TII	179-95	AC126	♦PHIN	110-31	PHIC	♦PHIN	110-31	AC126	PHIC	♦PHIN
A5T3505	♦TII	295-70	A5T6539	♦TII	179-96	AC127	♦PHIN	120-41	RTCF	♦VALG	120-41	AC127	BELI	120-41
A5T3565	♦TII	179-18	A5T6540	♦TII	179-97	AC127	♦MULB	120-41	PHIC	♦PHIN	120-41	AC127	BELI	120-41
A5T3571	♦TII	175-56	A5T6541	♦TII	179-98	AC127-01	♦RTCF	120-42	PHIC	♦PHIN	120-42	AC127-01	BELI	120-42
A5T3572	♦TII	175-51	A5T6541	♦TII	179-98	AC127-01	♦PHIN	120-42	PHIC	♦PHIN	120-42	AC127-01	BELI	120-42
A5T3638	♦TII	139-49	A6T5222	♦TII	180-88	AC127/AC128	♦PHIN	338-62	PHIC	♦PHIN	338-62	AC127/AC128	BELI	338-62
A5T3638A	♦TII	302-21	A7T3391	♦TII	178-88	AC127/AC132	♦PHIN	338-63	PHIC	♦PHIN	338-63	AC127/AC132	BELI	338-63
A5T3644	NTR	140-37	A7T3391A	♦TII	178-89	AC128-01	♦PHIN	112-109	PHIC	♦PHIN	112-109	AC128-01	BELI	112-109
A5T3645	♦TII	295-72	A7T3392	♦TII	178-90	AC128-01	♦MULB	202-49	PHIC	♦PHIN	202-49	AC128-01	BELI	202-49
A5T3645	NTR	295-73	A7T5172	♦TII	178-91	AC128K	♦PHIN	202-50	PHIC	♦PHIN	202-50	AC128K	BELI	202-50
A5T3707	♦TII	166-8	A7T6027	♦TII	345-56	AC130	♦PHIN	338-27	PHIC	♦PHIN	338-27	AC130	BELI	338-27
A5T3708	♦TII	166-9	A7T6028	♦TII	345-57	AC132	♦PHIN	117-35	PHIC	♦PHIN	117-35	AC132	BELI	117-35
A5T3709	♦TII	166-10	A8T404A	♦TII	139-28	AC132-01	♦PHIN	117-43	PHIC	♦PHIN	117-43	AC132-01	BELI	117-43
A5T3710	♦TII	166-11	A8T404A	♦TII	139-28	AC132-01	♦PHIN	117-43	PHIC	♦PHIN	117-43	AC132-01	BELI	117-43
A5T3711	♦TII	166-12	A8T3391	♦TII	178-92	AC132-01	♦PHIN	117-43	PHIC	♦PHIN	117-43	AC132-01	BELI	117-43
A5T3798	♦TII	136-56	A8T3391A	♦TII	178-93	AC151	♦PHIN	110-89	PHIC	♦PHIN	110-89	AC151	BELI	110-89
A5T3821	♦TII	194-84	A8T3391A	♦TII	178-93	AC151IV	SIEG	116-75	RTCF	♦VALG	117-43	AC151IV	SIEG	116-75
A5T3822	♦TII	194-85	A8T3392	♦TII	178-94	AC151rIV	SIEG	116-76	PHIC	♦PHIN	117-43	AC151rIV	SIEG	116-76
A5T3823	♦TII	194-86	A8T3392	♦TII	178-94	AC151rV	SIEG	116-77	PHIC	♦PHIN	117-43	AC151rV	SIEG	116-77
A5T3824	♦TII	194-87	A8T3392	♦TII	178-94	AC151rVI	SIEG	116-78	PHIC	♦PHIN	117-43	AC151rVI	SIEG	116-78
A5T3903	NTR	167-15	A8T3644	♦TII	140-40	AC151R	SIEG	110-90	PHIC	♦PHIN	117-43	AC151R	SIEG	110-90
A5T3904	♦TII	295-106	A8T3645	♦TII	295-75	AC151V	SIEG	116-79	PHIC	♦PHIN	117-43	AC151V	SIEG	116-79
A5T3905	NTR	296-18	A8T3702	♦TII	140-41	AC151VI	SIEG	116-80	PHIC	♦PHIN	117-43	AC151VI	SIEG	116-80
A5T3906	♦TII	167-64	A8T3703	♦TII	139-56	AC151VII	SIEG	116-81	PHIC	♦PHIN	117-43	AC151VII	SIEG	116-81
A5T3906	NTR	132-93	A8T3703	♦TII	139-57	AC152	SIEG	116-82	PHIC	♦PHIN	117-43	AC152	SIEG	116-82
A5T4026	♦TII	295-74	A8T3705	♦TII	139-57	AC152IV	SIEG	116-83	PHIC	♦PHIN	117-43	AC152IV	SIEG	116-83
A5T4027	♦TII	133-16	A8T3705	♦TII	139-57	AC152V	SIEG	116-84	PHIC	♦PHIN	117-43	AC152V	SIEG	116-84
A5T4028	♦TII	139-56	A8T3706	♦TII	179-64	AC152VI	SIEG	116-85	PHIC	♦PHIN	117-43	AC152VI	SIEG	116-85
A5T4028	♦TII	305-20	A8T3706	♦TII	179-65	AC153	SIEG	116-86	PHIC	♦PHIN	117-43	AC153	SIEG	116-86
A5T4029	♦TII	305-21	A8T3707	♦TII	179-66	AC153-AC176	SIEG	117-76	PHIC	♦PHIN	117-43	AC153-AC176	SIEG	117-76
A5T4058	♦TII	132-3	A8T3708	♦TII	178-95	AC153K	SIEG	117-74	PHIC	♦PHIN	117-43	AC153K	SIEG	117-74
A5T4059	♦TII	132-4	A8T3709	♦TII	178-96	AC153K-AC176K	SIEG	338-65	PHIC	♦PHIN	117-43	AC153K-AC176K	SIEG	338-65
A5T4060	♦TII	132-5	A8T3709	♦TII	178-97	AC153KV	SIEG	116-86	PHIC	♦PHIN	117-43	AC153KV	SIEG	116-86
A5T4061	♦TII	132-6	A8T3710	♦TII	178-98	AC153KVI	SIEG	116-87	PHIC	♦PHIN	117-43	AC153KVI	SIEG	116-87
A5T4062	♦TII	132-7	A8T3711	♦TII	178-99	AC153KVII	SIEG	116-88	PHIC	♦PHIN	117-43	AC153KVII	SIEG	116-88
A5T4123	NTR	162-73	A8T3711	♦TII	178-99	AC153V	SIEG	116-89	PHIC	♦PHIN	117-43	AC153V	SIEG	116-89
A5T4124	♦TII	288-78	A8T4026	♦TII	139-58	AC153VII	SIEG	116-90	PHIC	♦PHIN	117-43	AC153VII	SIEG	116-90
A5T4125	NTR	288-79	A8T4027	♦TII	305-22	AC162	SIEG	117-68	PHIC	♦PHIN	117-43	AC162	SIEG	117-68
A5T4126	♦TII	162-93	A8T4028	♦TII	139-59	AC163	SIEG	117-69	PHIC	♦PHIN	117-43	AC163	SIEG	117-69
A5T4248	♦TII	139-37	A8T4029	♦TII	305-23	AC172	SIEG	120-15	PHIC	♦PHIN	117-43	AC172	SIEG	120-15
A5T4249	♦TII	139-38	A8T4058	♦TII	139-59	AC176	SIEG	120-54	PHIC	♦PHIN	117-43	AC176	SIEG	120-54
A5T4250	♦TII	139-39	A8T4059	♦TII	139-88	AC176K	SIEG	202-51	PHIC	♦PHIN	117-43	AC176K	SIEG	202-51
A5T4260	♦TII	137-98	A8T4059	♦TII	305-96	AC180	SIEG	116-56	PHIC	♦PHIN	117-43	AC180	SIEG	116-56
A5T4261	♦TII	137-100	A8T4060	♦TII	139-89	AC180K	THCF	202-56	PHIC	♦PHIN	117-43	AC180K	THCF	202-56
A5T4402	NTR	139-87	A8T4061	♦TII	139-9	AC181	THCF	120-31	PHIC	♦PHIN	117-43	AC181	THCF	120-31
A5T4403	NTR	292-18	A8T4062	♦TII	139-10	AC181K	THCF	212-2	PHIC	♦PHIN	117-43	AC181K	THCF	212-2
A5T4409	NTR	179-40	A8T5172	♦TII	178-100	AC182	THCF	114-85	PHIC	♦PHIN	117-43	AC182	THCF	114-85
A5T4410	NTR	179-41	A25-12	♦CTR	260-53	AC182	MISI	148-85	PHIC	♦PHIN	117-43	AC182	THCF	114-85
A5T4416	♦TII	194-88	A25-28	♦CTR	272-22	AC183	MISI	120-16	PHIC	♦PHIN	117-43	AC183	THCF	114-85
A5T4416A	♦TII	194-89	A50-12	♦CTR	268-94	AC184	MISI	115-52	PHIC	♦PHIN	117-43	AC184	THCF	114-85
A5T5058	♦TII	185-105	A70-28	♦CTR	272-22	AC185	MISI	120-24	PHIC	♦PHIN	117-43	AC185	THCF	114-85
A5T5059	♦TII	185-106	A141	♦APX	143-33	AC187	MISI	212-8	PHIC	♦PHIN	117-43	AC187	THCF	114-85
A5T5086	TII	139-39	A142	♦APX	143-34	GTC	♦MULB	212-8	PHIC	♦PHIN	117-43	AC187	THCF	114-85
A5T5087	TII	139-40	A143	♦APX	143-35	PHIC	♦PHIN	212-6	PHIC	♦PHIN	117-43	AC187	THCF	114-85
A5T5172	NTR	178-87	A157A	♦APX	160-16	RTCF	♦VALG	212-6	PHIC	♦PHIN	117-43	AC187	THCF	114-85
A5T5209	TII	179-10	A157B	♦APX	160-17	♦MULB	♦PHIN	212-6	PHIC	♦PHIN	117-43	AC187	THCF	114-85
A5T5210	TII	179-11	A158B	♦APX	160-18	AC187/01/AC188/01	♦PHIN	338-66	PHIC	♦PHIN	117-43	AC187/01/AC188/01	SIEG	338-66
A5T5219	TII	179-82	A159B	♦APX	160-19	AC187/01	♦PHIN	338-67	PHIC	♦PHIN	117-43	AC187/01	SIEG	338-67
A5T5220	NTR	179-81	A159C	♦APX	160-20	AC187/01	♦PHIN	338-67	PHIC	♦PHIN	117-43	AC187/01	SIEG	338-67
A5T5221	NTR	139-52	A160	♦APX	121-29	AC187/AC188	♦PHIN	338-67	PHIC	♦PHIN	117-43	AC187/AC188	SIEG	338-67
A5T5223	TII	179-83	A161	♦APX	121-30	AC187/AC188	♦PHIN	338-67	PHIC	♦PHIN	117-43	AC187/AC188	SIEG	338-67
A5T5225	NTR	179-84	A162	♦APX	121-31	AC187K	♦PHIN	120-56	PHIC	♦PHIN	117-43	AC187K	SIEG	120-56
A5T5226	NTR	139-43	A178A	♦APX	127-65	AC187K-AC188K	♦VALG	338-68	PHIC	♦PHIN	117-43	AC187K-AC188K	SIEG	338-68
A5T5227	TII	139-53	A178B	♦APX	127-66	AC188	♦PHIN	202-54	PHIC	♦PHIN	117-43	AC188	SIEG	202-54
A5T5400	♦TII	139-54	A179A	♦APX	127-67	GTC	♦MULB	212-6	PHIC	♦PHIN	117-43	AC188	SIEG	202-54
A5T5401	♦TII	139-55	A210	♦APX	234-89	PHIC	♦PHIN	212-6	PHIC	♦PHIN	117-43	AC188	SIEG	202-54
A5T5460	♦TII	189-86	A400	♦APX	152-63	RTCF	♦VALG	212-6	PHIC	♦PHIN	117-43	AC188	SIEG	202-54
A5T5461	♦TII	189-87	A401	♦APX	152-64	AC188/01	♦PHIN	202-52	PHIC	♦PHIN	117-43	AC188/01	SIEG	202-52
A5T5462	♦TII	189-88	A424	♦APX	175-60	AC188K	♦PHIN	117-59	PHIC	♦PHIN	117-43	AC188K	SIEG	117-59
A5T5550	♦TII	179-62	A430	♦APX	155-20	AC188K	SIEG	117-59	PHIC	♦PHIN	117-43	AC188K	SIEG	117-59
A5T5551	♦TII	179-63	A441	♦APX	122-67	AC188K	SIEG	117-59	PHIC	♦PHIN	117-43	AC188K	SIEG	117-59
A5T6116	♦TII	345-53	A442	♦APX	155-20	AC188K	SIEG	117-59	PHIC	♦PHIN	117-43	AC188K	SIEG	117-

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BC178B (cont.)	SIEG TADI TIIB		BC183L (cont.)	STR		BC207A	CEN MEHK ID MISI NSC	149-93	BC214 (cont.)	NSC NASB PIHS THIC TIID	128-65	BC238B (cont.)	PIHS SST	
BC178C	VALG MEHK SIEG	127-29	BC183LA	MEHK NSC	294-62 158-11	BC207B	CEN STR MISI NSC	149-94	BC214A	PIHS TIID	128-66 301-16	BC238BZ	MEHK	164-77
BC178V	MISI NPC	128-30	BC183LB	MEHK NSC	158-12 294-63	BC208	CEN ID MISI NPC	149-95	BC214B	PIHS TIID	301-17 128-67	BC238C5	MEHK	164-78
BC178VI	MISI NPC	128-31	BC183LC	MEHK NSC	294-64 158-13	BC208A	IDI MISI NPC	149-96	BC214C	PIHS TIID	128-68 301-18	BC238C18	MEHK	164-79
BC179	CEN IDI MISI NASB NSC RTCF SIEG TADI TIIB	128-32	BC184	NSC PIHS TIIB TIID	158-14 294-65	BC208B	IDI MISI NPC	149-97	BC214K	CEN NSC	301-19 128-69	BC238C	MEHK	160-45
BC179A	BELI IDI MISI NSC RTCF TADI TIIB	127-69	BC184B	PIHS TIIB TIID	294-66 158-15	BC208C	IDI MISI NPC	149-98	BC214KA	CEN MEHK	128-70 128-71	BC239	MEHK	164-80
BC179B	CEN MEHK MOTA NSC RTCF STR TADI TIIB	128-33	BC184C	NSC PIHS	158-16 294-67	BC209	IDI MISI NPC	149-99	BC214KB	IDI MEHK	301-20	BC239A	MEHK	164-109
BC179C	BELI IDI MISI NSC RTCF TADI TIIB	127-30	BC184K	IDI MEHK NSC CEN	149-64 149-65	BC209B	IDI MISI NPC	149-100	BC214LB	CEN NASB	128-74 128-75	BC239B	MEHK	165-1
BC181	MEHK MOTA NSC RTCF STR TADI TIIB	126-14	BC184KB	IDI MEHK NSC CEN	149-66 149-67	BC210	IDI MISI NPC	149-101	BC214LC	MEHK NSC	301-21 128-72	BC239B18	MEHK	165-2
BC182	NASB PIHS STR TIIC	157-106 294-51	BC184L	MEHK NSC	158-17 294-68	BC211	MISI	183-21	BC214LA	MEHK	301-23 128-74	BC239B	CEN	160-49
BC182A	ALGG PIHS TIIB TIID	294-52 157-107	BC184LB	MEHK NSC	158-18	BC211A	MISI	185-107	BC214LB	MEHK NSC	301-24	BC239C	MEHK	165-3
BC182A	SIEG ALGG	157-108 157-109	BC184LC	MEHK NSC	158-19 294-70	BC212	MISI	188-104	BC214LC	MEHK NSC	301-25 128-76	BC239C	MEHK	165-4
BC182B	NSC TIIC	294-53	BC185	MEHK NSC	181-46	BC212A	ALGG PIHS TIIB	300-105 128-45	BC214LA	MEHK	301-26	BC239C	MEHK	160-50
BC182B	SIEG CEN	157-110 149-57	BC186	SGAI MEHK	127-105 128-6	BC212B	ALGG PIHS TIIB	300-106 128-46 300-106	BC214LB	MEHK NSC	301-27	BC239C	MEHK	165-5
BC182K	IDI NSC	149-58	BC187	MEHK	128-6	BC212B	ALGG PIHS TIIB	300-107 128-47 300-108	BC214LC	MEHK NSC	301-28	BC239C	MEHK	165-6
BC182KA	IDI MEHK NSC CEN	149-59	BC188	INTG	159-4	BC212C	ALGG PIHS TIIB	300-108 128-48 300-108	BC214LA	MEHK	301-29	BC239C	MEHK	165-7
BC182KB	IDI NSC STR	149-60	BC189	INTG	159-5	BC212C	ALGG PIHS TIIB	300-109 128-49 300-110	BC214LB	MEHK NSC	301-30	BC239C	MEHK	165-8
BC182L	MEHK NSC TIIB	294-54	BC190	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-50 300-110	BC214LB	MEHK NSC	301-31	BC239C	MEHK	165-9
BC182LA	MEHK NSC	294-55	BC190A	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-51 300-110	BC214LC	MEHK NSC	301-32	BC239C	MEHK	165-10
BC182LB	MEHK NSC	294-56	BC200-01	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-52 300-110	BC214LA	MEHK	301-33	BC239C	MEHK	165-11
BC183	MEHK NSC	294-57	BC200-02	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-53 300-110	BC214LB	MEHK NSC	301-34	BC239C	MEHK	165-12
BC183A	NASB PIHS TIIB TIID	158-4	BC200-03	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-54 300-110	BC214LC	MEHK NSC	301-35	BC239C	MEHK	165-13
BC183A	STR TIIB TIID	294-58	BC200	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-55 300-110	BC214LA	MEHK	301-36	BC239C	MEHK	165-14
BC183B	STR TIIB TIID	294-59	BC200A	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-56 300-110	BC214LB	MEHK NSC	301-37	BC239C	MEHK	165-15
BC183B	STR TIIB TIID	294-60	BC200B	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-57 300-110	BC214LC	MEHK NSC	301-38	BC239C	MEHK	165-16
BC183C	PIHS	294-61	BC200C	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-58 300-110	BC214LA	MEHK	301-39	BC239C	MEHK	165-17
BC183C	PIHS	294-62	BC200D	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-59 300-110	BC214LB	MEHK NSC	301-40	BC239C	MEHK	165-18
BC183K	IDI NSC STR	149-60	BC200E	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-60 300-110	BC214LC	MEHK NSC	301-41	BC239C	MEHK	165-19
BC183KA	MEHK NSC STR	149-61	BC200F	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-61 300-110	BC214LA	MEHK	301-42	BC239C	MEHK	165-20
BC183KB	IDI NSC STR	149-62	BC200G	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-62 300-110	BC214LB	MEHK NSC	301-43	BC239C	MEHK	165-21
BC183KC	IDI NSC STR	149-63	BC200H	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-63 300-110	BC214LC	MEHK NSC	301-44	BC239C	MEHK	165-22
BC183L	MEHK NSC	294-61	BC200I	INTG	159-6	BC212C	ALGG PIHS TIIB	300-110 128-64 300-110	BC214LA	MEHK	301-45	BC239C	MEHK	165-23

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BC430	TIIB	229-34	BC489L18	◆MOTA	180-17	BC548VI	◆SIEG	174-80	BC559	(cont.)		BCW33	◆PHIC	150-45
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BC432	ALGG	136-89	BC490	◆MOTA	140-4		◆MEHK			◆MEHK			◆APX	150-46
BC440	NASB	266-4	BC490-5	◆MOTA	140-5		◆MULB			◆NASB		BCW34	◆MULB	
BC441	SGAI	266-5	BC490A5	◆MOTA	140-6		◆PHIC			◆NSC		BCW35		166-79
			BC490A18	◆MOTA	140-7		◆RTCF			◆PHIN			◆VALG	
BC445	◆MOTA	164-88	BC490A5	◆MOTA	140-8	BC549B	◆VALG	174-81	BC559A	◆APX	137-30	BCW36	◆MEHK	132-82
			BC490B18	◆MOTA	140-9		◆ALGG			◆ELMA			◆TIIB	
BC445-5	◆MOTA	164-89	BC490B18	◆MOTA	140-10		◆ELMA			◆INTG		BCW37	◆TIIB	127-78
BC445-18	◆MOTA	164-90	BC490B	◆MOTA	140-11		◆MEHK			◆MULB		BCW44	◆SGAI	184-31
BC446	◆MOTA	131-36	BC490L5	◆MOTA	140-12		◆NSC			◆NSC		BCW45	◆SGAI	142-16
BC446-5	◆MOTA	131-37	BC490L18	◆MOTA	140-13		◆PHIN			◆PHIC		BCW46A	◆PHIN	150-47
BC446-18	◆MOTA	131-38	BC490L	◆MOTA	140-14		◆SIEG			◆PHIN		BCW46B	◆PHIN	150-48
BC447	◆MOTA	164-91	BC512A	◆TIID	128-106	BC549C	◆NECJ	180-66	BC559A	◆NECJ	140-23	BCW47A	◆PHIN	150-49
BC447-5	◆MOTA	164-92	BC512B	◆TIID	128-107			◆ALGG		174-35		◆ALGG	137-31	BCW47B
BC447-18	◆MOTA	164-93	BC513	◆TIID	128-108		◆ELMA			◆ELMA		BCW48A	◆PHIN	150-51
BC448	◆MOTA	131-39	BC513A	◆TIID	128-109		◆INTG			◆INTG		BCW48B	◆PHIN	150-52
BC448-5	◆MOTA	131-40	BC513B	◆TIID	128-110		◆MEHK			◆MEHK		BCW48C	◆PHIN	150-53
BC448-18	◆MOTA	131-41	BC513C	◆TIID	129-1		◆NSC			◆NSC		BCW49B	◆PHIN	150-54
BC449	◆MOTA	164-94	BC514	◆TIID	129-2	BC549C	◆PHIN	180-67	BC559B	◆VALG	140-24	BCW56A	◆PHIN	123-39
BC449-5	◆MOTA	164-95	BC514A	◆TIID	129-3					◆SIEG				
BC449-18	◆MOTA	164-96	BC514B	◆TIID	129-4		◆NECJ	174-82		◆ALGG	137-32	BCW57A	◆PHIN	123-40
BC450	◆MOTA	131-42	BC514C	◆TIID	129-5		◆PHIN			◆INTG		BCW58A	◆PHIN	123-41
BC450-5	◆MOTA	131-43	BC516	◆MEHK	330-55		◆MULB			◆TIIB		BCW58B	◆PHIN	123-42
BC450-18	◆MOTA	131-44	BC517	◆MEHK	330-56		◆PHIN			◆PHIN		BCW59A	◆PHIN	123-43
BC451	TOSJ	180-51		◆TIIB		BC550B	◆VALG	174-83	BC560	◆MULB	173-73	BCW60AA	◆ALGG	145-87
BC452	TOSJ	180-52		◆MOTA	174-67					◆ALGG				
BC453	TOSJ	180-53	BC546	◆MULB			◆PHIN			◆ELMA	137-33	BCW60AB	◆ALGG	300-14
BC454	TOSJ	180-54		◆PHIC			◆PHIN			◆INTG		BCW60AC	◆ALGG	145-88
BC455	TOSJ	180-55		◆RTCF			◆TIIB			◆MULB		BCW60AD	◆ALGG	145-89
BC456	TOSJ	180-56		◆VALG			◆RTCF			◆SIEG		BCW61BA	◆ALGG	145-90
BC460	NASB	225-49		◆ALGG			◆SIEG			◆VALG		BCW61BB	◆ALGG	299-38
BC461	SGAI	225-50	BC546A	◆ALGG	174-68	BC550B	◆NECJ	180-68	BC560A	◆NECJ	140-25	BCW61BC	◆ALGG	122-47
				◆APX			BC550C	◆ALGG	174-36		◆ALGG	137-34	BCW61BD	◆ALGG
	NASB			◆MULB			◆ELMA			◆INTG		BCW62	◆MEHK	121-37
				◆MEHK			◆TIIB			◆MULB		BCW63EA	◆SIEG	164-6
BC461-4	MEHK	142-35		◆PHIN			◆PHIN			◆PHIN		BCW65EB	◆SIEG	305-25
BC461-5	MEHK	142-36		◆SIEG			◆VALG			◆VALG		BCW65EC	◆SIEG	164-7
BC461-6	MEHK	142-37		◆RTCF			◆SIEG			◆PHIC		BCW66EF	◆SIEG	305-26
BC477	SGAI	132-74		◆TIIB			◆SIEG			◆TIIB		BCW66EG	◆SIEG	164-9
	TADI		BC546A	◆NECJ	180-58	BC550C	◆NECJ	180-69	BC560B	◆NECJ	140-26	BCW66EH	◆SIEG	305-28
	TADI		BC546B	◆ALGG	174-69	BC556	◆APX	137-17	BC560C	◆ALGG	137-35	BCW67DA	◆SIEG	184-100
BC477A	SGAI	132-75		◆ELMA			◆APX			◆INTG		BCW67DB	◆SIEG	305-30
BC477VI	SGAI	132-76		◆ELMA			◆INTG			◆SIEG		BCW67DC	◆SIEG	130-104
BC478	SGAI	132-77		◆MULB			◆PHIC			◆PHIN		BCW67DF	◆SIEG	305-32
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BC478A	SGAI	132-78		◆SIEG			◆SIEG			◆PHIN		BCW68DH	◆SIEG	305-34
BC478B	SGAI	132-79		◆VALG			◆SIEG			◆PHIC		BCW73-16	◆SIEG	170-65
BC479	SGAI	132-80		◆NECJ	180-59	BC556A	◆ELMA	137-18	BC582	◆TIID	158-32	BCW73-25	◆SIEG	170-66
	TADI		BC546B	◆ALGG	174-70		◆INTG		BC582A	◆TIID	158-33	BCW73-40	◆SIEG	305-38
BC479B	SGAI	132-81		◆ELMA			◆MULB		BC582B	◆TIID	158-34	BCW74-16	◆SIEG	305-39
BC485	◆MOTA	178-103		◆PHIC			◆PHIN		BC583	◆TIID	158-35	BCW74-25	◆SIEG	170-67
	NSC	178-104		◆PHIN			◆SIEG		BC583A	◆TIID	158-36	BCW74-40	◆SIEG	305-40
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BC485A18	◆MOTA	178-101		◆SIEG	174-71	BC556B	◆ELMA	140-18	BC584B	◆TIID	158-40			
BC485A	◆MOTA	178-102		◆ELMA			◆INTG	137-19	BC612	◆TIIB	129-7			
BC485B5	◆MOTA	179-103		◆PHIC		BC556VI	◆ALGG	140-19	BC635	◆ALGG	184-100			
BC485B18	◆MOTA	179-104		◆MULB			◆SIEG	137-19	BC636	◆PHIC	184-101			
BC485B	◆MOTA	179-105		◆PHIN			◆SIEG		BC635-BC636	◆ELMA	338-71			
	NSC	179-106		◆SIEG			◆RTCF			◆PHIN	141-52			
BC485L5	◆MOTA	179-106		◆TIIB			◆SIEG			◆ALGG				
BC485L18	◆MOTA	179-107		◆VALG			◆SIEG			◆MEHK				
BC485L	◆MOTA	179-108	BC547A	◆NECJ	180-60		◆PHIN			◆PHIN				
	NSC	179-108	BC547B	◆ALGG	174-73		◆TIID			◆SIEG				
	◆APX			◆ELMA			◆VALG			◆PHIC				
BC486	◆MOTA	139-90		◆INTG			◆ALGG			◆RTCF				
BC486-5	◆MOTA	139-91		◆MULB			◆MEHK			◆SIEG				
BC486-18	◆MOTA	139-92		◆MEHK			◆PHIC			◆SIEG				
BC486A5	◆MOTA	139-93		◆NSC			◆PHIN			◆PHIC				
BC486A18	◆MOTA	139-94		◆PHIN			◆RTCF			◆SIEG				
BC486A	◆MOTA	139-95		◆SIEG			◆SIEG			◆SIEG				
BC486B5	◆MOTA	139-96		◆VALG			◆TIID			◆SIEG				
BC486B18	◆MOTA	139-97		◆NECJ	180-61		◆SIEG			◆SIEG				
BC486B	◆MOTA	139-98		◆APX	174-74		◆SIEG			◆SIEG				
BC486L5	◆MOTA	139-99		◆ELMA			◆INTG			◆SIEG				
BC486L18	◆MOTA	139-100		◆MEHK			◆MULB			◆SIEG				
BC486L	◆MOTA	139-101		◆PHIC			◆PHIN			◆SIEG				
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BC487-18	◆MOTA	178-107		◆SIEG	174-75		◆SIEG			◆SIEG				
BC487A5	◆MOTA	178-108		◆ELMA	174-76		◆SIEG			◆SIEG				
BC487A18	◆MOTA	178-109		◆PHIN			◆SIEG			◆SIEG				
BC487A	◆MOTA	180-1		◆MEHK			◆SIEG			◆SIEG				
BC487B5	◆MOTA	180-2		◆NSC			◆SIEG			◆SIEG				
BC487B18	◆MOTA	180-3		◆PHIN			◆SIEG			◆SIEG				
BC487B	◆MOTA	180-4		◆VALG			◆SIEG			◆SIEG				
BC487L5	◆MOTA	180-5		◆ALGG			◆SIEG			◆SIEG				
BC487L18	◆MOTA	180-6		◆ELMA			◆SIEG			◆SIEG				
BC487L	◆MOTA	180-7		◆INTG			◆SIEG			◆SIEG				
BC488	◆MOTA	180-8		◆MEHK			◆SIEG			◆SIEG				
BC488-5	◆MOTA													

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			134-75		AMC	268-103	(cont.)			(cont.)				†PHIC	224-78
BCY93	†TAGS		130-74		NASB		†PHIN	PHIC		†RCAB	THCF		BD301	†VALG	
BCY93B	†TAGS		134-76		†NPC		†RTCF	†PIHS			THCF		BD302	†MISI	263-7
BCY94	†TAGS		130-75	BD142	†THCF		†VALG	†VALG		BD241A	†MEHK	258-67	BD303	†THCF	
BCY94B	†TAGS		134-77	BD144	†MOTA	268-104	†PHIN	†PHIN	338-79	†NSC	†PPC	310-94	BD303	†MISI	224-34
BCY95	†TAGS		130-76	BD157	†PHIN	253-79	†RTCF	†RTCF		†RCAB	†THCF		BD303	†THCF	
			307-34		MISI	251-35	†MULB	†MULB	219-91		†MEHK	310-95	BD304	†MISI	263-8
BCY95B	†TAGS		307-35		NASB		†PHIC	†PHIC		†NSC	†PPC	258-68	BD304	†THCF	
			134-78	BD157	†THCF		†PIHS	†PIHS		†RCAB	†THCF		BD304	†MISI	224-35
BCY96	†TAGS		130-77	BD158	†MOTA	251-36	†VALG	†VALG	250-34	BD241C	†MEHK	258-69	BD311	†THCF	
BCY96B	†TAGS		134-79		MISI	251-37	†MULB	†MULB		†NSC	†PPC	310-96	BD312	†MOTA	274-53
BCY97	†TAGS		130-78		†NPC		†PHIN	†PHIN		†RCAB	†THCF		BD313	†MOTA	226-84
BCY97B	†TAGS		134-80	BD158	†MOTA	251-38	†RTCF	†RTCF			†MEHK	308-24	BD314	†MOTA	274-54
BCY98B	†TAGS		134-81	BD159	†PHIN	251-39	†VALG	†VALG		BD242	†MISI	223-22	BD315	†MOTA	226-85
BD111A			229-35		†NPC		†PHIN	†PHIN	338-80	†NSC	†PPC		BD316	†MOTA	227-23
BD115			246-10	BD159	†THCF		†RTCF	†RTCF		†RCAB	†THCF		BD317	†MOTA	228-24
	†MULB			BD165	†ALGG	251-41	†MULB	†MULB	219-92		†THCF		BD318	†MOTA	227-36
	†PHIC				NPC		†PHIN	†PHIN		BD242A	†MEHK	223-23	BD329	†PHIC	250-65
	†RTCF			BD166	†THCF		†PIHS	†PIHS		†NSC	†PPC	308-25		†RTCF	
BD117	†VALG			BD166	†MOTA	220-16	†VALG	†VALG		†RCAB	†THCF			†SIEG	
	†THCF			BD167	†ALGG	251-43	†MULB	†MULB	250-35	BD242B	†MEHK	308-26	BD330	†VALG	
	†THCF				NPC		†PHIN	†PHIN		†NSC	†PPC	223-24	BD330	†PHIC	220-1
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BD127	†SSI		258-23		†MOTA	220-16			338-81	BD242C	†MEHK	223-25	BD331	†PHIC	333-48
BD123	†NSSI		258-24		†ALGG	251-43				†NSC	†PPC	308-27	BD332	†VALG	
BD124	†PHIN		302-62	BD167	NPC		†MOTA	†MOTA	219-93	BD243	†THCF	310-97	BD333	†PHIC	333-49
			249-89		†THCF		†ALGG	†ALGG		†RCAB	†THCF	265-62	BD334	†VALG	
BD124A	NASB		251-103	BD168	†MOTA	220-18	†PHIC	†PHIC	248-40	BD243A	†RCAB	310-98	BD335	†VALG	
BD127	†ALGG		252-34		†ALGG	251-45	†PIHS	†PIHS		†NSC	†PPC	285-63	BD336	†PHIC	333-50
BD128	†ALGG		252-35	BD168	NPC					†RCAB	†THCF	310-98	BD337	†VALG	
BD129	†ALGG		252-36		†THCF					†NSC	†PPC	310-99	BD338	†PHIC	333-51
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	NASB				†ALGG	251-45				BD243C	†RCAB	310-100	BD340	†PHIC	333-52
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	†RTCF				†ALGG	220-19		ELMA	310-83	BD244A	†NSC	225-19	BD361	†MOTA	248-99
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	†PHIN			BD173	†MOTA	251-49		†THCF		†NSC	†PPC	308-31	BD370B	NSC	215-74
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	†MULB				†MOTA		BD233-BD234	†RTCF	338-82		†THCF	266-102	BD370D	NSC	215-76
	†PHIN			BD176	†PIHS	222-5	BD234	†ALGG	221-11	BD245A	†THCF	266-103	BD371A	NSC	234-93
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	†MULB			BD177	†PIHS	255-60		†MULB		†NSC	†PPC	310-103	BD371C	NSC	234-95
	†NPC				†ALGG	222-6		†NSC		†NSC	†PPC	266-104	BD371D	NSC	234-96
	†PHIB			BD178	†PIHS	222-6		†PHIC		†NSC	†PPC	266-105	BD372A	NSC	215-77
	†PHIN				†ALGG	222-6		†THCF		†NSC	†PPC	310-104	BD372B	NSC	215-78
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	†RTCF				†NPC			†ALGG	253-82		†THCF	308-39		†MULB	
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	†MULB				†RCAB			†NSC			†THCF			†THCF	
	†NPC				†THCF			†NSC		BD262A	†THCF			†VALG	
	†PHIB				†MOTA	268-108		†PHIC		†PHIN	†THCF			†VALG	
	†PHIN				†ALGG	258-63		†THCF		BD262B	†THCF			†VALG	
	†RTCF				†MOTA	223-19		†THCF		†PHIN	†THCF			†VALG	
	†THCF				†ALGG	223-19		†THCF			†THCF			†VALG	
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	†RTCF				†MOTA			ELMA		BD263B	†THCF			†VALG	
	†ALGG			BD188	†ALGG	223-20		†MULB		†PHIN	†THCF			†VALG	
	†MISI				†MOTA	223-20		†NSC			†THCF			†VALG	
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HP35827E	HPA	181-58	HSE210-RT	HSE	172-5	IMF3954A	INL	342-50	IR5066	INR	336-95	IT2907	INL	128-25
HP35828E	HPA	353-75	HSE211-RT	HSE	136-57	TSC	193-64	IR5251	INR	335-106	ITC918A	INL	156-3	
HP35829E	HPA	353-74	HSE218-RT	HSE	169-71	IMF3955	HSE	193-65	INR	311-13	ITE3066	INL	192-39	
HP35831BOpt005	HPA	180-96	HSE220-RT	HSE	174-45	TSC	342-51	IR5252	INR	311-14	ITE3067	INL	192-40	
HP35831EOpt005	HPA	353-76	HSE223-RT	HSE	174-46	IMF3955A	INL	342-52	INR	335-107	ITE3068	INL	192-41	
HP35850A	HPA	235-1	HSE224-RT	HSE	135-105	TSC	193-66	IR5253	INR	335-108	ITE4117	INL	192-42	
HP35853B	HPA	180-96	HSE226-RT	HSE	138-67	IMF3956	INL	193-67	INR	311-15	ITE4118	INL	192-43	
HP35853E	HPA	353-77	HSE301-RT	HSE	135-58	TSC	342-53	IR6000	INR	314-29	ITE4119	INL	192-44	
HP35853A	HPA	235-109	HSE302-RT	HSE	122-24	IMF3957	INL	342-54	INR	337-11	ITE4338	INL	192-45	
HP35853B	HPA	180-96	HSE306-RT	HSE	135-59	TSC	193-68	IR6001	INR	337-12	TSC			
HP358550A	HPA	353-78	HSE307-RT	HSE	135-60	IMF3958	INL	193-69	INR	314-30	ITE4339	INL	192-46	
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HP358553E	HPA	353-79	HSE316-RT	HSE	160-69	IR401	INR	312-97	INR	337-13	ITE4340	INL	192-47	
HP358554B	HPA	235-3	HSE317-RT	HSE	127-83	TSC	272-23	IR6006	INR	337-7	TSC			
HP358554E	HPA	353-80	HSE318-RT	HSE	158-50	IR402	INR	276-15	INR	314-32	ITE4341	INL	192-48	
HP358559E	HPA	353-81	HSE319-RT	HSE	127-84	TSC	312-98	IR6061	INR	314-33	TSC			
HP35860A	HPA	235-4	HSE320-RT	HSE	123-80	IR403	INR	312-92	INR	337-8	ITE4391	INL	195-32	
HP35861E	HPA	353-82	HSE350-RT	HSE	107-2	IR409	INR	276-17	INR	337-9	TSC			
HP35862E	HPA	353-83	HSE401-RT	HSE	162-58	TSC	313-82	IR6251	INR	309-93	TSC			
HP35866E	HPA	353-84	HSE402-RT	HSE	130-12	IR410	INR	312-99	INR	336-11	ITE4392	INL	288-68	
HP35867B	HPA	161-66	HSE403-RT	HSE	130-13	TSC	272-24	IR6252	INR	309-93	TSC			
HP35867E	HPA	353-85	HSE404-RT	HSE	162-103	IR411	INR	272-25	INR	336-12	ITE4393	INL	195-33	
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HP35868E	HPA	161-67	HSE408-RT	HSE	162-37	IR413	INR	314-8	INR	336-13	ITE4416	INL	288-69	
HP35868L	HPA	353-87	HSE411-RT	HSE	130-5	TSC	272-26	IR6302	INR	309-95	TSC			
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HS5308A	SPR	353-91	HSE420-RT	HSE	162-18	TSC	276-21	IT120ATO71	INL	342-58	J109	NCS	288-24	
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HS5813	GESY	161-87	HSE450-RT	HSE	156-82	IR516	INR	271-17	INL	159-63	J111	NCS	288-26	
HS5815	GESY	161-95	HSE453-RT	HSE	157-57	IR517	INR	271-18	INL	342-60	SIX	SODI	198-11	
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MA895	STI	110-95	MA42057-510	♦MIC	354-59	MD2369A	♦MOTA	175-99	MD7005F	♦MOTA	348-15	MEF4859	MEHK	289-14
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		290-28	MC152	PIHS	216-42				ME0462	♦MEHK	125-90	MEF5457	MEHK	197-27
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MA42009-509	♦MIC	354-28	MD708	♦MOTA	175-91	MD3251AF	♦MOTA	343-21	ME4104	♦MEHK	148-102	MEM517A	♦GIC	190-53
		182-28							ME6001	♦MEHK	166-103	MEM517B	♦GIC	188-1
MA42010-509	♦MIC	354-29	MD708A	♦MOTA	342-100	MD3251AF	♦MOTA	343-22	ME6002	♦MEHK	166-104	MEM517C	♦GIC	190-26
		170-99	MD708AF	♦MOTA	165-32	MD3251F	♦MOTA	131-92	ME6003	♦MEHK	166-80	MEM520	♦GIC	188-75
MA42010-510	♦MIC	354-30							ME6101	♦MEHK	133-41		INL	
MA42011-509	♦MIC	354-31	MD708B	♦MOTA	342-101	MD3409	♦MOTA	347-109	ME6102	♦MEHK	133-41	MEM520C	♦GIC	188-36
MA42011-510	♦MIC	354-32	MD708BF	♦MOTA	165-33	MD3410	♦MOTA	343-23			293-68		INL	
		170-91					SCA	176-9	ME8001	♦MEHK	133-44	MEM550	♦GIC	188-76
MA42012-510	♦MIC	354-33	MD918	♦MOTA	175-93	MD3467	♦MOTA	176-10	ME8002	♦MEHK	169-77	MEM550C	♦GIC	188-34
MA42020-509/K2069	♦MIC	161-73	MD918A	♦MOTA	342-102	MD3467F	♦MOTA	343-24	ME8003	♦MEHK	169-34	MEM551	♦GIC	188-25
		354-34							ME9001	♦MEHK	169-35		♦GIC	188-77
MA42020-509/K2116	♦MIC	161-77	MD918AF	♦MOTA	165-34	MD3725	♦MOTA	294-88	ME9002	♦MEHK	154-79	MEM551C	♦GIC	343-33
		354-35	MD918B	♦MOTA	342-105	MD3725F	♦MOTA	294-88	ME9002	♦MEHK	289-89	MEM551C	♦GIC	343-34
MA42021-509/K2071	♦MIC	161-72	MD918BF	♦MOTA	342-106	MD3726	♦MOTA	348-4	ME9021	♦MEHK	290-100	MEM554	♦GIC	192-87
		354-36							ME9022	♦MEHK	290-100	MEM554C	♦GIC	192-88
MA42021-509/K2117	♦MIC	161-78	MD918F	♦MOTA	342-107	MD3762F	♦MOTA	294-74	MEF103	MEHK	192-56	MEM556	♦GIC	188-22
MA42022-509	♦MIC	161-74	MD982	♦MOTA	165-70	MD4260	♦MOTA	348-5	MEF104	MEHK	192-57	MEM556C	♦GIC	188-23
MA42023-509	♦MIC	161-75	MD982F	♦MOTA	131-74	MD4261	♦MOTA	348-4	MEF3069	MEHK	192-58	MEM557C	♦GIC	191-93
MA42024-509	♦MIC	161-76	MD984	♦MOTA	342-108	MD4957	♦MOTA	343-25	MEF3070	MEHK	198-33	MEM560	♦GIC	192-89
MA42025-509	♦MIC	161-77	MD985	♦MOTA	342-109	MD5000	♦MOTA	343-26	MEF3458	MEHK	198-34	MEM561	♦GIC	192-90
MA42026-509	♦MIC	161-78	MD985F	♦MOTA	129-97	MD5000A	♦MOTA	343-27	MEF3459	MEHK	198-35	MEM562C	♦GIC	301-70
MA42027-509	♦MIC	161-79	MD986	♦MOTA	129-99	MD5000B	♦MOTA	343-28	MEF3460	MEHK	198-36		♦GIC	302-55
MA42028-509	♦MIC	161-80	MD986F	♦MOTA	343-106	MD5000C	♦MOTA	129-97	MEF3684	MEHK	198-37	MEM563	♦GIC	192-91
MA42029-509	♦MIC	161-81	MD1120	♦MOTA	343-1	MD5000D	♦MOTA	343-28	MEF3685	MEHK	198-38		♦GIC	192-92
		354-43	MD1120F	♦MOTA	343-2	MD6001F	♦MOTA	343-29	MEF3686	MEHK	191-36	MEM563C	♦GIC	295-30
MA42030-509	♦MIC	163-33	MD1121	♦MOTA	343-3	MD6002	♦MOTA	343-30	MEF3687	MEHK	191-37		♦GIC	192-92
		354-44	MD1122	♦MOTA	343-4	MD6002F	♦MOTA	338-107	MEF3819	MEHK	199-29	MEM564C	♦GIC	192-93
MA42035-510	♦MIC	163-34	MD1123	♦MOTA	343-5	MD6003	♦MOTA	338-108	MEF3821	MEHK	199-29	MEM571C	♦GIC	191-94
MA42050-510	♦MIC	354-47	MD1123F	♦MOTA	343-6	MD6003F	♦MOTA	338-109	MEF3822	MEHK	199-29	MEM575	♦GIC	189-46
MA42050-511	♦MIC	165-90	MD1130F	♦MOTA	343-7	MD6100F	♦MOTA	338-109	MEF3823	MEHK	199-29	MEM610	♦GIC	199-43
MA42051-509	♦MIC	163-34	MD1130F	♦MOTA	343-8	MD6100	♦MOTA	338-109	MEF3823	MEHK	199-29	MEM615A	♦GIC	192-94
MA42051-510	♦MIC	163-35	MD1132	♦MOTA	164-100	MD6900	♦MOTA	339-1	MEF3954	MEHK	199-30	MEM616	♦GIC	192-94
MA42051-511	♦MIC	165-93	MD2218A	♦MOTA	164-101	MD7000	♦MOTA	339-2	MEF3955	MEHK	199-30	MEM617	♦GIC	199-45
MA42052-509	♦MIC	163-35	MD2218AF	♦MOTA	164-101				MEF3956	MEHK	199-30	MEM618	♦GIC	199-46
MA42052-510	♦MIC	354-52	MD2218F	♦MOTA	164-101	MD6003	♦MOTA	339-3	MEF3957	MEHK	199-30	MEM630	♦GIC	200-71
		170-105	MD2219	♦MOTA	347-92	MD6003F	♦MOTA	339-4	MEF3958	MEHK	199-30	MEM631	♦GIC	200-72
MA42052-511	♦MIC	165-94	MD2219A	♦MOTA	176-7	MD6100F	♦MOTA	339-5	MEF3959	MEHK	199-30	MEM632	♦GIC	200-73
MA42055-510	♦MIC	165-95	MD2219AF	♦MOTA	176-8	MD6900	♦MOTA	339-6	MEF3967	MEHK	199-30	MEM633	♦GIC	200-74
MA42055-511	♦MIC	170-103	MD2219F	♦MOTA	347-93	MD7000	♦MOTA	348-7	MEF3968	MEHK	199-30	MEM633	♦GIC	200-74
MA42056-510	♦MIC	165-96	MD2219A	♦MOTA	176-8	MD7001	♦MOTA	348-7	MEF3969	MEHK	199-30	MEM639	♦GIC	199-47
		354-56	MD2219AF	♦MOTA	347-93	MD7002	♦MOTA	176-11	MEF4220	MEHK	199-30	MEM643	♦GIC	199-48
MA42056-511	♦MIC	170-102	MD2219F	♦MOTA	347-94	MD7003	♦MOTA	176-12	MEF4221	MEHK	199-30	MEM644		

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
MJE3439	♦MOTA	249-13	MM4257	♦MOTA	133-53	MP110B	GP	209-68	MP3613	LTE	206-108	MPS706L	♦FERB	297-57
MJE3440	♦MOTA	249-14	MM4258	♦MOTA	291-3	MP249A	LTE	209-69	MP3614	LTE	206-106	MPS706M	♦FERB	175-33
MJE3738	♦MOTA	255-74	MM5000	STI	112-103	MP500	GP	211-47	MP3615	LTE	206-107	MPS834	CEN	297-58
MJE3739	♦MOTA	255-75	MM5001	STI	112-104	MP500A	GP	211-48	MP3618	LTE	206-109	♦DEF	IDI	163-1
MJE5655	♦MOTA	255-76	MM5002	STI	112-105	MP501	GP	211-49	MP3730	GP	206-38	♦ITT	MEHK	
MJE5656	♦MOTA	255-77	MM5005	♦MOTA	216-100							♦MOTA	NTR	
MJE5657	♦MOTA	255-78	MM5006	♦MOTA	216-101	MP501A	GP	211-50	MP3730A	♦MOTA	206-39	♦MOTA	NTR	
MJE5980	♦MOTA	226-44	MM5007	♦MOTA	216-102	MP502	GP	211-51	MP3730B	♦LITE	288-2	MPS835	♦MOTA	165-37
MJE5981	♦MOTA	226-45	MM5007	♦MOTA	216-102	MP502A	GP	211-52	MP4276	LTE	206-40	MPS918	CEN	292-55
MJE5982	♦MOTA	226-46	MM5189	♦MOTA	298-16	MP503	GP	211-53	MP4277	LTE	211-61	♦DEF	IDI	163-19
MJE5983	♦MOTA	271-66	MM5262	♦MOTA	235-59	MP504	GP	211-54	MP4278	LTE	329-22	♦MOTA	NPC	
MJE5984	♦MOTA	271-67	MM6427	♦MOTA	337-99	MP504A	GP	211-55	MP4279	LTE	211-62	NTR	♦SPR	
MJE5985	♦MOTA	335-27	MM8000	♦MOTA	235-7	MP505	GP	211-56	MP4278	LTE	211-63	♦MOTA	SST	
MJE6040	♦MOTA	339-9	MM8000	♦MOTA	337-99	MP505A	GP	211-57	MP4279	LTE	329-24	MPS929	♦MOTA	179-12
MJE6041	♦MOTA	335-28	MM8001	♦MOTA	235-8	MP506	GP	211-58	MP4279	LTE	329-25	MPS929A	♦MOTA	179-30
MJE6042	♦MOTA	335-25	MM8001	♦MOTA	235-8	MP506	GP	211-58	MP4280	LTE	211-64	MPS930	♦MOTA	179-13
MJE6043	♦MOTA	335-29	MM8006	♦MOTA	151-91	MP506A	GP	211-59	MP4281	LTE	211-65	MPS930A	♦MOTA	179-31
MJE6044	♦MOTA	335-30	MM8006	♦MOTA	151-91	MP507	GP	211-60	MP4281	LTE	329-26	MPS2222	♦FERB	180-48
MJE6045	♦MOTA	335-26	MM8007	♦MOTA	151-92	MP525	GP	209-70	MP4282	LTE	211-66	MPS2222A	♦MOTA	293-36
MJE13002	♦MOTA	258-93	MM8007	♦MOTA	151-92	MP600	LTE	207-62	MP4282	LTE	211-67	MPS2222A	♦FERB	293-58
MJE13003	♦MOTA	321-66	MM8009	♦MOTA	235-9	MP600A	♦LITE	327-76	MP4283	LTE	329-28	MPS2222AK	♦FERB	174-86
MJE13006	♦MOTA	321-67	MM8009	♦MOTA	235-9	MP600A	♦LITE	327-77	MP4283	LTE	329-29	MPS2222AL	♦FERB	293-59
MJE13007	♦MOTA	267-46	MMBR901	♦MOTA	165-95	MP601	♦LITE	207-63	MP4283	LTE	211-68	MPS2222AL	♦FERB	293-60
MJE13007	♦MOTA	267-47	MMBR920	♦MOTA	152-65	MP601	♦LITE	207-64	MP4283	LTE	328-4	MPS2222AM	♦FERB	174-88
MJE13008	♦MOTA	321-52	MMBR930	♦MOTA	165-97	MP601A	♦LITE	327-78	MP4283	LTE	328-5	MPS2222AM	♦FERB	293-61
MJE13008	♦MOTA	321-53	MMBR931	♦MOTA	143-45	MP601A	♦LITE	327-79	MP4283	LTE	210-40	MPS2222K	♦FERB	293-37
MJE13008	♦MOTA	272-33	MMBR4957	♦MOTA	123-101	MP602	♦LITE	207-65	MP4283	LTE	210-41	MPS2222K	♦FERB	174-50
MJE13009	♦MOTA	272-34	MMBR5031	♦MOTA	151-93	MP602	♦LITE	207-66	MP4283	LTE	328-6	MPS2222L	♦FERB	174-51
MJE13009	♦MOTA	272-34	MMBR5179	♦MOTA	151-93	MP602	♦LITE	327-80	MP4283	LTE	328-7	MPS2222L	♦FERB	293-38
MM439	SCA	125-100	MMBT1918	♦MOTA	165-71	MP602A	♦LITE	327-81	MP4283	LTE	210-42	MPS2222M	♦FERB	293-39
MM1553	♦MOTA	265-96	MMBT2222	♦MOTA	164-105	MP603	♦LITE	207-67	MP4283	LTE	210-43	MPS2222M	♦FERB	174-52
MM1812	STI	231-57	MMBT2907	♦MOTA	131-54	MP603	♦LITE	207-68	MP4283	LTE	328-8	MPS2369	CEN	163-16
MM1941	♦MOTA	161-42	MMBT3904	♦MOTA	164-65	MP603	♦LITE	327-82	MP4283	LTE	328-9	♦DEF	♦FERB	290-11
MM2258	♦MOTA	231-58	MMBT3906	♦MOTA	131-71	MP603A	♦LITE	327-83	MP4283	LTE	210-44	♦MOTA	IT	
MM2258	♦MOTA	231-58	MMBT6543	♦MOTA	165-79	MP603A	♦LITE	207-69	MP4283	LTE	192-62	♦MOTA	NASB	
MM2259	♦MOTA	231-59	MMBT-A06	♦MOTA	164-13	MP1077	♦LITE	209-71	MP4283	LTE	192-63	NPC	NTR	
MM2259	♦MOTA	231-59	MMBT-A20	♦MOTA	164-30	MP1529	LTE	209-72	MP4283	LTE	192-64	♦MOTA	SST	
MM2260	♦MOTA	231-60	MMBT-A70	♦MOTA	131-14	MP1530	LTE	327-84	MP4283	LTE	192-65	♦MOTA	STI	
MM2260	♦MOTA	231-60	MMCM918	♦MOTA	151-27	MP1530	LTE	327-85	MP4283	LTE	192-66	♦MOTA	STI	
MM2260	♦MOTA	231-60	MMCM930	♦MOTA	148-103	MP1531	LTE	209-73	MP4283	LTE	192-67	♦MOTA	STI	
MM2260	♦MOTA	231-60	MMCM2222	♦MOTA	149-105	MP1531	LTE	209-74	MP4283	LTE	192-68	♦MOTA	STI	
MM2550	STI	288-34	MMCM2369	♦MOTA	291-31	MP1532	LTE	327-86	MP4283	LTE	192-69	♦MOTA	STI	
MM2550	STI	112-107	MMCM2369	♦MOTA	290-9	MP1532	LTE	327-87	MP4283	LTE	192-70	♦MOTA	STI	
MM2613	♦MOTA	174-48	MMCM2484	♦MOTA	148-104	MP1533	LTE	209-75	MP4283	LTE	192-71	♦MOTA	STI	
MM2613	♦MOTA	293-82	MMCM2907	♦MOTA	123-70	MP1533	LTE	209-76	MP4283	LTE	192-72	♦MOTA	STI	
MM2614	♦MOTA	293-80	MMCM2907	♦MOTA	292-49	MP1534	LTE	327-88	MP4283	LTE	192-73	♦MOTA	STI	
MM2711	♦MOTA	174-49	MMF1	♦MOTA	196-5	MP1534	LTE	327-89	MP4283	LTE	192-74	♦MOTA	STI	
MM2712	♦MOTA	293-83	MMF2	♦MOTA	343-41	MP1535	LTE	209-77	MP4283	LTE	192-75	♦MOTA	STI	
MM2712	♦MOTA	293-81	MMF2	♦MOTA	343-42	MP1535	LTE	327-43	MP4283	LTE	192-76	♦MOTA	STI	
MM2712	♦MOTA	137-58	MMF2	♦MOTA	196-6	MP1536	LTE	327-44	MP4283	LTE	192-77	♦MOTA	STI	
MM3000	♦MOTA	231-61	MMF3	♦MOTA	196-7	MP1536	LTE	209-79	MP4283	LTE	192-78	♦MOTA	STI	
MM3001	♦MOTA	231-62	MMF4	♦MOTA	343-43	MP1537	LTE	209-80	MP4283	LTE	192-79	♦MOTA	STI	
MM3001	♦MOTA	231-62	MMF4	♦MOTA	343-44	MP1538	LTE	327-45	MP4283	LTE	192-80	♦MOTA	STI	
MM3002	♦MOTA	231-63	MMF5	♦MOTA	196-8	MP1538	LTE	327-46	MP4283	LTE	192-81	♦MOTA	STI	
MM3002	♦MOTA	231-63	MMF5	♦MOTA	196-9	MP1539	LTE	209-81	MP4283	LTE	192-82	♦MOTA	STI	
MM3003	♦MOTA	231-64	MMF6	♦MOTA	343-45	MP1539	LTE	209-82	MP4283	LTE	192-83	♦MOTA	STI	
MM3003	♦MOTA	231-64	MMF6	♦MOTA	343-46	MP1540	LTE	209-83	MP4283	LTE	192-84	♦MOTA	STI	
MM3005	♦MOTA	240-103	MMT70	♦MOTA	152-102	MP1540	LTE	209-84	MP4283	LTE	192-85	♦MOTA	STI	
MM3005	♦MOTA	240-103	MMT71	♦MOTA	123-108	MP1541	LTE	209-85	MP4283	LTE	192-86	♦MOTA	STI	
MM3006	♦MOTA	240-104	MMT72	♦MOTA	153-4	MP1542	LTE	209-86	MP4283	LTE	192-87	♦MOTA	STI	
MM3006	♦MOTA	240-104	MMT72	♦MOTA	153-5	MP1543	LTE	209-87	MP4283	LTE	192-88	♦MOTA	STI	
MM3007	♦MOTA	240-105	MMT73	♦MOTA	292-68	MP1544	LTE	209-88	MP4283	LTE	192-89	♦MOTA	STI	
MM3007	♦MOTA	240-105	MMT73	♦MOTA	292-69	MP1545	LTE	209-89	MP4283	LTE	192-90	♦MOTA	STI	
MM3008	♦MOTA	231-65	MMT74	♦MOTA	124-5	MP1546	LTE	209-90	MP4283	LTE	192-91	♦MOTA	STI	
MM3008	♦MOTA	231-65	MMT75	♦MOTA	153-7	MP1547	LTE	209-91	MP4283	LTE	192-92	♦MOTA	STI	
MM3009	♦MOTA	231-66	MMT75	♦MOTA	123-109	MP1548	LTE	209-92	MP4283	LTE	192-93	♦MOTA	STI	
MM3009	♦MOTA	231-66	MMT76	♦MOTA	291-60	MP1549	LTE	209-93	MP4283	LTE	192-94	♦MOTA	STI	
MM3053	♦MOTA	238-13	MMT76	♦MOTA	290-30	MP1550	LTE	209-94	MP4283	LTE	192-95	♦MOTA	STI	
MM3726	♦MOTA	294-86	MMT806	♦MOTA	152-103	MP1551	LTE	209-95	MP4283	LTE	192-96	♦MOTA	STI	
MM3726	♦MOTA	216-33	MMT807	♦MOTA	153-17	MP1552	LTE	209-96	MP4283	LTE	192-97	♦MOTA	STI	
MM3734	SCA	296-40	MMT818	♦MOTA	153-18	MP1553	LTE	209-97	MP4283	LTE	192-98	♦MOTA	STI	
MM3735	SCA	235-58	MMT918	♦MOTA	153-6	MP1554	LTE	209-98	MP4283	LTE	192-99	♦MOTA	STI	
MM3735	SCA	296-41	MMT930	♦MOTA	152-105	MP1555	LTE	209-99	MP4283	LTE	193-00	♦MOTA	STI	
MM3903	♦MOTA	296-6	MMT2222	♦MOTA	153-2	MP1556	LTE	209-100	MP4283	LTE	193-01	♦MOTA	STI	
MM3903	♦MOTA	167-32	MMT2369	♦MOTA	292-34	MP1557	LTE	209-101	MP4283	LTE	193-02	♦MOTA	STI	
MM3904	♦MOTA	167-72	MMT2369	♦MOTA	290-10	MP1558	LTE	209-102	MP4283	LTE	193-03	♦MOTA	STI	
MM3904	♦MOTA	296-24	MMT2484	♦MOTA	153-5	MP1559	LTE	209-103	MP4283	LTE	193-04	♦MOTA	STI	
MM3905	♦MOTA	295-82	MMT2857	♦MOTA	152-106	MP1612	GP	207-70	MP4283					

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
MPS6540	DEF MOTA SST	165-50	MPS6574	MOTA NPC	162-69	MPSA70	ITD MEHK	(cont)	MPSK70	NTR	127-21	MRF603	MOTA	252-59
MPS6541	DEF MOTA SST	162-11	MPS6575	MOTA NPC	162-70	MPSA71	ITD MEHK NASB		MPSK71	NTR	127-22	MRF604	MOTA	240-12
MPS6542	DEF MOTA SST	163-26	MPS6576	MOTA NPC	162-71	MPSA72	ITD MEHK NASB		MPSK72	NTR	127-23	MRF607	MOTA	238-18
MPS6542Δ	DEF MOTA SST	165-78	MPS6579	MOTA NPC	131-84	MPSA92	ITD MEHK NASB		MPSL01	NTR	179-44	MRF618	MOTA	256-94
MPS6543	DEF MOTA SST	163-30	MPS6580	MOTA NPC	130-19	MPSA93	ITD MEHK NASB		MPSU01	NTR	245-72	MRF621	MOTA	272-103
MPS6544	DEF MOTA SST	162-12	MPS6591	MOTA NPC	162-25	MPSA94	ITD MEHK NASB		MPSU02	NTR	245-73	MRF622	MOTA	239-42
MPS6545	DEF MOTA SST	162-13	MPS8000	MOTA NPC	179-14	MPSA95	ITD MEHK NASB		MPSU03	NTR	245-74	MRF623	MOTA	239-43
MPS6546	DEF MOTA SST	163-21	MPS8001	MOTA NPC	164-14	MPSD01	ITD MEHK NASB		MPSU04	NTR	245-75	MRF624	MOTA	239-44
MPS6546Δ	DEF MOTA SST	165-73	MPS8097	MOTA NPC	164-66	MPSD02	ITD MEHK NASB		MPSU05	NTR	245-76	MRF625	MOTA	239-19
MPS6547	DEF MOTA SST	163-22	MPS8098	MOTA NPC	164-44	MPSD03	ITD MEHK NASB		MPSU06	NTR	245-77	MRF626	MOTA	239-19
MPS6547Δ	DEF MOTA SST	165-74	MPS8099	MOTA NPC	164-45	MPSD04	ITD MEHK NASB		MPSU07	NTR	245-78	MRF627	MOTA	239-43
MPS6548	DEF MOTA SST	163-23	MPS8598	MOTA NPC	131-26	MPSD05	ITD MEHK NASB		MPSU08	NTR	245-79	MRF628	MOTA	239-19
MPS6560	DEF MOTA SST	179-42	MPS8599	MOTA NPC	131-27	MPSD06	ITD MEHK NASB		MPSU09	NTR	245-80	MRF629	MOTA	238-19
MPS6561	DEF MOTA SST	179-43	MPSA05	MOTA NPC	179-77	MPSD10	ITD MEHK NASB		MPSU10	NTR	245-81	MRF644	MOTA	269-38
MPS6562	DEF MOTA SST	139-46	MPSA05K	MOTA NPC	181-103	MPSD20	ITD MEHK NASB		MPSU11	NTR	245-82	MRF646	MOTA	276-48
MPS6563	DEF MOTA SST	139-47	MPSA05L	MOTA NPC	181-104	MPSD30	ITD MEHK NASB		MPSU12	NTR	245-83	MRF816	MOTA	232-103
MPS6564	DEF MOTA SST	162-14	MPSA05M	MOTA NPC	181-105	MPSD40	ITD MEHK NASB		MPSU13	NTR	245-84	MRF817	MOTA	238-20
MPS6565	DEF MOTA SST	162-66	MPSA06	MOTA NPC	179-78	MPSD50	ITD MEHK NASB		MPSU14	NTR	245-85	MRF818	MOTA	247-22
MPS6565K	DEF MOTA SST	173-102	MPSA09	MOTA NPC	162-26	MPSD60	ITD MEHK NASB		MPSU15	NTR	245-86	MRF823	MOTA	247-23
MPS6565L	DEF MOTA SST	173-103	MPSA10	MOTA NPC	156-83	MPSD70	ITD MEHK NASB		MPSU16	NTR	245-87	MRF824	MOTA	254-56
MPS6565M	DEF MOTA SST	173-104	MPSA11	MOTA NPC	330-96	MPSD80	ITD MEHK NASB		MPSU17	NTR	245-88	MRF825	MOTA	263-89
MPS6566	DEF MOTA SST	162-67	MPSA12	MOTA NPC	330-96	MPSD90	ITD MEHK NASB		MPSU18	NTR	245-89	MRF835	MOTA	257-22
MPS6566A	DEF MOTA SST	162-67	MPSA13	MOTA NPC	330-90	MPSH00	ITD MEHK NASB		MPSU19	NTR	245-90	MRF835	MOTA	257-22
MPS6566M	DEF MOTA SST	173-106	MPSA14	MOTA NPC	330-95	MPSH01	ITD MEHK NASB		MPSU20	NTR	245-91	MRF901	MOTA	168-61
MPS6567	DEF MOTA SST	162-15	MPSA15	MOTA NPC	330-95	MPSH02	ITD MEHK NASB		MPSU21	NTR	245-92	MRF902	MOTA	170-32
MPS6568	DEF MOTA SST	163-2	MPSA20K	MOTA NPC	173-56	MPSH03	ITD MEHK NASB		MPSU22	NTR	245-93	MRF903	MOTA	152-57
MPS6568A	DEF MOTA SST	163-3	MPSA20L	MOTA NPC	173-57	MPSH04	ITD MEHK NASB		MPSU23	NTR	245-94	MRF904	MOTA	152-57
MPS6568AΔ	DEF MOTA SST	165-51	MPSA20M	MOTA NPC	173-58	MPSH05	ITD MEHK NASB		MPSU24	NTR	245-95	MRF905	MOTA	240-13
MPS6569	DEF MOTA SST	162-106	MPSA42	MOTA NPC	179-35	MPSH06	ITD MEHK NASB		MPSU25	NTR	245-96	MRF911	MOTA	170-36
MPS6569A	DEF MOTA SST	165-38	MPSA43	MOTA NPC	179-36	MPSH07	ITD MEHK NASB		MPSU26	NTR	245-97	MRF912	MOTA	175-64
MPS6570	DEF MOTA SST	162-107	MPSA44	MOTA NPC	173-56	MPSH08	ITD MEHK NASB		MPSU27	NTR	245-98	MRF914	MOTA	152-62
MPS6571	DEF MOTA SST	162-40	MPSA55	MOTA NPC	139-72	MPSH09	ITD MEHK NASB		MPSU28	NTR	245-99	MRF914	MOTA	143-46
MPS6573	DEF MOTA SST	162-68	MPSA56	MOTA NPC	139-73	MPSH10	ITD MEHK NASB		MPSU29	NTR	245-100	MRF917A	MOTA	259-33
			MPSA62	MOTA NPC	330-76	MPSH11	ITD MEHK NASB		MPSU30	NTR	245-101	MRF8004	GTC	238-22
			MPSA63	MOTA NPC	330-72	MPSH12	ITD MEHK NASB		MPSU31	NTR	245-102			
			MPSA64	MOTA NPC	330-74	MPSH13	ITD MEHK NASB		MPSU32	NTR	245-103			
			MPSA65	MOTA NPC	331-9	MPSH14	ITD MEHK NASB		MPSU33	NTR	245-104			
			MPSA66	MOTA NPC	331-10	MPSH15	ITD MEHK NASB		MPSU34	NTR	245-105			
			MPSA70	MOTA NPC	142-56	MPSH16	ITD MEHK NASB		MPSU35	NTR	245-106			
						MPSH17	ITD MEHK NASB		MPSU36	NTR	245-107			
						MPSH18	ITD MEHK NASB		MPSU37	NTR	245-108			
						MPSH19	ITD MEHK NASB		MPSU38	NTR	245-109			
						MPSH20	ITD MEHK NASB		MPSU39	NTR	245-110			
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						MPSH22	ITD MEHK NASB		MPSU41	NTR	245-112			
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						MPSH24	ITD MEHK NASB		MPSU43	NTR	245-114			
						MPSH25	ITD MEHK NASB		MPSU44	NTR	245-115			
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						MPSH28	ITD MEHK NASB		MPSU47	NTR	245-118			
						MPSH29	ITD MEHK NASB		MPSU48	NTR	245-119			
						MPSH30	ITD MEHK NASB		MPSU49	NTR	245-120			
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						MPSH36	ITD MEHK NASB		MPSU55	NTR	245-126			
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						MPSH42	ITD MEHK NASB		MPSU61	NTR	245-132			
						MPSH43	ITD MEHK NASB		MPSU62	NTR	245-133			
						MPSH44	ITD MEHK NASB		MPSU63	NTR	245-134			
						MPSH45	ITD MEHK NASB		MPSU64	NTR	245-135			
						MPSH46	ITD MEHK NASB		MPSU65	NTR	245-136			
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						MPSH53	ITD MEHK NASB		MPSU72	NTR	245-143			
						MPSH54	ITD MEHK NASB		MPSU73	NTR	245-144			
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						MPSH60	ITD MEHK NASB		MPSU79	NTR	245-150			
						MPSH61	ITD MEHK NASB		MPSU80	NTR	245-151			
						MPSH62	ITD MEHK NASB		MPSU81	NTR	245-152			
						MPSH63	ITD MEHK NASB		MPSU82	NTR	245-153			
						MPSH64	ITD MEHK NASB		MPSU83	NTR	245-154			
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						MPSH66	ITD MEHK NASB		MPSU85	NTR	245-156			
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OC78	PHIN	114-23	PE1004	PHIB	154-50	PL4053	TIIF	293-41	PN3568	NTR	177-52	PN5137	NTR	179-26
OC79	PHIN	117-46	PE1007A	PHIB	154-13		TIIF	293-42		NTR			NTR	
OC80	PHIN	117-47	PE1007B	PHIB	154-51		TIIF	152-98		NTR			NTR	
OC81DN	NTLB	114-24	PE1008A	PHIB	154-14	PL4054	TIIF	152-101	PN3569	NTR	177-53	PN5138	NTR	139-33
OC81N	NTLB	114-25	PE1008B	PHIB	154-15		TIIF	293-62		NTR			NTR	
OC83N	NTLB	115-23	PE3001	PHIB	154-16	PL4055	TIIF	293-43	PN3638	NTR	138-53	PN5139	NTR	140-58
OC84N	NTLB	115-24	PE3002	PHIB	175-35		TIIF	152-99		NTR			NTR	
OC122	PHIN	116-36	PE3100	FSC	170-44	PL4061	TIIF	148-64	PN3638A	NTR	138-68	PN5140	NTR	140-62
OC123	PHIN	116-37		NSC		PL4062	TIIF	148-65		NTR			NTR	
OC139	PHIN	119-14	PE5025	FSC	170-43	PL4112	TIIF	146-44	PN3639	NTR	138-103	PN5141	NTR	138-97
OC140	PHIN	119-16		NSC		PL7001	AMC	332-49		NTR		PN5142	NTR	139-74
OC141	PHIN	119-13	PE5029	NSC	170-45	PL7017	AMC	310-80	PN3640	NTR	138-104	PN5143	NTR	139-75
OC170	NTLB	107-32	PE5030B	FSC	170-46		AMC	312-43		NTR			NTR	
OC171	NTLB	107-33		NSC		PL7018	AMC	332-50	PN3641	NTR	178-34		NTR	
OC200	TIIB	124-54	PE5031	FSC	170-47		AMC	332-51	PN3642	NTR	178-35	PN5163	NTR	199-88
OC201	TIIB	124-75		NSC		PM10PNP	PHIB	312-44	PN3643	NTR	178-36	PN5179	NTR	178-66
OC202	TIIB	124-76	PE7058	FSC	239-17	PM26K380	PMN	218-77		NTR		PN5910	NTR	138-108
OC203	TIIB	124-55	PE7059	FSC	239-18		PMN	321-20	PN3644	NTR	138-91	PN7055	NTR	177-9
OC204	TIIB	126-29	PE8050	FSC	232-108	PM29K380	PMN	276-49		NTR		PP3000	NTR	269-39
OC205	TIIB	126-30	PE8051	FSC	232-109		PMN	321-21	PN3645	NTR	138-92	PP3001	NTR	269-40
OC206	TIIB	126-38	PE8550	FSC	232-108	PMD10K40	PMN	337-47		NTR		PP3002	NTR	269-41
OC207	TIIB	129-102	PE8551	FSC	232-109	PMD10K60	PMN	337-48		NTR		PP3003	NTR	269-42
P1069E	TSC	189-53	PE9001	PHIB	215-29	PMD10K80	PMN	337-49	PN3684	NTR	199-62	PP3004	NTR	269-43
P1086E	NSC	189-54	PE9001	PHIB	215-29	PMD10K80	PMN	337-49	PN3685	NTR	199-63	PP3005	NTR	269-44
SIX	TSC	291-105	PE9002	PHIB	289-17	PMD10K100	PMN	337-50	PN3686	NTR	199-64	PP3006	NTR	276-51
P1087E	NSC	302-56			289-18	PMD11K40	PMN	337-41	PN3687	NTR	199-65	PP3007	NTR	276-52
SIX	TSC	189-55	PET3702	STI	132-59	PMD11K60	PMN	337-42	PN3691	NTR	178-15	PP3008	NTR	276-53
P1117E	TSC	189-56	PET3703	STI	132-60	PMD11K80	PMN	337-43		NTR		PP3083	NTR	252-5
P1118E	TSC	189-57	PET3704	STI	166-73	PMD11K100	PMN	337-44	PN3692	NTR	178-16	PP3084	NTR	252-6
P1119E	TSC	189-58	PET3705	STI	166-74	PMD12K40	PMN	335-66		NTR		PP3085	NTR	252-7
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PA7003	AMC	331-40	PET4058	STI	132-9	PMD16K60	PMN	337-85	PN4093	NTR	199-69	PP7536	NTR	227-75
PA7013	AMC	330-39	PET4059	STI	132-10	PMD16K80	PMN	337-86	PN4121	NTR	140-60	PP7676	NTR	278-71
PA7014	AMC	331-41	PET4060	STI	132-11	PMD16K100	PMN	337-87		NTR		PPR1006	NTR	244-77
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PBM6003	PHIB	339-23	PL1024	TIIF	144-76	PMD1702K	PMN	337-63		NTR		PT102	STL	349-65
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PC108B	PHIB	137-77	PL1035	TIIF	121-95	PN172	NTLB	123-67	PN4274	NTR	178-47	PT502	SSI	284-72
PC110	PHIB	258-105	PL1036	TIIF	121-96	PN107	NTLB	150-26	PN4275	NTR	178-48		SSI	324-110
PC120	PHIB	258-106	PL1037	TIIF	144-79	PN108	NTLB	150-27		NTR		PT600	SSI	284-73
PC1200	PHIB	223-55	PL1038	TIIF	144-80	PN109	NTLB	150-28	PN4302	NTR	199-75		SSI	
PC210	PHIB	223-56	PL1039	TIIF	144-81	PN109	NTR	150-29	PN4303	NTR	199-76	PT600	TRW	247-31
PC220	PHIB	223-57	PL1040	TIIF	144-82	PN918	NTR	150-30	PN4304	NTR	199-77	PT601	TRW	284-74
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PC1007A	PHIB	125-77	PL1042	TIIF	144-84	PN930	NTR	178-64	PN4306	NTR	199-78	PT602	TRW	247-32
PC1008	PHIB	125-78	PL1043	TIIF	144-85	PN930	NTR	178-65	PN4307	NTR	199-79	PT603	TRW	284-75
PC1008A	PHIB	125-79	PL1044	TIIF	144-86	PN930A	NTR	178-66	PN4308	NTR	199-80	PT604	TRW	325-1
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RCP702B	RCA	304-96	S1236	IMTM	259-6	SCA3023	SCA	152-6			332-27	SDN22313	STC	336-1
RCP702C	RCA	218-83	S1350	IMTM	223-67	SCA3235	SCA	151-94	SDM3204	SOD	332-28	SDP151	STC	331-36
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SDT5002	AMC SOD	240- 37	SDT5048	AMC KER SSI	240- 83	SDT5595	AMC ↑PPC KER SOD	240- 116	SDT5954	GSE ↑PPC SSI UNI	252- 68	SDT6450	AMC GSE ↑PPC	260- 76
SDT5003	AMC SOD	240- 38	SDT5049	AMC KER SSI	240- 84	SDT5596	AMC ↑PPC KER SOD	240- 117	SDT5955	GSE ↑PPC SSI UNI	252- 69	SDT6451	AMC GSE ↑PPC	260- 77
SDT5004	AMC SOD	240- 39	SDT5050	AMC KER SSI	240- 85	SDT5597	AMC ↑PPC KER SOD	240- 118	SDT5956	GSE ↑PPC SSI UNI	252- 70	SDT6452	AMC GSE ↑PPC	260- 78

1. TYPE No. CROSS INDEX

TYPE No.				TYPE No.				TYPE No.				TYPE No.				TYPE No.													
TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line									
SDT9802	AMC	272-97	SDT96404	SOD	278-107	SE9304	CEN	336-4	SK3021-RT	RCA	230-29	SP2907AF	RTN	348-83	SDT9802	AMC	272-97	SDT96404	SOD	278-107	SE9304	CEN	336-4	SK3021-RT	RCA	230-29	SP2907AF	RTN	348-83
SDT9803	AMC	272-98	SDT96405	SOD	278-108	SE9305	GTC	336-5	SK3024-RT	RCA	230-30	SP2907AQD	RTN	348-84	SDT9803	AMC	272-98	SDT96405	SOD	278-108	SE9305	GTC	336-5	SK3025-RT	RCA	213-80	SP2907AQF	RTN	348-85
SDT9804	AMC	272-99	SDT96406	SOD	278-109	SEN-1733	GTC	280-10	SK3026-RT	RCA	230-31	SP2907F	RTN	348-86	SDT9804	AMC	272-99	SDT96406	SOD	278-109	SEN-1733	SEN	280-10	SK3027-RT	RCA	230-32	SP2907QF	RTN	348-87
SDT12201	SOD	277-25	SDT96501	SOD	282-92	SES3819	MISI	324-4	SK3028-RT	RCA	230-33	SP2920F	RTN	343-94	SDT12201	SOD	277-25	SDT96501	SOD	282-92	SES3819	MISI	324-4	SK3028-RT	RCA	230-33	SP2920F	RTN	343-94
SDT12202	SOD	277-26	SDT96502	SOD	282-93	NPB	THCF	192-76	SK3029-RT	RCA	230-34	SP3019F	RTN	348-88	SDT12202	SOD	277-26	SDT96502	SOD	282-93	NPB	THCF	192-76	SK3029-RT	RCA	230-34	SP3019F	RTN	348-88
SDT12203	SOD	277-27	SDT96503	SOD	282-94	SF115	PIHS	145-103	SK3034-RT	RCA	202-41	SP3019QD	RTN	348-89	SDT12203	SOD	277-27	SDT96503	SOD	282-94	SF115	PIHS	145-103	SK3034-RT	RCA	202-41	SP3019QD	RTN	348-89
SDT12301	SOD	278-28	SDT96504	SOD	282-95	SF115A	PIHS	145-71	SK3035-RT	RCA	202-42	SP3251AQD	RTN	348-90	SDT12301	SOD	278-28	SDT96504	SOD	282-95	SF115A	PIHS	145-71	SK3035-RT	RCA	202-42	SP3251AQD	RTN	348-90
SDT12302	SOD	311-29	SDT96505	SOD	282-96	SF115B	PIHS	145-72	SK3036-RT	RCA	230-35	SP3467F	RTN	348-91	SDT12302	SOD	311-29	SDT96505	SOD	282-96	SF115B	PIHS	145-72	SK3036-RT	RCA	230-35	SP3467F	RTN	348-91
SDT12303	SOD	311-30	SDT96506	SOD	282-97	SF115C	PIHS	145-104	SK3037-RT	RCA	230-36	SP3467QD	RTN	348-92	SDT12303	SOD	311-30	SDT96506	SOD	282-97	SF115C	PIHS	145-104	SK3037-RT	RCA	230-36	SP3467QD	RTN	348-92
SDT12304	SOD	278-98	SDT96901	SOD	285-28	SF115D	PIHS	145-105	SK3038-RT	RCA	158-79	SP3467QF	RTN	348-93	SDT12304	SOD	278-98	SDT96901	SOD	285-28	SF115D	PIHS	145-105	SK3038-RT	RCA	158-79	SP3467QF	RTN	348-93
SDT12305	SOD	278-99	SDT96902	SOD	285-29	SF115E	PIHS	145-106	SK3039-RT	RCA	161-60	SP3724QF	RTN	348-94	SDT12305	SOD	278-99	SDT96902	SOD	285-29	SF115E	PIHS	145-106	SK3039-RT	RCA	161-60	SP3724QF	RTN	348-94
SDT12306	SOD	311-31	SDT96903	SOD	285-30	SF173	PIHS	144-34	SK3040-RT	RCA	230-37	SP3725QF	RTN	348-95	SDT12306	SOD	311-31	SDT96903	SOD	285-30	SF173	PIHS	144-34	SK3040-RT	RCA	230-37	SP3725QF	RTN	348-95
SDT12307	SOD	277-28	SDT96904	SOD	285-31	SF194	PIHS	146-45	SK3041-RT	RCA	230-38	SP3725QD	RTN	348-96	SDT12307	SOD	277-28	SDT96904	SOD	285-31	SF194	PIHS	146-45	SK3041-RT	RCA	230-38	SP3725QD	RTN	348-96
SDT13202	SOD	277-29	SDT96905	SOD	285-32	SF194B	PIHS	145-99	SK3042-RT	RCA	230-39	SP3725QF	RTN	348-97	SDT13202	SOD	277-29	SDT96905	SOD	285-32	SF194B	PIHS	145-99	SK3042-RT	RCA	230-39	SP3725QF	RTN	348-97
SDT13203	SOD	277-30	SDT96906	SOD	285-33	SF195	PIHS	145-100	SK3043-RT	RCA	174-97	SP3725QD	RTN	348-98	SDT13203	SOD	277-30	SDT96906	SOD	285-33	SF195	PIHS	145-100	SK3043-RT	RCA	174-97	SP3725QD	RTN	348-98
SDT13204	SOD	277-31	SDT96907	SOD	285-34	SF195D	PIHS	145-73	SK3044-RT	RCA	230-41	SP3762QF	RTN	348-100	SDT13204	SOD	277-31	SDT96907	SOD	285-34	SF195D	PIHS	145-73	SK3044-RT	RCA	230-41	SP3762QF	RTN	348-100
SDT13205	SOD	277-32	SDT96908	SOD	285-35	SF196	PIHS	145-74	SK3045-RT	RCA	230-42	SP7056	NSC	230-53	SDT13205	SOD	277-32	SDT96908	SOD	285-35	SF196	PIHS	145-74	SK3045-RT	RCA	230-42	SP7056	NSC	230-53
SDT13301	SOD	278-98	SE1001	SOD	150-72	SF197	PIHS	145-75	SK3046-RT	RCA	230-43	SPC151-04	SPC	281-86	SDT13301	SOD	278-98	SE1001	SOD	150-72	SF197	PIHS	145-75	SK3046-RT	RCA	230-43	SPC151-04	SPC	281-86
SDT13302	SOD	309-96	SE1002	SOD	150-73	SF284	PIHS	144-35	SK3047-RT	RCA	197-65	SPC151-06	SPC	281-87	SDT13302	SOD	309-96	SE1002	SOD	150-73	SF284	PIHS	144-35	SK3047-RT	RCA	197-65	SPC151-06	SPC	281-87
SDT13303	SOD	278-98	SE2001	SOD	149-106	SF284B	PIHS	146-46	SK3048-RT	RCA	202-43	SPC151-08	SPC	281-88	SDT13303	SOD	278-98	SE2001	SOD	149-106	SF284B	PIHS	146-46	SK3048-RT	RCA	202-43	SPC151-08	SPC	281-88
SDT13304	SOD	278-98	SE2002	SOD	149-107	SF285	PIHS	145-101	SK3049-RT	RCA	230-44	SPC151-10	SPC	281-89	SDT13304	SOD	278-98	SE2002	SOD	149-107	SF285	PIHS	145-101	SK3049-RT	RCA	230-44	SPC151-10	SPC	281-89
SDT13305	SOD	278-100	SE3001	SOD	151-63	SF295D	PIHS	145-102	SK3050-RT	RCA	197-66	SPC151-12	SPC	281-90	SDT13305	SOD	278-100	SE3001	SOD	151-63	SF295D	PIHS	145-102	SK3050-RT	RCA	197-66	SPC151-12	SPC	281-90
SDT14304	SOD	309-100	SE3002	SOD	151-64	SF310	PIHS	145-76	SK3051-RT	RCA	230-45	SPC151-14	SPC	281-91	SDT14304	SOD	309-100	SE3002	SOD	151-64	SF310	PIHS	145-76	SK3051-RT	RCA	230-45	SPC151-14	SPC	281-91
SDT14305	SOD	278-102	SE4001	SOD	148-84	SF334B	PIHS	146-21	SK3052-RT	RCA	202-44	SPC151-16	SPC	281-92	SDT14305	SOD	278-102	SE4001	SOD	148-84	SF334B	PIHS	146-21	SK3052-RT	RCA	202-44	SPC151-16	SPC	281-92
SDT55405	SOD	286-24	SE4002	SOD	148-106	SF335	PIHS	146-7	SK3053-RT	RCA	230-46	SPC151-18	SPC	281-93	SDT55405	SOD	286-24	SE4002	SOD	148-106	SF335	PIHS	146-7	SK3053-RT	RCA	230-46	SPC151-18	SPC	281-93
SDT55407	SOD	286-25	SE4003	SOD	148-107	SF335C	PIHS	146-8	SK3054-RT	RCA	230-47	SPC151-20	SPC	281-94	SDT55407	SOD	286-25	SE4003	SOD	148-107	SF335C	PIHS	146-8	SK3054-RT	RCA	230-47	SPC151-20	SPC	281-94
SDT55456	SOD	286-77	SE4004	SOD	148-108	SF335D	PIHS	146-9	SK3055-RT	RCA	230-48	SPC151-22	SPC	281-95	SDT55456	SOD	286-77	SE4004	SOD	148-108	SF335D	PIHS	146-9	SK3055-RT	RCA	230-48	SPC151-22	SPC	281-95
SDT55460	SOD	322-105	SE4010	SOD	148-109	SFT187	MISI	184-83	SK3056-RT	RCA	230-49	SPC151-24	SPC	281-96	SDT55460	SOD	322-105	SE4010	SOD	148-109	SFT187	MISI	184-83	SK3056-RT	RCA	230-49	SPC151-24	SPC	281-96
SDT55462	SOD	286-78	SE4011	SOD	149-108	SFT221	THCF	115-35	SK3057-RT	RCA	191-60	SPC151-26	SPC	281-97	SDT55462	SOD	286-78	SE4011	SOD	149-108	SFT221	THCF	115-35	SK3057-RT	RCA	191-60	SPC151-26	SPC	281-97
SDT55464	SOD	286-75	SE4020	SOD	150-31	SFT222	THCF	115-58	SK3058-RT	RCA	135-100	SPC151-28	SPC	281-98	SDT55464	SOD	286-75	SE4020	SOD	150-31	SFT222	THCF	115-58	SK3058-RT	RCA	135-100	SPC151-28	SPC	281-98
SDT55470	SOD	286-76	SE4021	SOD	150-32	SFT227	MISI	307-8	SK3059-RT	RCA	135-100	SPC151-30	SPC	281-99	SDT55470	SOD	286-76	SE4021	SOD	150-32	SFT227	MISI	307-8	SK3059-RT	RCA	135-100	SPC151-30	SPC	281-99
SDT55472	SOD	286-77	SE4022	SOD	150-33	SFT228	THCF	111-70	SK3060-RT	RCA	230-50	SPC152-06	SPC	281-100	SDT55472	SOD	286-77	SE4022	SOD	150-33	SFT228	THCF	111-70	SK3060-RT	RCA	230-50	SPC152-06	SPC	281-100
SDT55474	SOD	286-78	SE4023	SOD	150-34	SFT229	MISI	306-6	SK3061-RT	RCA	147-38	SPC152-08	SPC	281-101	SDT55474	SOD	286-78	SE4023	SOD	150-34	SFT229	MISI	306-6	SK3061-RT	RCA	147-38	SPC152-08	SPC	281-101
SDT55476	SOD	286-79	SE4024	SOD	150-35	SFT232	THCF	111-107	SK3062-RT	RCA	137-69	SPC152-10	SPC	281-102	SDT55476	SOD	286-79	SE4024	SOD	150-35	SFT232	THCF	111-107	SK3062-RT	RCA	137-69	SPC152-10	SPC	281-102
SDT55503	SOD	286-80	SE4025	SOD	150-36	SFT233	MISI	112-25	SK3063-RT	RCA	230-51	SPC152-12	SPC	281-103	SDT55503	SOD	286-80	SE4025	SOD	150-36	SFT233	MISI	112-25	SK3063-RT	RCA	230-51	SPC152-12	SPC	281-103
SDT55504	SOD	286-81	SE4026	SOD	150-37	SFT234	THCF	109-5	SK3064-RT	RCA	230-52	SPC152-14	SPC	281-104	SDT55504	SOD	286-81	SE4026	SOD	150-37	SFT234	THCF	109-5	SK3064-RT	RCA	230-52	SPC152-14	SPC	281-104
SDT55505	SOD	286-82	SE4027	SOD	150-38	SFT235	MISI	117-41	SK3065-RT	RCA	230-53	SPC152-16	SPC	281-105	SDT55505	SOD	286-82	SE4027	SOD	150-38	SFT235	MISI	117-41	SK3065-RT	RCA	230-53	SPC152-16	SPC	281-105
SDT55506	SOD	286-83	SE4028	SOD	150-39	SFT236	THCF	117-41	SK3066-RT	RCA	178-49	SPC152-18	SPC	281-106	SDT55506	SOD	286-83	SE4028	SOD	150-39	SFT236	THCF	117-41	SK3066-RT	RCA	178-49	SPC152-18	SPC	281-106
SDT55507	SOD	286-84	SE4029	SOD	151-00	SFT237	MISI	117-42	SK3067-RT	RCA	343-82	SPC152-20	SPC	281-107	SDT55507	SOD	286-84	SE4029	SOD	151-00	SFT237	MISI	117-42	SK3067-RT	RCA	343-82	SPC152-20	SPC	281-107
SDT55508	SOD	286-85	SE4030	SOD	147-3	SFT238	THCF	117-43	SK3068-RT	RCA	343-83	SPC152-22	SPC	281-108	SDT55508	SOD	286-85	SE4030	SOD	147-3	SFT238	THCF	117-43	SK3068-RT	RCA	343-83	SPC152-22	SPC	281-108
SDT55509	SOD	286-86	SE4031	SOD	147-4	SFT239	MISI	117-44	SK3069-RT	RCA</																			

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IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
TR-C44	STI	111-80	TRLP3005S	◆GDC	217-97	TRS25X5	SSI	244-85	TRS451MP	SSI	231-15	TRS2805S	◆GDC	244-106
TR-C45	STI	111-37		STI			STI			STI			◆HVS	
TR-C70	STI	110-23	TRLP3504	◆GDC	217-98	TRS25X	SSI	243-55	TRS475	SSI	177-27		STI	
TR-C71	STI	110-24		STI			STI			STI		TRS3006	◆GDC	249-100
TR-C72	STI	110-25	TRLP3504S	◆GDC	217-99	TRS30X5	SSI	244-86	TRS475MP	SSI	231-16		◆HVS	
TRL2005	◆GDC	243-54		STI			STI			STI			STI	
	◆STI		TRLP3505	◆GDC	217-100	TRS30X	SSI	243-56	TRS501	SSI	177-28	TRS3011	SSI	156-88
TRL2014	◆GDC	232-22		STI			STI			STI		TRS3012	SSI	156-89
	◆STI		TRLP3505S	◆GDC	217-101	TRS35X5	SSI	244-87	TRS501LC	SSI	231-81		STI	
TRL2015	◆GDC	287-25		STI			STI			SSI	231-17	TRS3014	◆GDC	236-20
	◆STI		TRLP4004	◆GDC	217-102	TRS35X	SSI	243-57	TRS501MP	SSI			◆HVS	
TRL2254S	◆GDC	232-23		STI			STI			SSI	177-29		STI	
	◆STI		TRLP4004S	◆GDC	217-103	TRS100	SSI	177-55	TRS525	SSI		TRS3014LP	STI	236-21
TRL2255S	◆GDC	287-26		STI			STI			SSI	231-18	TRS3015	◆GDC	244-107
	◆STI		TRLP4005	◆GDC	217-104	TRS100A	SSI	177-10	TRS525MP	SSI			◆HVS	
TRL2504	◆GDC	232-24		STI			SSI	242-69	TRS550	SSI	177-30		STI	
	◆STI		TRLP4005S	◆GDC	217-105	TRS100HC	SSI			STI		TRS3015LC	STI	233-83
TRL2504S	◆GDC	232-25		STI			SSI	177-56	TRS550MP	SSI	231-19	TRS3015LP	STI	244-108
	◆STI		TRLP4504	◆GDC	217-106	TRS101	SSI			STI		TRS3016LC	STI	233-84
TRL2505	◆GDC	287-27		STI			SSI	177-11	TRS575	SSI	177-31	TRS3204S	◆GDC	236-22
	◆STI		TRLP4504S	◆GDC	217-107	TRS120	SSI			STI			◆HVS	
TRL2505S	◆GDC	287-28		STI			SSI	242-70	TRS575MP	SSI	231-20		STI	
	◆STI		TRLP4505	◆GDC	217-108	TRS125HC	SSI			STI		TRS3205S	◆GDC	244-109
TRL2754S	◆GDC	232-26		STI			SSI	177-12	TRS601	SSI	177-32		◆HVS	
	◆STI		TRLP4505S	◆GDC	217-109	TRS140	SSI			STI		TRS3254	◆GDC	236-23
TRL2755S	◆GDC	287-29		STI			SSI	238-40	TRS601LC	SSI	231-82		◆HVS	
	◆STI		TRM13	STI	106-6	TRS140HP	SSI		TRS601MP	SSI	231-21		STI	
TRL3014	◆GDC	232-27	TRM14	STI	106-7	TRS140MP	SSI			STI		TRS3254LP	STI	236-24
	◆STI		TRM15	STI	109-27	TRS150HC	SSI	242-71	TRS650	SSI	177-33	TRS3255	◆GDC	244-110
TRL3014S	◆GDC	232-28	TRM16	STI	109-28		STI			STI			◆HVS	
	◆STI		TRM17	STI	109-29	TRS160	SSI	177-13	TRS701	SSI	177-34		STI	
TRL3015	◆GDC	287-30	TRM21	STI	109-30		STI			STI		TRS3255LP	STI	245-1
	◆STI		TRM34	STI	104-84	TRS160HP	SSI	238-41	TRS750	SSI	177-35	TRS3501	SSI	156-90
TRL3015S	◆GDC	287-31	TRM81	STI	106-8	TRS160MP	SSI	231-3	TRS801	SSI	177-36	TRS3502	SSI	156-91
	◆STI		TRM2014	◆GDC	232-41		STI			STI			STI	
TRL3504	◆GDC	232-29	TRM2015	◆GDC	233-63	TRS175HC	SSI	242-72	TRS1004	◆GDC	236-1	TRS3504	◆GDC	236-25
	◆STI			STI			SSI		◆HVS	STI			◆HVS	
TRL3505	◆GDC	287-32	TRM2254S	◆GDC	232-42	TRS180	SSI	177-14		STI		TRS3504LP	STI	236-26
	◆STI			STI			SSI			STI		TRS3505	◆GDC	245-2
TRL3514S	◆GDC	232-68	TRM2255S	◆GDC	233-64	TRS180HP	SSI	238-42	TRS1004LP	◆GDC	236-2		◆HVS	
	◆STI			STI			SSI		TRS1005	◆GDC	244-88		◆HVS	
TRL3515S	◆GDC	287-33	TRM2504	◆GDC	232-43	TRS180MP	SSI	231-4		STI		TRS3505LP	STI	245-3
	◆STI			STI			SSI		TRS1005LP	STI	244-89	TRS3604S	◆GDC	236-27
TRL4014	◆GDC	232-30	TRM2504S	◆GDC	232-44	TRS200	SSI	177-15	TRS1204	◆GDC	236-3		◆HVS	
	◆STI			STI			SSI		◆HVS	STI			STI	
TRL4014S	◆GDC	232-31	TRM2505	◆GDC	233-65	TRS200HC	SSI	242-73		STI		TRS3605S	◆GDC	245-4
	◆STI			STI			SSI		TRS1204LP	STI	236-4		◆HVS	
TRL4015	◆GDC	287-34	TRM2505S	◆GDC	233-66	TRS200HP	SSI	238-43	TRS1205	◆GDC	244-90		STI	
	◆STI			STI			SSI		◆HVS	STI		TRS3742	◆GDC	243-58
TRL4015S	◆GDC	233-53	TRM2754S	◆GDC	232-45	TRS200MP	SSI	231-5		STI		SS	STI	
	◆STI			STI			SSI		TRS1205LP	STI	244-91	TRS3754	◆GDC	236-28
TRL4504	◆GDC	232-32	TRM2755S	◆GDC	233-67	TRS225	SSI	177-16	TRS1404	◆GDC	236-5		◆HVS	
	◆STI			STI			SSI		◆HVS	STI			STI	
TRL4505	◆GDC	233-54	TRM3014	◆GDC	232-46	TRS225HP	SSI	238-44		STI		TRS3754LP	STI	236-29
	◆STI			STI			SSI		TRS1404LP	STI	236-6	TRS3755	◆GDC	245-5
TRL5014	◆GDC	232-33	TRM3014S	◆GDC	232-47	TRS225MP	SSI	231-6	TRS1405	◆GDC	244-92		◆HVS	
	◆STI			STI			SSI		◆HVS	STI			STI	
TRL5014S	◆GDC	232-34	TRM3015	◆GDC	233-68	TRS250	SSI	177-17		STI		TRS3755LP	STI	245-6
	◆STI			STI			SSI		TRS1405LP	STI	244-93	TRS4001	SSI	156-92
TRL5015	◆GDC	233-55	TRM3015S	◆GDC	233-69	TRS250HP	SSI	238-45	TRS1604	◆GDC	236-7	TRS4002	SSI	156-93
	◆STI			STI			SSI		◆HVS	STI			STI	
TRL5015S	◆GDC	233-56	TRM3504	◆GDC	232-48	TRS250MP	SSI	231-7		STI		TRS4004	SSI	236-30
	◆STI			STI			SSI		TRS1604LP	STI	236-8		STI	
TRL5504	◆GDC	232-35	TRM3505	◆GDC	233-70	TRS275	SSI	177-18	TRS1605	◆GDC	244-94	TRS4005	SSI	245-7
	◆STI			STI			SSI		◆HVS	STI			STI	
TRL5505	◆GDC	233-57	TRM3514S	◆GDC	232-49	TRS275HP	SSI	238-46		STI		TRS4006	◆GDC	249-101
	◆STI			STI			SSI		TRS1605LP	STI	244-95		◆HVS	
TRL6014	◆GDC	232-36	TRM3515S	◆GDC	233-71	TRS275MP	SSI	231-8	TRS1804	◆GDC	236-9		STI	
	◆STI			STI			SSI		◆HVS	STI		TRS4014	◆GDC	236-31
TRL6015	◆GDC	233-58	TRM4014	◆GDC	232-50	TRS301	SSI	177-19		STI		◆HVS	STI	
	◆STI			STI			SSI		TRS1804LP	STI	236-10		STI	
TRL6504	◆GDC	232-37	TRM4014S	◆GDC	232-51	TRS301HP	SSI	238-47	TRS1805	◆GDC	244-96	TRS4014LP	STI	236-32
	◆STI			STI			SSI		◆HVS	STI		TRS4014S	◆GDC	236-33
TRL6505	◆GDC	233-59	TRM4015	◆GDC	233-72	TRS301LC	SSI	232-61		STI			◆HVS	
	◆STI			STI			SSI		TRS1805LP	STI	244-97		STI	
TRL7014	◆GDC	232-38	TRM4015S	◆GDC	233-73	TRS301MP	SSI	231-9	TRS2004	◆GDC	236-11	TRS4015	◆GDC	245-8
	◆STI			STI			SSI		◆HVS	STI			◆HVS	
TRL7015	◆GDC	233-60	TRM4504	◆GDC	232-52	TRS325	SSI	177-20		STI			STI	
	◆STI			STI			SSI		TRS2004LP	STI	236-12	TRS4015LC	STI	233-85
TRL7504	◆GDC	232-39	TRM4505	◆GDC	233-74	TRS325HP	SSI	238-48	TRS2005	◆GDC	244-98	TRS4015LP	STI	245-9
	◆STI			STI			SSI		◆HVS	STI		TRS4015S	◆GDC	245-10
TRL7505	◆GDC	233-61	TRM5014	◆GDC	232-53	TRS325MP	SSI	231-10		STI			◆HVS	
	◆STI			STI			SSI		TRS2005LP	STI	244-99		STI	
TRL8014	◆GDC	232-40	TRM5014S	◆GDC	232-54	TRS350	SSI	177-21	TRS2006	◆GDC	249-99	TRS4016LC	STI	233-86
	◆STI			STI			SSI		◆HVS	STI		TRS4016S	◆GDC	249-102
TRL8015	◆GDC	233-62	TRM5015	◆GDC	233-75	TRS350HP	SSI	238-49		STI			◆HVS	
	◆STI			STI			SSI		TRS2254	◆GDC	236-13		◆HVS	
TRLP2004	◆GDC	217-84	TRM5015S	◆GDC	233-76	TRS350MP	SSI	231-11		STI		TRS4254	◆GDC	236-34
	◆STI			STI			SSI		◆HVS	STI			◆HVS	
TRLP2005	◆GDC	217-85	TRM5504	◆GDC	232-55	TRS375	SSI	177-22	TRS2254LP	STI	236-14		STI	
	◆STI			STI			SSI		TRS2255	◆GDC	244-100		STI	

1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
UC250	INL	200-97	UPT011	◆UNI	186-58	UPT531	◆UNI	308-101	V578	NECJ	155-55	ZDT40	◆FERB	159-106
NSC	◆SODI		UPT012	◆UNI	298-103	UPT532	◆UNI	265-39	V578S	NECJ	155-56		◆FERB	344-66
UC251	INL	200-98	UPT013	◆UNI	298-104	UPT533	◆UNI	265-40	V578W	NECJ	155-57	ZDT41	◆FERB	344-67
NSC	◆SODI		UPT014	◆UNI	186-59	UPT534	◆UNI	308-102	V658	◆NECJ	155-34	ZDT42	◆FERB	159-107
UC400	INL	190-9	UPT015	◆UNI	186-60	UPT535	◆UNI	308-103	V741	SGAI	132-43	ZDT44	◆FERB	159-108
◆SODI			UPT021	◆UNI	298-105	UPT611	◆UNI	265-41	V745	SGAI	142-20		◆FERB	344-68
UC401	INL	189-72	UPT022	◆UNI	298-106	UPT612	◆UNI	265-42	V761	SGAI	135-24	ZDT45	◆FERB	344-69
◆SODI			UPT023	◆UNI	186-61	UPT613	◆UNI	308-104	V763	SGAI	135-107		◆FERB	159-109
UC410	INL	188-37	UPT024	◆UNI	186-62	UPT614	◆UNI	308-105			288-10	ZDT46	◆FERB	159-110
◆SODI			UPT025	◆UNI	298-107	UPT615	◆UNI	265-43	V765	SGAI	140-96		◆FERB	344-70
UC420	INL	188-18	UPT026	◆UNI	298-108	UPT616	◆UNI	310-21	V911	NECJ	155-35	ZT20	◆FERB	164-18
◆SODI			UPT027	◆UNI	250-89	UPT617	◆UNI	242-62	V912A	◆NECJ	155-44		◆FERB	306-8
UC588	INL	200-1	UPT028	◆UNI	250-90	UPT618	◆UNI	242-63			355-87	ZT21	◆FERB	306-9
UC703	INL	197-2	UPT029	◆UNI	298-109	UPT619	◆UNI	310-22	V912B	◆NECJ	355-88		◆FERB	164-19
◆SODI			UPT030	◆UNI	250-91	UPT620	◆UNI	310-23			155-45	ZT22	◆FERB	164-20
UC704	INL	197-3	UPT031	◆UNI	250-92	UPT621	◆UNI	242-64	V912C	◆NECJ	155-46		◆FERB	306-10
UC705	INL	197-4	UPT032	◆UNI	299-1	UPT622	◆UNI	242-65			355-89	ZT23	◆FERB	306-11
◆SODI			UPT033	◆UNI	299-2	UPT623	◆UNI	310-24	V913A	◆NECJ	355-90		◆FERB	164-21
UC707	INL	201-72	UPT034	◆UNI	250-93	UPT624	◆UNI	310-25			155-58	ZT24	◆FERB	164-22
◆SODI			UPT035	◆UNI	304-104	UPT625	◆UNI	242-66	V913B	◆NECJ	155-59		◆FERB	306-12
UC714	INL	197-5	UPT036	◆UNI	186-66	UPT626	◆UNI	254-42	V913C	◆NECJ	355-92	ZT40	◆FERB	306-13
◆SODI			UPT037	◆UNI	186-67	UPT627	◆UNI	310-26			155-60	ZT41	◆FERB	157-74
UC734	INL	197-6	UPT038	◆UNI	304-105	UPT628	◆UNI	254-43	V996	◆NECJ	155-27		◆FERB	306-14
◆SODI			UPT039	◆UNI	304-106	UPT629	◆UNI	254-44	VCR2N	◆SIX	191-18	ZT42	◆FERB	306-15
UC734E	INL	197-7	UPT040	◆UNI	186-68	UPT630	◆UNI	310-28	VCR3P	◆SIX	188-2		◆FERB	157-76
◆SODI			UPT041	◆UNI	186-69	UPT631	◆UNI	310-29	VCR4N	◆SIX	191-19	ZT43	◆FERB	157-77
UC751	INL	197-8	UPT042	◆UNI	304-107	UPT632	◆UNI	254-45	VCR5P	◆SIX	188-3		◆FERB	306-16
UC752	INL	197-9	UPT043	◆UNI	304-108	UPT633	◆UNI	254-46	VCR7N	◆SIX	191-20	ZT44	◆FERB	306-17
UC753	INL	197-10	UPT044	◆UNI	186-70	UPT634	◆UNI	310-30	VMP1	◆SIX	201-90		◆FERB	157-78
UC754	INL	191-15	UPT045	◆UNI	304-109	UPT635	◆UNI	310-10			289-45	ZT60	◆FERB	164-24
UC755	INL	191-16	UPT046	◆UNI	250-94	UPT636	◆UNI	256-77	VMP2	◆SIX	289-46		◆FERB	303-26
◆SODI			UPT047	◆UNI	250-95	UPT637	◆UNI	256-78			201-40	ZT61	◆FERB	303-27
UC756	INL	191-17	UPT048	◆UNI	304-110	UPT638	◆UNI	310-11	VMP4	◆SIX	356-59		◆FERB	164-25
◆SODI			UPT049	◆UNI	305-1	UPT639	◆UNI	310-12	VMP11	◆SIX	201-91	ZT62	◆FERB	164-26
UC805	INL	189-73	UPT050	◆UNI	250-96	UPT640	◆UNI	256-79			289-47		◆FERB	303-28
UC807	INL	190-56	UPT051	◆UNI	250-97	UPT641	◆UNI	256-80	VMP12	◆SIX	289-48	ZT63	◆FERB	303-29
UC814	INL	189-74	UPT052	◆UNI	305-2	UPT642	◆UNI	310-13			201-92		◆FERB	164-27
NASB	◆SODI		UPT053	◆UNI	305-3	UPT643	◆UNI	310-14	VMP21	◆SIX	201-41	ZT64	◆FERB	164-28
UC851	INL	189-75	UPT054	◆UNI	250-98	UPT644	◆UNI	256-81			289-49		◆FERB	303-30
NASB	◆SODI		UPT055	◆UNI	307-19	UPT645	◆UNI	310-15	VMP22	◆SIX	289-50	ZT66	◆FERB	303-31
UC853	INL	189-76	UPT056	◆UNI	186-71	UPT646	◆UNI	265-44			201-42		◆FERB	164-29
NASB	◆SODI		UPT057	◆UNI	186-72	UPT647	◆UNI	265-45	VMPA2	◆SIX	201-81	ZT68	◆FERB	181-106
UC854	INL	189-77	UPT058	◆UNI	307-20	UPT648	◆UNI	310-16	VMPA21	◆SIX	201-82		◆FERB	303-32
NASB	◆SODI		UPT059	◆UNI	307-21	UPT649	◆UNI	310-17	VMPA22	◆SIX	201-83	ZT80	◆FERB	303-33
UC855	INL	189-78	UPT060	◆UNI	186-73	UPT650	◆UNI	265-46	XB433	◆TIIB	234-21		◆FERB	159-33
NASB	◆SODI		UPT061	◆UNI	186-74	UPT651	◆UNI	265-47	XGS7001	◆GSE	238-53	ZT81	◆FERB	159-34
UC1764	INL	190-21	UPT062	◆UNI	307-22	UPT652	◆UNI	310-18			296-85		◆FERB	303-34
◆SODI			UPT063	◆UNI	307-23	UPT653	◆UNI	310-19	XGS7002	◆GSE	296-86	ZT82	◆FERB	303-35
UC2130	INL	200-99	UPT064	◆UNI	186-75	UPT654	◆UNI	265-48			238-54		◆FERB	159-35
UC2132	INL	200-100	UPT065	◆UNI	307-24	UPT655	◆UNI	310-37	XGSA3025	◆GSE	249-108	ZT83	◆FERB	159-36
UC2134	INL	200-101	UPT066	◆UNI	250-99	UPT656	◆UNI	256-82			303-86		◆FERB	303-36
UC2136	INL	200-102	UPT067	◆UNI	250-100	UPT657	◆UNI	256-83	XGSA3030	◆GSE	303-87	ZT84	◆FERB	303-37
UC2138	INL	200-103	UPT068	◆UNI	307-25	UPT658	◆UNI	310-38			249-109		◆FERB	159-37
UC2139	INL	200-104	UPT069	◆UNI	307-26	UPT659	◆UNI	310-39	XGSA3035	◆GSE	249-110	ZT86	◆FERB	159-38
◆SODI			UPT070	◆UNI	250-101	UPT660	◆UNI	256-84			303-88		◆FERB	303-38
UC2147	INL	348-107	UPT071	◆UNI	250-102	UPT661	◆UNI	256-85	XGSA5025	◆GSE	303-89	ZT87	◆FERB	303-39
◆SODI			UPT072	◆UNI	307-27	UPT662	◆UNI	310-40			250-1		◆FERB	159-39
UC2148	INL	193-84	UPT073	◆UNI	307-28	UPT663	◆UNI	310-41	XGSA5030	◆GSE	250-2	ZT88	◆FERB	159-40
◆SODI			UPT074	◆UNI	250-103	UPT664	◆UNI	256-86			303-90		◆FERB	303-40
UC2149	INL	348-108	UPT075	◆UNI	248-25	UPT665	◆UNI	310-42	XGSA5035	◆GSE	303-91	ZT89	◆FERB	303-41
◆SODI			UPT076	◆UNI	309-2	UPT666	◆UNI	265-49			250-3		◆FERB	159-41
UC2149	INL	348-109	UPT077	◆UNI	309-3	UPT667	◆UNI	265-50	XGSQ3025	◆GSE	254-47	ZT90	◆FERB	239-19
◆SODI			UPT078	◆UNI	248-26	UPT668	◆UNI	310-43			303-92	ZT91	◆FERB	239-20
UC2766	INL	189-79	UPT079	◆UNI	248-27	UPT669	◆UNI	310-44	XGSQ3030	◆GSE	303-93	ZT92	◆FERB	239-21
◆SODI			UPT080	◆UNI	309-4	UPT670	◆UNI	265-51			254-48	ZT93	◆FERB	239-22
UCX2910	INL	344-62	UPT081	◆UNI	309-5	UPT671	◆UNI	265-52	XGSQ3035	◆GSE	254-49	ZT94	◆FERB	239-23
◆SODI			UPT082	◆UNI	248-28	UPT672	◆UNI	310-45			303-94	ZT95	◆FERB	239-24
UN11A	◆SHEJ	201-2	UPT083	◆UNI	248-29	UPT673	◆UNI	265-53	XGSQ5025	◆GSE	303-95	ZT110	◆FERB	303-42
UN11B	◆SHEJ	201-3	UPT084	◆UNI	309-6	UPT674	◆UNI	270-80	XGSQ5030	◆GSE	254-50		◆FERB	159-42
UN11C	◆SHEJ	201-4	UPT085	◆UNI	309-7	UPT675	◆UNI	270-81	XGSQ5035	◆GSE	254-51	ZT111	◆FERB	159-43
UN11D	◆SHEJ	201-5	UPT086	◆UNI	250-104	UPT676	◆UNI	317-73			303-96		◆FERB	303-43
UN12A	◆SHEJ	201-6	UPT087	◆UNI	250-105	UPT677	◆UNI	317-74	XGSQ5035	◆GSE	303-97	ZT112	◆FERB	303-44
UN12B	◆SHEJ	201-7	UPT088	◆UNI	309-8	UPT678	◆UNI	270-81			254-52		◆FERB	159-44
UN12C	◆SHEJ	201-8	UPT089	◆UNI	309-9	UPT679	◆UNI	270-82	XGSR3025	◆GSE	303-98	ZT113	◆FERB	159-45
UN12D	◆SHEJ	201-9	UPT090	◆UNI	250-106	UPT680	◆UNI	317-75			277-90		◆FERB	303-45
UN23	◆SHEJ	200-106	UPT091	◆UNI	250-107	UPT681	◆UNI	270-83	XGSR3030	◆GSE	277-91	ZT114	◆FERB	303-46
UN05	◆SHEJ	201-10	UPT092	◆UNI	309-10	UPT682	◆UNI	270-84			303-99		◆FERB	159-46
UN06	◆SHEJ	200-107	UPT093	◆UNI	309-11	UPT683	◆UNI	270-85	XGSR3035	◆GSE	303-100	ZT116	◆FERB	159-47
UP11A	◆SHEJ	190-57	UPT094	◆UNI	250-108	UPT684	◆UNI	317-77			277-92		◆FERB	303-47
UP11B	◆SHEJ	190-58	UPT095	◆UNI</										

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C			ABS MAX RATINGS @25°C					MAX. lco @MAX Vcb (V)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# E O A D E
			fab (Hz)	M M A X P	M M A X P	BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	BIAS		COMMON EMITTER									
										Vcb (V)		le (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)					
1	GT20					25	25	25	200m	10u	5.0	1.0m	42	500nb	39	15	35p	A	T05		
2	2N1664†		5.0M		#J	45	40	30	200m	10u	6.0	1.0m	120	900nzb	100		25p	A	T05		
3	CK766	2.0m	10.0M	2.6m	#A	30			200m	1.0u						12					
4	CK766A	2.0m	10.0M		#A	30			200m	1.0u						12					
5	2N231	9.0m*	20M*		*J	4.5	4.5		3.0m	3.0u	3.0	500m	19	5.0uZb	100		5.5p	S	T024	F	
6	2N232	9.0m*	30M*		*J	4.5	4.5		3.0m	6.0u	3.0	500m	9.0	5.0uZb	100		6.0p	S	T024	F	
7#	2SA216	15m	120M		*J	15		50	2.0m	5.0u	6.0	1.0m	40			1.0p	G	T01	A		
8#	2N1471	18m	3.0MΔ	3.3m	#J	12	12		200m	5.0u	6.0	1.0m	160			18p	AΔ	T05	A		
9	JAN2N220	20m		434u	#S	30		12		12u	4.0	500u	40	800nzb	65	15	50p	∅	T01	A	
10	OC60	20m		666u	∅J	7.0	3.0		5.0m	1.5u	2.0	3.8m	75				A	R19			
11#	OC57	20m*	10kΔ	666u	∅J	7.0	3.0	7.0	10m		5.0	250u	35	60u	2.9k	17	60p	A	R19		
12	OC58	20m*	10kΔ	666u	∅J	7.0	3.0	7.0	10m		5.0	250u	55	80u	4.0k	17	60p	A	R19		
13	2N175	20m	850k	3.3m	∅J	10		10	2.0m	12u	4.0	500u	65			36p	∅	T040	A		
14	2N220	20m	850k	3.3m	∅J	10		10	2.0m	12u	4.0	500u	65	25u	3.5k	944	36p	A∅	T01	A	
15	OC59	20m	2.2M	666u	∅J	7.0	3.0	7.0	5.0m	3.0u	5.0	250u	80	100u	5.1k	17	60p	A	R19		
16	2N344	20m†	50M*	666u	*J	5.0	5.0		5.0m	3.0u	3.0	500u	22	5.0ub	100		6.0p	SΔ	T024	F	
17	2N345	20m†	50M*	666u	*J	5.0	5.0		5.0m	3.0u	3.0	500u	66	5.0ub	100		6.0p	SΔ	T024	F	
18#	2SA156	20m	55M		*J	15		50	4.0m	5.0u	6.0	1.0m	50	200nb	40	2.0	1.5p	G	T01		
19#	2SA160	20m	55M		*J	15		50	4.0m	5.0u	6.0	1.0m	60	200nb	40	2.0	1.5p	G	T01		
20	2N346	20m†	75M*	666u	*J	5.0	5.0		5.0m	3.0u	3.0	500u	10	5.0ub	100		6.0p	SΔ	T024	F	
21	2N299	20m*	110M*		#J	5.0	4.5	5.0	5.0m	3.0u	3.0	500m		2.0ub	65		2.8p	S	T030		
22	2N1499†	25m*		625u	#S	20	15	2.0	50m	100u	25	10m	35			1.5p	AD	T09	A		
23	JAN2N240	25m	25MΔ	416u	#J	6.0	6.0	6.0	15m	10u	3.0	500u	16	1.5ub	75		6p	D	R143	F	
24	2N128	25m	28MΔ		#S	10	4.5	10	5.0m	3.0u	3.0	500u	19			5.0p	D	T024	F		
25	2N1122†	25m*	40MΔ	625u	#J	12	11	10	50m	5.0u	2.5	10m	25			6p	MA	T024	A		
26	2N1122A†	25m*	40MΔ	625u	#J	15	14	∅	50m	5.0u	2.5	10m	25			6p	MA	T024	A		
27	JAN2N128	25m	45M*Δ	417u	#A	10		10		4.0u	3.0	500u	19	4.0uZb	90		5.0p	Δ	T024	F	
28	2N393†	25m*	50M*	455u	#J	6.0	6.0	6.0	50m	5.0u	3.0	500u	155			3.5p	MA	T024	A		
29	2N1427†	25m*	60M*	625u	#J	6.0	6.0	6.0	50m	5.0u	3.0	500u	120	1.0ub	55	20	3.5p	ME	T024	A	
30	2N245†	25m*	80MΔ	454u	#S	6.0	5.0	6.0	50m	5.0u	3.0	500u	40			6.0p	Δ	T024	A		
31	2N503	25m*	168MΔ		#J	20	20	5.0		100u	10	2.0m	45			1.0p	DA	T09	A		
32	2N502A	25m	220MΔ	455u	#J	30	30	5.0		100u	10	2.0m	45			1.0p	DA	T09	A		
33	2N252	30m			*A		16		5.0m	10u						1.0p	GD	O3e			
34	2N308	30m			*A	20			5.0m	10u						1.0p	GD	O3e			
35	2N309	30m			*A	20			5.0m	10u						1.0p	GD	O3e			
36	2N310	30m			*A	30			5.0m	10u						1.0p	GD	O3e			
37	2N1753	30m*		769u	#S	30	18	50	50m	15u	4.0	1.0m	50	2.0ub	70		2.5p	S	T01		
38	2N129	30m	30M*	500u	#J		4.5	10	5.0m	3.0u	3.0	500u	20	1.5ub	66		4.0p	SΔ	T024	F	
39	2N240	30m	30M*	500u	#J		6.0		15m	3.0u	3.0	500u	30			2.9p	SΔ	T024	F		
40	2N1108	30m∅	35M		#J	16		1.0	5.0m	10u						1.5p		O3f	A		
41	2N1109	30m∅	35M		#J	16		1.0	5.0m	10u						1.5p		O3f	A		
42	2N1110	30m∅	35M		#J	16		1.0	5.0m	10u						1.5p		O3f	A		
43	2N1111	30m∅	35M		#J	20		1.0	5.0m	10u						1.1p		O3f	A		
44	2N1111A	30m∅	35M		#J	20		1.0	5.0m	10u	6.0	.50m∅	29			1.5p	GD	T022			
45	2N1111B	30m∅	35M		#J	20		1.0	5.0m	10u	6.0	.50m∅	29			1.5p	GD	T022			
46	2N1107	30m∅	40M		#J	16		1.0	5.0m	10u						1.5p		O3f	A		
47	2N504	30m*	50M*Δ	750u	#S	35	25	1.0	50m	10u	12	1.0m	16	1.0uZb	40		2.5p	DA	T01	A	
48	2N499	30m*	170MΔ	750u	#J	30	18	50	50m	100u						1.3p	DA	T01	A		
49	2N588	30m*	250M*Δ	750u	#J	15	15	∅	50m	15u						1p	DA	T030	G		
50	2N5044	30m	2.5GΔ	1.2m	∅S	15	7.0	.30	30m	6.0u	5.0	3.0m∅	150			1p	∅	T072	A		
51	2N5043	30m	3.0GΔ	1.2m	∅S	15	7.0	.30	30m	6.0u	5.0	3.0m∅	150			1p	∅	T072	A		
52	2N768	35m		467m	#S	12	10	∅	100m							1.7p	FA	T018	A		
53	2N77	35m	700k		#A	25			15m	10u	4.0	.70m∅	55			40p	A∅	T02	A		
54	TR77	35m	.70M		*A	25			15m	10u							A	T02	A		
55	2N105	35m	750k		#A	25			15m	5.0u	4.0	.70m∅	55			17p	A∅	T02	A		
56	TR105	35m	.75M		*A	25			15m	5.0u							A	T02	A		
57	TR139	35m	4.5M		∅A	16		12	15m	6.0u	9.0	5.0m∅	45			9.5p	A				
58	TR218	35m	4.5M		∅A	16		12	15m	6.0u	9.0	5.0m∅	45			9.5p	A				
59	2N139	35m	13.0M∅		∅A	16	12	.50	15m	10u	9.0	1.0m∅	48	1.0k		9.5p	AΔ	T040	A		
60	2N218	35m	13.0M∅		∅A	16	12	.50	15m	10u	9.0	1.0m∅	48	1.0k		9.5p	AΔ	T01	A		
61	JAN2N393	35m	30MΔ	476u	#J	10	6.0	10	50m	5.0u	3.0	500u	40			4.0p	Δ	R143	F		
62#	JAN2N1411	35m	30MΔ	460u	#J	8.0		8.0	50m	5.0u	1.0	50m∅	20			6.0p	Δ	R143	F		
63	2N769	35m	100MΔ	467u	#S	12	7.0	2.0	100m	3.0u	5.0	20m∅	25			3.0p	Δ	T018	A		
64	2N267	35m∅	132M∅		∅A	-35		1.0	10m	16u			45			1.7p	∅				
65	CK891	40m†			*A	12			50m	5.5u	1.5	.50m	160				FA	R18a	A		
66	CK892	40m†			*A	12			50m	5.5u	1.5	.50m	160				FA	R18a	A		
67	2N623	40m	90.M	1.0m	*J	30		1.0		10u	6.0	2.0m∅	35			3.5p	DΔ	T09	A		
68	2N1785	45m	50.M*	1.3m	#S	10	10	∅	50m	10u	6.0	1.0m∅	40	2.0u	40		3p	ME	T09	A	
69	2N1786	45m	50.M*	1.3m	#S	10	10	∅	50m	10u	6.0	1.0m∅	40	2.0u	40		3p	ME	T09	A	
70	2N1787	45m	50.M*	1.3m	#S	15	15	∅	50m	10u	6.0	1.									

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE				3 ABS MAX RATINGS @25°C				MAX. I _{cb0} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS				Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	L C O D E
			fab (Hz)	IN FREE AIR W/°C	M E (V)	T (V)	BV _{cb0} (V)	BV _{ceo} (V)	BV _{ebo} (V)	I _c (A)		BIAS		COMMON EMITTER					
												V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)				
1#	AF127	67m	75Ms	1.3m	ØJ	20	20 s	50	11m	25uØ	6.0Ø	1.0m	150						
2	TR12	70m			#J	25				15uØ	4.5	1.0m	15						
3	TR13	70m			#	25		25		15uØ	4.5	1.0m	28						
4	TR14	70m			#	25				15uØ	4.5	1.0m	45						
5	TR88	70m			#	25				15uØ	4.5	1.0m	65						
6	TRM13	70m			#	25				15uØ	4.5	1.0m	28						
7	TRM14	70m			#	25				15uØ	4.5	1.0m	45						
8	TRM81	70m			#	25				15uØ	4.5	1.0m	65						
9	TR18	70m	70M		#	25				15uØ	4.5	1.0m	45						
10	TR87	70m	1.0M	2.0m	#J	25				15uØ	4.5	1.0m	28						
11#	2N825†	70m	8.0M	1.2m	#J	30	20	20	400m	25u	25Ø	1.0mΔ	20 †Δ	b		100	50	R180a	
12#	2N826†	70m	8.0M	1.2m	#J	30	20	20	400m	25u	25Ø	1.0mΔ	20 †Δ	b		100	20pZ	R218a	
13	2N311	75m			#J	15	15	6.0		60u†	5.0Ø	1.0m	25 Δ					R157 A	
14	2N502B	75m		1.0m	#S	30	30 Ø	50	50m	5.0uØ	1.0Ø	2.0m	20 Δ				1.6pZ	T09 A	
15	2N695†	75m		1.0m	#J	15	15	3.5	50m	3.0u	3.0Ø	1.0mØ	25 †Δ				5.0pZ	T017 G	
16	JAN2N695†	75m		1.0m	#J	15	15	3.5	50m	3.0uØ	3.0Ø	1.0mØ	25 †Δ				5.0pZ	T017 G	
17	2N700	75m		1.0m	#J	25	20	20	50m	2.0u	6.0	2.0m	4.0 Δ	b	30 Z		1.5pZ	T072 G	
18	2N700A	75m		1.0m	#J	25	25	20	50m	2.0uØ	6.0Ø	2.0m	4.0 Δ					T072 G	
19	2N801†	75m		1.2m	#S	30	18	20	400m	4.0uØ	25Ø	1.0mΔ	30 †Δ				20pZ	R180 A	
20	2N802†	75m		1.2m	#S	30	18	20	400m	4.0uØ	25Ø	1.0mΔ	30 †Δ				20pZ	R181 A	
21	2N803†	75m		1.2m	#S	30	15	20	400m	4.0uØ	25Ø	1.0mΔ	40 †Δ				20pZ	R180 A	
22	2N804†	75m		1.2m	#S	30	15	20	400m	4.0uØ	25Ø	1.0mΔ	40 †Δ				20pZ	R181 BS	
23	2N805†	75m		1.2m	#S	30	12	20	400m	4.0uØ	25Ø	1.0mΔ	60 †Δ				20pZ	R180 A	
24	2N806†	75m		1.2m	#S	30	12	20	400m	4.0uØ	25Ø	1.0mΔ	60 †Δ				20pZ	R181 BS	
25	2N1158A	75m		1.0m	#S	20	20 Ø	50	100m	5.0uØ	10	3.0m	9.0 Δ				2.8p	T09 A	
26#	ASY63N	75m			#	20	20	20		4.0u	.10	15m	80				17pZ	T05 A	
27	2N206	75m	780k	3.3m	#S	30				10u	5.0	1.0m	47				35p	T01 A	
28#	NKT11	75m	1.0MΔ	1.5m	ØJ	18	10	12	100m	5.0uØ	4.5Ø	1.0mØ	90 Δ				13pZ	T01 A	
29	2N265	75m	1.5M	2.0m	*J		25 s		50m	16u	5.0	1.0m	115				40p	R32 A	
30	2N809	75m	3.0MΔ	1.2m	#S	30	15	20	200m	5.0uØ	6.0	1.0m	30 †Δ				20pZ	R180 A	
31	2N810	75m	3.0MΔ	1.2m	#S	30	15	20	200m	5.0uØ	6.0	1.0m	30 †Δ				20pZ	R181 BS	
32#	OC41N	75m	3.0MΔ	1.7m	#	16	15	12	200m	5.0u	0.0	1.0m	40				14p	T01 A	
33	CK83	75m	5.5M	1.3m	#J	12			20m	10u	6.0Ø	1.0m	60				11p	R18a A	
34#	OC42N	75m	5.5MΔ	1.7m	#	16	15	12	50m	5.0u	0.0	1.0m	40				14p	T01 A	
35#	NKT12	75m	7.5MΔ	1.5m	ØJ	18	10	12	100m	5.0uØ	4.5Ø	1.0mØ	45 Δ				13pZ	T01 A	
36	2N815†	75m	8.0M	1.3m	#J	25	20	15	200m	10u	.75Ø	2.0mØ	80 †				14p	R180 A	
37	2N816†	75m	8.0M	1.3m	#J	25	20	15	200m	10u	.75Ø	2.0mØ	80 †				14p	R181 A	
38#	OC45N	75m	9.0M	1.2m	ØJ	15	15	12	10m	2.0uØ	6.0Ø	1.0mØ	25 Δ				12pZ	T01 A	
39	CK86	75m	12.0M	1.3m	#J	12			10m	10u	6.0Ø	1.0m	200				10p	R18a A	
40#	2N807†	75m	18.0M	1.3m	#J	25	14 s	12	100m	5.0uØ	.20Ø	2.0mØ	60 †				13pZ	R180a A	
41#	2N808†	75m	18.0M	1.3m	#J	25	14 s	12	100m	5.0uØ	.20Ø	2.0mØ	60 †				13pZ	R218a A	
42#	OC44N	75m	3.0MZ	1.2m	ØJ	15	15	12	100m	2.0uØ	6.0Ø	1.0mØ	40 Δ				13pZ	T01 A	
43	2N1749	75m	80MΔ	1.0m	#S	40	40 Ø	1.0	10m	10uØ	6.0Ø	1.0mØ	30 Δ	1.0ub	40 Z		2.5pZ	T09 A	
44	2N199	75m	120MΔ	1.0m	#S	15	10	50	100m	5.0uØ	1.0Ø	3.0m	20 Δ				2.8pZ	T09 A	
45	2N2200	75m	120MΔ	1.0m	#S	15	10	50	100m	5.0uØ	1.0Ø	3.0m	70 Z				2.8pZ	T09 A	
46	2N1499B†	75m	150MΔ	1.0m	#S	30	20	2.0	100m	3.0uØ	.30Ø	1.0mØ	40 Δ				3pZ	T09 A	
47#	2N2797†	75m	150MΔ	1.0m	#S	40	20	2.5	100m	3.0uØ	.30Ø	1.0mØ	50 †Δ				3.5pZ	T09 A	
48#	2SA240	75m	200MΔ	1.3m	#J	20	18 Ø	20	5.0m	10uØ	6.0	1.0m	120 Z				1.5pZ	T017 G	
49#	2SA239	75m	300M	1.3m	#J	20			5.0m	10uØ	6.0	2.0m	10				1.5p	T017 G	
50	2N2416	75m	400MΔ	1.0m	#S	15	10	30	20m	5.0uØ	6.0Ø	2.0mØ	10 Δ				2.0pZ	T072 G	
51	JAN2N2996	75m	400MΔ	1.0m	#S	15	10	30	50m	5.0uØ	6.0Ø	4.0mØ	35 Δ				3.0p	T072 G	
52	JAN2N2997	75m	400MΔ	1.0m	#S	30	15	30	50m	5.0uØ	1.2Ø	4.0mØ	50 Δ				1.0pZ	T072 G	
53	2N2795†	75m	450MΔ	1.0m	#S	25	15	2.5	100m		.30Ø	1.0mØ	100 †				2.5p	T018 A	
54	2N2796†	75m	450MΔ	1.0m	#S	20	12	2.0	100m		.30Ø	1.0mØ	60 †				2.5p	T018 A	
55	2N2415	75m	500MΔ	1.0m	#S	15	10	30	20m	5.0uØ	6.0Ø	2.0mØ	15 Δ				2.0pZ	T072 G	
56	2N2996	75m	550MΔ	1.0m	#S	15	10	30	50m	100u	6.0Ø	4.0mØ	200				3.0p	T072 G	
57	JAN2N502A	75m	600MΔ	1.0m	#S	30	30 Ø	50		10u	10Ø	2.0m	15 Δ				1.6pZ	R179t A	
58	JAN2N502B	75m	600MΔ	1.0m	#S	30	30 Ø	50		10u	10Ø	2.0m	15 Δ				1.6pZ	R179t A	
59	2N2997	75m	600MΔ	1.0m	#S	30	15	30	50m	100u	12Ø	4.0mØ	200				1.8p	T072 G	
60	JAN2N700A	75m	800MΔ	1.0m	#J	25	25	30	50m	2.0uØ	6.0	2.0m	4.0 Δ	b	30		1.4pZ	T072 G	
61	2N2998	75m	900MΔ	1.0m	#S	15	12	30	20m	100u	6.0Ø	3.0mØ	200				1.7p	T072 G	
62	2N3267	75m	900MΔ	1.0m	#S	15	8.0	20	20m	5.0uØ	6.0Ø	3.0mØ	15 Δ				1.7pZ	T072 G	
63	2N2363	75m	1.1G*	1.0m	#J	30	20	50	50m	5.0uØ	6.0Ø	2.0mØ	10				2.0p	T072 G	
64	2N2999	75m	1.6GΔ	1.0m	#S	15	10	20	20m	100u	6.0Ø	3.0mØ	100 †				1.7p	T072 G	
65	2N1631	80m			#S	34			50	10m	16uØ	6.0Ø	1.0m				40 †Δ	T040 AE	
66	2N1632	80m			#S	34			50	10m	16uØ	6.0Ø	1.0m				40 †Δ	T01 A	
67	2N1633	80m			#S	34			50	10m	16uØ	6.0Ø	1.0m				27 Δ	T040 AE	
68	2N1634	80m			#S	34			50	10m	16uØ	6.0Ø	1.0m				27 Δ	T01 A	
69	2N1635	80m			#S	34			50	10m	16uØ	6.0Ø	1.0m				40 †Δ	T040 AE	
70	2N1636	80m			#S	34			50	10m	16uØ	6.0Ø	1.0m				40 †Δ	T01 A	
71	2N1637	80m			#S	34			1.5	10m	5.0uØ	6.0Ø	1.0m				40 †Δ	T01 A	
72	2N1638	80m			#S	34			1.5	10m	7.0uØ	6.0Ø	1.0m				70 Δ	T01 A	
73	2N1639	80m			#S	34			1.5	10m	7.0uØ	6.0Ø	1.0m				40 †Δ	T01 A	
74#	2SB74	80m			#J	16			50	15m	10u	6.0Ø	1.0m				48	T01 A	
75	CK64	80m	80M	1.3m	#J	45	29 Ø	12	100m	5.0uØ	6.0Ø	1.0m	25				18u	R18a A	
76	CK64A	80m	80M	1.3m	#J	45	29 Ø	12	100m	5.0uØ	6.0Ø	1.0m	25				18u	R18b A	
77	CK64B	80m	80M	1.3m	#A	45					6.0Ø	1.0mØ	22 †					R180 A	
78	CK64C	80m	80M	1.3m	#A	45					6.0Ø	1.0mØ	22 †					R181 A	
79	2N1266	80m	1.0M		#J				10		6.0Ø	1.0mØ	48				11p	T022 A	
80#	2SB46	80m	1.0M		ØJ	25			12	150m	14u	6.0	1.0m	200nb	30	2.5	35p	T01 A	
81	CK65	80m	1.0M	1.6m	#J	45	24	12	100m	5.0uØ	6.0Ø	1.0m	45				25u	R18a A	
82	CK65A	80m	1.0M	1.3m	#J	45	24	12	100m	5.0uØ	6.0Ø	1.0m	45				25u	R18b A	
83	CK65B	80m	1.0M	1.3m	#A	45					6.0Ø	1.0mØ	45 †						

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @ 25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	M T ABS MAX RATINGS @ 25°C BVcbo BVceo BVbeo	Ic (A)	TYPICAL 'h' PARAMETERS												Cob (F)	STRUC-TURE	DWG Y200 s/A TO200 Ser.	# E O A D E		
						BIAS			COMMON EMITTER			Cob											
						Vcb (V)	Ic (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)	hfe	hoe	hie	hre	hfe	hoe					hie	hre
1#	2SA203	100m	5.0M	2.0m	#J	15	5.0	15m	10u	6.0	1.0m	30											
2	GT760	100m	5.0M	2.0m	#S	15	5.0	15m	5.0u	4.5	1.0m	40											
3#	GT42	100m	6.0M	2.0m	#J	15	15	100m	15u	4.5	1.0m	60											
4#	GT46	100m	6.0M	2.0m	#J	25	15	100m	15u	4.5	1.0m	60	25u	1.6k	3.0								
5#	GT100	100m	6.0M	2.0m	#J	9.0	9.0	100m	5.0u	4.5	1.0m	60	25u	1.6k	3.0								
6#	2N136	100m	6.5M	1.7m	#J	20		50m	5.0u	5.0	1.0m	40											
7	2N521	100m	8.0MΔ	1.6m	#S	15	10	10	2.0u	4.5	1.0m	70	700nb	30	10								
8#	2SA201	100m	8.0M	2.0m	#J	15	15	15m	10u	6.0	1.0m	50											
9#	GT43	100m	9.0M	2.0m	#J	15	15	100m	15u	4.5	1.0m	100	30u	2.7k	3.0								
10#	GT47	100m	9.0M	2.0m	#J	25	15	100m	15u	4.5	1.0m	100	30u	2.7k	3.0								
11	2N137	100m	10.0M	1.7m	#J	10		50m	5.0u	5.0	1.0m	60											
12	2N487	100m	10MΔ	1.6m	#S	18	3.0	25m	15u	6.0	1.0m	20 Δ											
13	GT761	100m	10.0M	2.0m	#S	15		5.0u	4.5	1.0m	70												
14	2N3161	100m	12M	2.0m	#S	20	10	20	200m	2.0u	2.0	200m	30										
15#	2SA202	100m	12M	2.0m	#J	15	5.0	15m	10u	6.0	1.0m	55											
16	2N522	100m	15MΔ	1.6m	#S	15	8.0	10	2.0u	4.5	1.0m	120	700nb	30	14								
17	GT1607	100m	18M	1.7m	#S	10		10	25u	5.0	1.0m	60 Δ											
18	2N3171	100m	20M	2.0m	#S	20	6.0	20	200m	2.0u	2.5	400m	30										
19	GT762	100m	20M	2.0m	#S	15		10	5.0u	4.5	1.0m	120											
20	2N523	100m	21MΔ	1.6m	#S	15	6.0	10	2.0u	4.5	1.0m	200	700nb	30	20								
21	GT764	100m	25M	2.0m	#S	20		200m	5.0u	4.5	1.0m	200											
22	GT763	100m	30M	2.0m	#S	15		20	5.0u	4.5	1.0m	200											
23	2N2089	100m	44MΔ	1.7m	#S	20	20	11m	8.0u	6.0	1.0m	40 Δ											
24#	2N2090	100m	44MΔ	1.7m	#S	20	20	11m	8.0u	6.0	1.0m	40 Δ											
25	2N2092	100m	44MΔ	1.7m	#S	20	20	11m	8.0u	6.0	1.0m	40 Δ											
26#	2SA69	100m	70M	2.0m	#J	20		10m	13u	6.0	1.0m	150											
27#	2SA70	100m	70M	2.0m	#J	20		10m	13u	6.0	1.0m	150											
28#	2G417	100m	90Ms	1.7m	#J	20	20	10m	8.0u	6.0	1.0m	50 Δ											
29#	2G413	100m	100Ms	1.5m	#J	40		25m	50u	6.0	1.0m	100											
30#	2N2273	100m	100MΔ	1.3m	#S	25	15	1.0	100m	10u	1.0	20 Δ											
31#	2SA71	100m	100M	2.0m	#J	20		50	13u	6.0	1.0m	150											
32#	2G414	100m	120Ms	1.7m	#J	20	20	10m	8.0u	6.0	1.0m	50 Δ											
33#	2G415	100m	120Ms	1.7m	#J	20	20	10m	8.0u	6.0	1.0m	50 Δ											
34#	2G416	100m	120Ms	1.7m	#J	20	20	10m	8.0u	6.0	1.0m	50 Δ											
35	2N3588	100m	200MΔ	1.7m	#S	25	10	10m	5.0u	6.0	1.0m	20 Δ											
36	2N9761	100m	250MΔ	1.3m	#S	15	10	2.0	3.0u	5.0	2.0m	30 Δ											
37	JAN2N2273	100m	250MΔ	1.3m	#S	25	25	1.0	10u	10	20 Δ												
38	2N3283	100m	250MΔ	1.3m	#S	25	25	50m	10u	10	10 Δ												
39	2N3284	100m	250MΔ	1.3m	#S	25	25	50m	10u	10	10 Δ												
40	2N3285	100m	250MΔ	1.3m	#S	25	25	50m	10u	10	10 Δ												
41	2N3286	100m	250MΔ	1.3m	#S	25	25	50m	10u	10	10 Δ												
42	40268	100m	250MΔ	1.3m	#S	25	15	100m	15u	10	10 Δ												
43	HEP3-RT	100m	250Ms	1.3m	#J	20	20	50m	15u	10	85 Δ												
44	PTC107-RT	100m	300Ms	1.3m	#J	33	22	50m	50u	5.0	10m	140 Δ											
45#	2G101	100m	320Ms	1.7m	#J	15	15	3.3	20m	5.0	2.0m	20 Δ											
46	2N2717	100m	390M	2.2m	#J	25	25	15m	8.0u	10	3.0m	20 Δ											
47#	2G102	100m	400Ms	1.7m	#J	15	15	1.0	15m	5.0	1.0m	20 Δ											
48	2N3127	100m	400MΔ	1.3m	#S	25	20	75	50m	5.0u	10	20 Δ											
49	JAN2N3127	100m	400MΔ	1.3m	#S	25	20	75	50m	5.0u	10	20 Δ											
50	2N3281	100m	550MΔ	1.3m	#J	30	15	50m	5.0u	10	3.0m	20 Δ											
51	2N3282	100m	550MΔ	1.3m	#J	30	15	50m	5.0u	10	3.0m	20 Δ											
52	2N3279	100m	600MΔ	1.3m	#J	30	20	10	50m	5.0u	10	3.0m	20 Δ										
53	2N3280	100m	600MΔ	1.3m	#J	30	20	10	50m	5.0u	10	3.0m	20 Δ										
54#	AF379	100m*	1.2Gs	2.2m	#J	13	30	20m	15u	8.0	8.0m	80 Δ											
55#	2N130A	102m	700k	1.6m	#J	45	40	12	100m	15u	1.0m	26	17u	900	3.5								
56#	2N131A	102m	800k	1.6m	#J	45	30	12	100m	15u	1.0m	45	18u	1.4k	4.3								
57#	2N133A	102m	800k	1.6m	#J	35	20	12	100m	15u	1.0m	50	19u	2.5k	5.5								
58#	AFY16	112m*	550Ms	1.3m	#J	30	25	50	10m	3.0u	1.2	5m	40 Δ										
59	2N605	120m	2.0m	2.0m	#S	15	15		10u	5.0	1.0m	40	2.0ub										
60	2N606	120m	2.0m	2.0m	#S	15	15		10u	5.0	1.0m	60	2.0ub										
61	2N607	120m	2.0m	2.0m	#S	15	15		10u	5.0	1.0m	80	2.0ub										
62	2N608	120m	2.0m	2.0m	#S	15	15		10u	5.0	1.0m	120	2.0ub										
63	2N1285	120m	1.6m	2.0m	#S	40	#	2.5	10m	12u	1.5	30 Δ											
64	2N1450†	120m	2.0m	2.0m	#S	30		1.0	100m	10u	1.0	20 Δ											
65	JAN2N1450M†	120m	2.0m	2.0m	#S	30	20	1.0	100m	10u	1.0	20 Δ											
66	2N2208	120m	2.0m	1.6m	#S	40	10	50	50m	12u	1.5m	30 Δ											
67	2N2953	120m#	2.6m	2.0m	#S	30	25	25	150m	5.0u	10	200 Δ											
68#	2SB459	120m	30m	1.6m	#J	40	18	2.5	50m	12u	1.0m	180	78u	5.2k	1.1								
69	SWT1224	120m	30m	1.6m	#J	40	18	2.5	50m	12u	1.0m	20 Δ											
70	SWT1225	120m	100m	1.6m	#J	40	45	50	10m	12u	1.5m	20 Δ											
71	2N564	120m	800k	2.0m	#S	30	25	10	300m	5.0u	5.0	1.0m	25	2.0ub	35	2.5							
72	2N566	120m	1.0M	2.0m	#S	30	25	10	300m	5.0u	5.0	1.0m	55	2.0ub	30	3.5							
73	2N568	120m	1.5M	2.0m	#S	30	25	10	300m	5.0u	5.0	1.0m	100	2.0ub	30	4.0							
74	TR34	120m	1.6MΔ	2.0m	#J	40		150m	20u	6.0	1.0m	15											
75	2N570	120m	2.0M	2.0m	#S	30	20	10	300m	5.0u	5.0	1.0m	150	2.0ub	30	5.0							
76	2N572	120m	3.0M	2.0m	#S	30	10	10	300m	5.0u	5.0	1.0m	200	2									

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	M E M P X	ABS MAX RATINGS @25°C			MAX. lcco @MAX Vcb	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# C O D E
					BVcbo (V)	BVceo (V)	Ic (A)		BIAS			COMMON EMITTER						
									Vcb (V)	Ic (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)				
1#	ZSB78	150m		#J	12	2.5	70m	14u	1.50	50m	70	†			A	TO1		
2#	ZSB156	150m		#J	16	2.5	300m	14u	4.00	1.0m	45			A	TO1	A		
3#	ZSB185	150m	2.5m	#J	25	2.5	50m	15u	1.50	30m	45			A	TO1			
4#	ZSB186	150m		#J	25	2.5	50m	15u	1.50	30m	170			A	TO1			
5#	ZSB187	150m		#J	25	2.5	50m	15u	1.50	30m	100			A	TO1			
6#	ZSB188	150m		#J	25	2.5	50m	15u	1.50	30m	100			A	TO1			
7	GT34HV	150m	2.0m	#S	50	10	200m	25u	5.00	1.0m	18		500nb	40	3.0	35p	A	
8	GT34N	150m	2.0m	#S	100	10	200m	450u	4.50	1.0m	18		500nb	40	4.0	35p	AΔ	
9	GT74	150m	2.0m	#S	25	10	200m	25u	5.00	1.0m	75		500nb	40	5.0	35p	A	
10	GT75	150m	2.0m	#S	25	10	200m	25u	5.00	1.0m	150		500nb	40	8.0	35p	A	
11	GT81	150m	2.0m	#S	25	10	200m	25u	5.00	1.0m	75		500nb	40	5.0	35p	A	
12	GT82	150m	2.0m	#S	25	10	200m	25u	5.00	1.0m	150		500nb	40	8.0	35p	A	
13	GT222	150m	2.0m	#S	12	10	200m	20u	5.00	1.0m	20		500nb	40		35p	A	
14	GT2694	150m	2.5m	#J	25	15	10	25u	5.00	1.0m	80		5.0ub			15p	FA	
15	GT2696	150m	2.5m	#J	25	15	10	25u	5.00	1.0m	70		5.0ub			15p	FA	
16	GT2883	150m	2.5m	#J	9.0	6.0	9.0	50u	6.00	1.0m	50					20p	FA	
17	GT2885	150m	2.5m	#J	9.0	6.0	7.0	50u	6.00	1.0m	200					20p	FA	
18	GT2887	150m	2.5m	#J	9.0	6.0	7.0	50u	6.00	1.0m	250					20p	FA	
19	HSE1300	150m	2.5m	#J	13	5.0	100m	4.0u	3.00	1.0m	20	Δ				D	TO5	
20	HSE1301	150m	2.5m	#J	13	12	1.0	100m	4.0u	3.00	1.0m	30	Δ			D	TO5	
21	TR10	150m		#J	50		100m	25u	5.0	1.0m	18					A		
22	TR81	150m	2.8m	#J	25			20u	4.5	1.0m	200					A		
23	TR-C70	150m	2.8m	#J	16		12	10u	6.0	1.0m	30						TO5	
24	TR-C71	150m	2.8m	#J	12		9.0	10u	6.0	1.0m	60						TO5	
25	TR-C72	150m	2.8m	#J	20		16	20u	5.4	1.0m	100						TO5	
26	UPI1303	150m	2.5m	#J	30	15	25	300m	6.0u	1.00	10m	20	†		20p	#	O3e	
27	UPI1305	150m	2.5m	#J	30	15	25	300m	6.0u	1.00	10m	40	†		20p	#	O3e	
28	UPI1307	150m	2.5m	#J	30	15	25	300m	6.0u	1.00	10m	60	†		20p	#	O3e	
29	UPI1309	150m	2.5m	#J	30	15	25	300m	6.0u	1.00	10m	80	†		20p	#	O3e	
30	AC125	150m*	1.7m	#J	32	32	10	200m	10u	5.0	2.0m	100	†		40p	#	TO1	
31	AC126	150m*	2.3m	#J	32	32	10	1.0	10u	0.0	300m	90	†		100p	#	TO1	
32	ZSB475	150m	10k	#J	20	10	300m	20u	20u	6.0	1.0m	14	Δ	1.0u	45	60p	A	TO1
33	JAN2N464	150m	400k	#S	40		12	20u	6.0	1.0m	14	Δ	1.0u	45	60p	A	R179e	
34	2N237	150m	50m	#S	45		20m	10u	6.0	1.0m	50						A	
35	JAN2N465	150m	500k	#S	40	30	12	50m	15u	6.0	1.0m	27	Δ	1.0u	45	60p	A	TO5
36	JAN2N466	150m	500k	#S	35	25	12	20u	6.0	1.0m	54	Δ	1.0u	45	60p	A	TO5	
37	2N519A	150m	500k	#S	25	18	10	2.0u	5.00	1.0m	15	Δ	1.5u				TO5	
38	JAN2N398A	150m	600k	#S	105	105	20	200m	14u	6.00	1.0m	20	Δ					TO5
39	2N405	150m	650k	#S	20	18	2.5	35m	14u	6.00	1.0m	35		17u	1.1k	2.9	25p	A
40	2N406	150m	700k	#S	20	18	2.5	35m	14u	6.00	1.0m	35		17u	1.1k	2.9	40p	A
41	2N104	150m	700k	#S	30		12	50m	10u	6.00	1.0m	44		23u	1.6k	5.0	40p	A
42	2N180	150m	700k	#S	30		30	10u	6.0	1.0m	60					25p	A	
43	2N181	150m	700k	#S	30		30	10u	6.0	1.0m	60					25p	A	
44	2N215	150m	700k	#S	30		50m	15u	6.00	1.0m	26		17u	900	3.5		TO1	
45	2N464	150m	700k	#S	45	40	12	100m	15u	6.00	1.0m	26		17u	900	3.5		TO5
46	JAN2N467	150m	700k	#S	35	15	12	50m	10u	6.0	1.0m	110	Δ	1.0u	45	60p	A	TO5
47	GT87	150m	700k	#S	25		10	25u	5.00	1.0m	28		500nb	40	4.0	35p	AΔ	
48	TR104	150m	700k	#S	30		50m	10u	6.0	1.0m	44					40p	A	
49	TR215	150m	700k	#S	30		50m	10u	6.0	1.0m	44					40p	A	
50	2N1129	150m	750k	#S	25	25	250m	25u	6.0	1.0m	190		1.6ub	10	5.5	125p	AΔ	
51	2N1130	150m	750k	#S	30		250m	25u	6.0	1.0m	160		1.6ub	10	5.5	125p	AΔ	
52	2N422	150m	800k	#S	35	20	12	100m	15u	6.00	1.0m	50		19u	2.5k	5.5		TO5
53	2N465	150m	800k	#S	45	30	12	100m	15u	6.00	1.0m	45		18u	1.4k	4.3		TO5
54	2N563	150m	800k	#S	30	25	10	300m	5.0u	5.00	1.0m	25		2.0ub	35	2.5	30p	A
55	ZSB32	150m	800k	#S	20	2.5	50m	14u	6.00	1.0m	40		16u	1.5k	4.2		TO1	
56	ZSB136	150m	80m	#S	25	25	12	150m	10u	1.50	50m	120	†					TO1
57	2N44	150m	1.0m	#S	45	30	5.0	300m	16u	1.00	100m	13	Δ	1.5u	38	13	60p	A
58	2N45	150m	1.0m	#S	45	5.0	10m	15u	5.00	1.0m	15	Δ	2.0u	50	5.0	50u	F	
59	2N45A	150m	1.0m	#S	45	5.0	10m	15u	5.00	1.0m	15	Δ	2.0u	50	5.0	40p	A	
60	2N272	150m	1.0m	#S	25	20	100m	6.0u	6.00	1.0m	90		25u	3.0k		40p	FA	
61	2N398A	150m	1.0m	#S	105	105	50	200m	50u	3.50	5.0m	65	†					TO5
62	JAN2N422	150m	1.0m	#S	35	12	20	200m	20u	3.50	5.0m	30	Δ	1.0u	45	60p	A	TO5
63	2N466	150m	1.0m	#S	35	20	12	100m	15u	6.00	1.0m	90		20u	3.0k	5.6	60p	FA
64	2N565	150m	1.0m	#S	30	25	10	300m	5.0u	5.00	1.0m	55		2.0ub	30	3.5	30p	A
65	2N1128	150m	1.0m	#S	25	18	250m	20u	10	2.0m	100		500nb	12	1.8	90p	A	
66	ZSB33	150m	1.0m	#S	20	2.5	50m	14u	6.00	1.0m	80		20u	2.6k	5.5		TO1	
67	ZSB54	150m	1.0m	#S	30	20	12	150m	14u	6.00	1.0m	140		30u	4.2k	6.0	35p	A
68	ZSB56	150m	1.0m	#S	30	25	12	150m	14u	1.00	50m	80	†				35p	A
69	ZSB60	150m	1.0m	#S	20	2.5	50m	14u	6.0	1.0m	65		300nb	30	3.0		TO1	
70	ZSB94	150m	1.0m	#S	25	12	50m	14u	6.0	1.0m	150		200nb	30	2.5		TO1	
71	ZSB365	150m	1.0m	#S	20	20	12	400m	14u	5.00	100m	90	†				50p	A
72	GT83	150m	1.0m	#S	25	10	200m	25u	5.00	1.0m	42		500nb	40	4.0	35p	AΔ	
73	MA202	150m	1.0m	#S	105	105	50	200m	50u	3.50	5.0m	40	†					TO5
74	MA203	150m	1.0m	#S	105	105	20	200m	50u	3.50	5.0m	40	†					TO5
75	MA204	150m	1.0m	#S	90	90	20	200m	50u	3.50	5.0m	20	†					TO5
76	MA205	150m	1.0m	#S	75	75	20	200m	50u	3.50	5.0m	20	†					TO5
77	MA206	150m	1.0m	#S	60	60	10	200m	50u	3.50	5.0m	20	†					TO5
78	OC75	150m	1.0m	#S	30	30	10	100m	10u	4.50	1.0m	60	†				40p	A
79	OC76	150m	1.0m	#S	32	16	10	300m	10u	5.40	1.0m	45	Δ				40p	A
80	SK3003-RT	150m	1.0m	#S	20	18	2.5	70m	1.0	50m	90	†					40p	A
81	TR43A	150m	2.0m	#	45	15	50m	5.0u	5.0	1.0m	43					40p	F	
82	2N467	150m	1.2m	#S	35	15	12	100m	15u	6.00	1.0m	180		22u	5.5k	6.2		TO5
83	ZSB364	150m	1.2m	#S	20	20	12	400m	14u	5.00	100m	90	†				50p	A
84	CK751	150m	1.2m	#S	12		150m	6.0u	6.0	1.0m	140							TO1
85	MA894	150m	1.2m	#S	30	30	10	200m	100u	6.00	1.0m	20	Δ	1.5u	35	15	25p	A
86	2N43	150m	1.3m	#S	45	30	5.0	300m	16u	1.00	100m	30	†	1.5u	35	15	60p	F
87	2N																	

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DEBATE IN FREE AIR (Hz)	3 M A X P	4 ABS MAX RATINGS @25°C					MAX lcb0 @MAX Vcb (V)	TYPICAL 'h' PARAMETERS							Cob (F)	STRUC-TURE	Y200 s/a TO200 Ser.	# C O D E				
					Vcbo (V)	Vce0 (V)	Vbe0 (V)	Ic (A)	COMMON EMITTER			hfe	hoe (mhos)	hie (Ω)	hre (X.0001)										
									Vcb (V)		Ie (A)					h _{FE}									
1	2N2627	150m	13MΔ	18m	#S	15	15	15	100m	20u	6.0	1.0	15	15	15	15	15	15	15	15	15	15	T05	A	A
2	UPI404	150m	13M	2.5m	#A	27	27	27	100m	20u	2.0	2.5	40	40	40	40	40	40	40	40	40	40	T05	A	A
3	2N303	150m	14MΔ	2.5m	#J	30	30	30	200m	1.0u	6.0	1.0	75	75	75	75	75	75	75	75	75	75	T05	A	F
4#	ASY27-RT†	150m	14MΔ	2.5m	#J	25	15	20	200m	7.0u	5.0	2.0	90	90	90	90	100u	1.4k	7.5	11p	A	T05	A	A	
5	JAN2N417	150m	15MΔ	2.0m	#J	30	30	30	200m	25u	6.0	1.0	60	60	60	60	1.5u	1.5u		20p	Δ	R179q	A	A	
6	2N522A	150m	15MΔ	2.0m	#J	30	30	30	200m	2.0u	5.0	1.0	100	100	100	100				20p	Δ	T05	A	A	
7	2N1309	150m	15MΔ	2.5m	#J	30	30	30	300m	6.0u	1.0	10m	80	80	80	80				20p	Δ	T05	A	A	
8	JAN2N1309	150m	15MΔ	2.5m	#J	30	30	30	300m	6.0u	1.0	10m	80	80	80	80				20p	Δ	T05	A	A	
9	2N1309A	150m	15MΔ	2.5m	#J	35	35	35	300m	6.0u	1.0	10m	80	80	80	80				20p	Δ	T05	A	A	
10	2N2622	150m	15MΔ	1.8m	#S	24	24	24	100m	12u	12	1.0	15	15	15	15				3.5p		T05	A	A	
11	2N2625	150m	15MΔ	1.8m	#S	24	24	24	100m	12u	12	1.0	15	15	15	15				3.5p		T05	A	A	
12	2N2628	150m	15MΔ	1.8m	#S	24	24	24	100m	14u	12	1.0	15	15	15	15				3.5p		T05	A	A	
13	2N3000	150m	15M	2.5m	#J	45	15	35	400m	50u	5.0	1.0	110	110	110	110				10p	AΔ	T05	A	A	
14#	ACY38	150m	15M	2.5m	#S	30	15	9	100m	20u	6.0	1.0	100	100	100	100	60u	3.0k	5.0	20p	AΔ	T05	A	A	
15#	NKT139	150m	15M	2.1m	#J	30	15	25	300m	6.0u	1.0	10m	60	60	60	60				20p	A	T05	A	A	
16	2N2623	150m	16MΔ	1.8m	#S	32	32	32	100m	8.0u	12	1.0	20	20	20	20				3.5p		T05	A	A	
17	2N2626	150m	16MΔ	1.8m	#S	32	32	32	100m	8.0u	12	1.0	20	20	20	20				3.5p		T05	A	A	
18	2N2629	150m	16MΔ	1.8m	#S	32	32	32	100m	10u	12	1.0	10	10	10	10				3.5p		T05	A	A	
19#	SFT288†	150m	16M	2.5m	#J	24	12	12	500m	10u	.35	400m	40	40	40	40				12p	Δ	T05	A	A	
20#	2N428†	150m	17M	2.5m	#J	30	12	20	400m	4.0u	.25	1.0m	40	40	40	40				14p	FA	T05	A	A	
21#	2N417	150m	20M	2.5m	#J	30	10	20	200m	5.0u	6.0	1.0	140	140	140	140	770nb	26	11	12p	FAΔ	T05	A	A	
22#	2N1017	150m	20M	2.5m	#J	30	10	20	400m	25u	.35	10m	30	30	30	30				12p	FAΔ	T05	A	A	
23#	SFT319	150m	20M	2.5m	#J	20	20	.50	10m	15u	9	1.0	50	50	50	50				2.5p	D	T01	A	A	
24	2N523A	150m	21MΔ	2.0m	#J	20	6.0	10	2.0u	5.0	1.0	125	125	125	125	1.5u	1.5u				Δ	T05	A	A	
25#	SFT229†	150m	25M	2.5m	#J	18	15	12	250m	10u	.50	10m	75	75	75	75					Δ	T05	A	A	
26	TR764	150m	25M	2.8m	#J	20	20		200m	5.0u	4.5	1.0	200	200	200	200					Δ	T01	A	A	
27#	SFT320	150m	35M	2.5m	#J	20		.50	10m	15u	9.0	1.0	80	80	80	80				2.5p	D	T01	A	A	
28	2N1300†	150m	40M	2.5m	#A	13	12	1.0	100m	3.0u	.30	10m	50	50	50	50					ME	T05	A	A	
29	2N1854	150m	40MΔ	2.5m	#J	18	2.0	2.0	100m	4.2u	50	20	40	40	40	40				12p	Δ	T05	A	A	
30#	JAN2N1854†	150m	40MΔ	3.7m	#S	18	2.0	2.0	100m	40u	75	100	25	25	25	25					Δ	T05	A	A	
31#	SFT317	150m	40M	2.5m	#J	20	.50	10m	15u	9.0	1.0	100	100	100	100				2.5p	D	T01	A	A		
32	2N1301†	150m	60M	2.5m	#A	13	12	4.0	100m	3.0u	.30	10m	50	50	50	50					DM	R179g	A	A	
33	UPI1301	150m	60M	2.5m	#A	13	12	4.0	100m	3.0u	.30	10m	50	50	50	50					DM	O3e	A	A	
34	2N1683†	150m	80M	2.0m	#A	13	12	4.0	100m	3.0u	.50	40m	85	85	85	85				8.0p	ME	T05	A	A	
35	HEP1-RT	150m	100M	2.0m	#J	12	12	2.0	100m	5.0u	6	0	50	50	50	50						T018	A	A	
36	HEP635-RT	150m	100M	2.0m	#J	30	25	2.5	100m	5.0u	5.0	5.0	85	85	85	85						T05	A	A	
37#	2G106†	150m	120M	2.0m	#A	18	15	4.0	100m	100u	25	10m	30	30	30	30				5p	ME	T018	A	A	
38	2N711†	150m	150MΔ	2.0m	#J	12	12	1.0	100m	3.0u	.50	10m	20	20	20	20				7.5p		T018	A	A	
39	2N711A†	150m	150M	2.0m	#S	15	7	1.5	100m	1.5u	.50	10m	25	25	25	25				6p	ME	T018	A	A	
40	2N711B†	150m	150M	2.0m	#S	18	7	2.0	100m	1.5u	.50	10m	30	30	30	30				6p	ME	T018	A	A	
41	2N2048†	150m	150MΔ	2.0m	#J	20	15	2.0	100m	5.0u	.50	10m	50	50	50	50				3.0p		T09	A	A	
42	2N2048A†	150m	150MΔ	2.0m	#J	30	20	2.5	3.0u	.50	50	40	40	40	40	40				3.0p		T09	A	A	
43	2N2400†	150m	150MΔ	2.0m	#J	12	7	1.0	100m	3.0u	.50	10m	30	30	30	30				4p		T018	A	A	
44	2N2635†	150m	150MΔ	2.0m	#J	30	15	2.5	100m	5.0u	1.0	50m	45	45	45	45				5.0p		T018	A	A	
45#	2N2942†	150m	150MΔ	2.0m	#J	50	25	2.5	100m	25u	.50	50m	40	40	40	40				3.5p	D	T09	A	A	
46	2N3400†	150m	150MΔ	2.0m	#J	20	20	2.0	100m	5.0u	.50	50m	35	35	35	35				3p		T09	A	A	
47	2N2401†	150m	200MΔ	2.0m	#J	15	10	1.5	100m	1.5u	.50	10m	50	50	50	50				4p		T018	A	A	
48	2N2955†	150m	200MΔ	2.0m	#J	40	25	3.5	100m	1.0u	1.0	10m	20	20	20	20				4p		T018	A	A	
49	2N3323	150m	200MΔ	2.0m	#J	35	35	3.0	100m	10u	10	3.0m	30	30	30	30				3p		T018	A	A	
50	2N3324	150m	200MΔ	2.0m	#J	35	35	3.0	100m	10u	10	3.0m	30	30	30	30				3p		T018	A	A	
51	2N3325	150m	200MΔ	2.0m	#J	35	35	3.0	100m	10u	10	3.0m	30	30	30	30				3p		T018	A	A	
52	2N6365	150m	200MΔ	2.0m	#J	30	10	1.0	100m	10u	6.0	1.0	20	20	20	20				2.0p		T018	A	A	
53	JAN2N6365	150m	200MΔ	2.0m	#J	30	25	1.0	100m	10u	6.0	1.0	15	15	15	15				2.0p		T018	A	A	
54	2N6365A	150m	200MΔ	2.0m	#J	30	10	1.0	100m	10u	6.0	1.0	20	20	20	20				2.0p		T018	A	A	
55	JAN2N6365A	150m	200MΔ	2.0m	#J	30	25	1.0	100m	10u	6.0	1.0	180	180	180	180				2.0p		T018	A	A	
56	2N827	150m	250MΔ	2.0m	#J	20	20	4.0	100m	10u	.30	10m	100	100	100	100				9p	Δ	T018	A	A	
57	2N963†	150m	250MΔ	2.0m	#J	12	7	1.2	100m	5.0u	.30	10m	20	20	20	20				5.0p		T018	A	A	
58	2N967†	150m	250MΔ	2.0m	#J	12	7	1.2	100m	5.0u	.30	10m	40	40	40	40				5.0p		T018	A	A	
59	2N2258†	150m	250MΔ	2.0m	#J	7	7	1.0	100m	10u	1.0	10m	30	30	30	30				4.0p	ME	T018	A	A	
60	2N2259†	150m	250MΔ	2.0m	#J	7	7	1.0	100m	10u	1.0	10m	50	50	50	50				4.0p	ME	T018	A	A	
61	2N2402†	150m	250MΔ	2.0m	#J	18	12	2.0	100m	1.5u	.50	10m	60	60	60	60				4p		T018	A	A	
62#	2G103†	150m	300M	4.0m	#J	15	15	2.0	50m	3.0u	5	10	40	40	40	40				5.0p	ME	T018	A	A	
63#	2G104†	150m	300M	4.0m	#J	15	15	3.5	50m	3.0u	50	10	40	40	40	40				5.0p	ME	T018	A	A	
64	JAN2N559†	150m	300MΔ	2.0m	#S	15	15	5.0	50m	3.0u	.50	10m	30	30	30	30	15	15		6.0p		T018	A	A	
65	2N741A	150m	300MΔ	4.0m	#J	20	20	1.0	100m	3.0u	4.0	5.0m	20	20	20	20				10p		T01			

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE fab (Hz)	T IN FREE AIR W/°C	M E M X P	ABS MAX RATINGS @25°C				MAX. lcb0 @MAX Vcb (V)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# C O A D E
						BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)		Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)				
1#	NKT216	200m	90MΔ	3.1m	#J	32	32	10	250m	10u0	4.50	1.0m0	50 Δ					T01	A	
2#	NKT217	200m	90MΔ	3.1m	#J	60	40	10	500m	10u0	0.00	50 Δ						T01	A	
3#	NKT219	200m	90MΔ	3.1m	#J	32	32	10	250m	10u0	4.50	1.0m0	85 Δ					T01	A	
4#	2N187A	200m	1.0M	3.3m	#J	25	25	5.0	200m	16u	1.00	36 †		2.0k				R32	A	
5	2N190	200m	1.0M	3.3m	#J	25	25	5.0	200m	16u	5.0	1.0m	42	800nb	29	4.0		R32	A	
6	2N322	200m	1.0MΔ	2.0m	#J	18	18	5.0	200m	16u0	1.00	20m0	35 †					T05	A	
7	2N651	200m	1.0MΔ	2.7m	#S	45	30	3.0	500m	10u0	6.00	1.0m	50 Δ					T05	A	
8	2N651A	200m	1.0MΔ	2.7m	#S	45	30	3.0	500m	10u0	6.00	1.0m	50 Δ	1.0uZb	37 Zb			T05	A	
9	JAN2N651A	200m	1.0MΔ	2.6m	#S	45	30	3.0	500m	50u	6.00	1.0m	50 Δ	700nZb	37 Zb	10 Z		T05	A	
10	2N1187	200m	1.0MΔ	2.7m	#S	60	45	3.0	500m	10u0	6.00	1.0m	50 Δ					T05	A	
11#	2SB415	200m	1.0M	3.3m	#J	32	32	6.0	1	14u0	0.0	300m	70 †					T01	A	
12#	2SB495	200m	1.0M	3.3m	#J	25	18	6.0	1.0	20u0	1.00	150m	110 †					T01	A	
13	HEP629-RT	200m	1.0M	2.6m	#J	55	40	3.0	400m	10u	2.0	50m0	50 †					T05	A	
14	HEP630-RT	200m	1.0M	2.6m	#J	55	40	3.0	400m	10u	2.0	50m0	50 †					T05	A	
15	HSE118-RT	200m	1.0M	2.6m	#J	20	12	3.0	1	10u	1.00	50m0	50 †					T05	A	
16	MA100	200m	1.0MΔ	2.7m	#J	60	60	15	500m	100u	6.00	1.0m	50 Δ					T05	A	
17	MA882	200m	1.0MΔ	2.6m	#J	60	60	15	500m	100u	6.00	1.0m	50 Δ	100nZb	40 Z			T05	A	
18	MA887	200m	1.0MΔ	2.6m	#J	50	50	15	500m	100u	6.00	1.0m	50 Δ	1.0uZb	40 Z			T05	A	
19#	NKT271	200m	1.0M	3.1m	#J	15	15	5.0	500m	10u0	1.50	50m0	50 Δ					T01	A	
20#	NKT272	200m	1.0M	3.1m	#J	15	15	5.0	250m	10u0	4.50	50m0	35 Δ					T01	A	
21#	NKT274	200m	1.0M	3.1m	#J	15	15	5.0	250m	10u0	4.50	1.0m0	85 Δ					T01	A	
22#	NKT275	200m	1.0M	3.1m	#J	15	15	5.0	250m	10u0	4.50	1.0m	30 Δ					T01	A	
23#	OC78	200m	1.0M	3.0m	#J	20	20	10	200m	10u0	1.00	125m0	25 Δ					40p	A	
24#	OC81DN	200m	1.0M	3.3m	#J	32	16	10	250m	10u	6.00	2.0m0	20 Δ					40p	A	
25#	OC81N	200m	1.0M	3.3m	#J	32	16	10	500m	10u	1.50	50m0	50 Δ					40p	A	
26	SK3005-RT	200m	1.0M	3.3m	#J	40	35	25	5.0m				165 †					T01	A	
27	2N188A	200m	1.2M	3.3m	#J	25	25	5.0	200m	16u	1.00	100m	54 †	2.6k				40p	R32	
28	2N191	200m	1.2M	3.3m	#J	25	25		200m	16u	5.0	1.0m	67	600nb	29	4.0		40p	A	
29	2N460	200m	1.2M	5.0m	#J	45	45		400m	15u	5.0	1.0m	960m	1.0ub	30	3.0		50p	A	
30	2N461	200m	1.2M	5.0m	#J	45	45		400m	15u	5.0	1.0m	980m	1.0ub	30	4.0		50p	A	
31	2N652	200m	1.2MΔ	2.7m	#S	45	30	3.0	500m	10u0	6.00	1.0m	100 Δ					37 Zb	T05	
32	2N652A	200m	1.2MΔ	2.7m	#S	45	30	3.0	500m	10u0	6.00	1.0m	100 Δ	1.0uZb	37 Zb			25pZ	T05	
33	JAN2N652A	200m	1.2MΔ	2.6m	#S	45	30	3.0	500m	50u	6.00	1.0m	100 Δ	700nZb	37 Zb	12 Z		25pZ	T05	
34	2N1188	200m	1.2MΔ	2.7m	#S	60	45	3.0	500m	10u0	6.00	1.0m	100 Δ					37 Zb	T05	
35#	ACY28	200m	1.2M	3.1m	#J	40	15	30	500m	6.0u0	12.0	1.0m0	45 Δ						T01	
36	MA883	200m	1.2MΔ	2.6m	#J	60	60	15	500m	100u	6.00	1.0m	100 Δ	100nZb	40 Z			25p	A	
37	MA888	200m	1.2MΔ	2.6m	#J	50	50	15	500m	100u	6.00	1.0m	100 Δ	1.0uZb	40 Z			25p	A	
38	2N241A	200m	1.3M	4.0m	#J	25	25	5.0	200m	16u	1.00	100m0	73 †	4.0k				40p	R32	
39#	SFT321	200m	1.3M	3.3m	#J	24	12	250m	15u	1.00	100m0	30 †						32p	T01	
40#	ACY29	200m	1.4M	3.1m	#J	40	15	30	250m	12u0	12.0	1.0m0	45 Δ					16p	A	
41	2N192	200m	1.5M	5.0m	#J	25	25		200m	16u	5.0	1.0m	90	500nb	29	4.0		40p	R32	
42	2N323	200m	1.5MΔ	2.0m	#J	18	18	5.0	200m	16u0	1.00	20m0	53 †					35p	A	
43	2N653	200m	1.5M	2.6m	#J	30	25	25	250m	15u0	6.00	1.0m0	49		1.8k			10p	A	
44	2N1451	200m	1.5M	3.3m	#J	45	20	10	400m	15u	2.00	20m0	45 †	1.0ub	40	3.0		20p	A	
45	HEP250-RT	200m	1.5M	2.6m	#J	20	20	2.5	200m	15u	2.0	20m0	65 †						T05	
46	HEP252-RT	200m	1.5M	2.6m	#J	20	20	2.5	200m	15u	2.0	20m0	65 †						T05	
47	HEP631-RT	200m	1.5M	2.6m	#J	40	25	2.5	200m	15u	2.5	20m0	45 †						T05	
48#	SFT322	200m	1.6M	3.3m	#J	24	12	250m	15u	1.00	100m0	50 †						32p	A	
49#	SFT352	200m	1.6M	3.3m	#J	24	12	150m	15u	6.00	1.0m0	50	27u	1.5k	3.2			32p	A	
50	2N1185	200m	1.7MΔ	2.7m	#S	45	30	3.0	500m	50u	6.00	1.0m	190 Z		37 Zb				T05	
51	MA884	200m	1.7MΔ	2.6m	#J	60	60	15	500m	100u	6.00	1.0m	190 Z	1.0uZb	40 Z			25p	A	
52	MA889	200m	1.7MΔ	2.6m	#J	50	50	15	500m	100u	6.00	1.0m	190 Z	1.0uZb	40 Z			25p	A	
53#	ACY30	200m	1.8M	3.3m	#J	40	20	40	200m	12u0	12.0	1.0m0	60 Δ					35p	A	
54	TR383	200m	1.8M	3.3m	#J	25	10	200m	25u	1.00	150m0	72 †						20p	T05	
55	2N324	200m	2.0MΔ	2.0m	#J	18	18	5.0	200m	16u0	1.00	20m0	72 Δ					35p	A	
56	2N654	200m	2.0M	2.6m	#J	30	25	25	250m	15u0	6.00	1.0m0	80		3.1k			10p	A	
57	2N1446	200m	2.0M	3.3m	#J	45	25	15	400m	10u0	6.00	1.0m0	30	600nb	25	300m		20p	A	
58#	2SB51	200m	2.0M	3.3m	#J	30	3.0	200m	16u	1.00	20m	43 †		.60u	28	8.0		25p	AT	
59	HEP632-RT	200m	2.0M	2.6m	#J	40	25	2.5	200m	15u	2.5	20m0	80 †						T05	
60	MA4404f	200m	2.0M	2.6m	#J	25	24	12	350m	10u0	6.00	1.0m0	145	50u	4.0k	8.5		25pZ	AT	
61	MA4404A	200m	2.0M	2.6m	#J	25	24	12	350m	10u0	6.00	1.0m0	145	50u	4.0k	8.5		4.0p	AT	
62	2N1452	200m	2.2M	3.3m	#J	45	20	10	400m	15u	2.00	20m0	60 †	100nb	40	4.0		20p	A	
63#	SFT353	200m	2.4M	3.3m	#J	24	12	150m	15u	6.00	1.0m0	80	40u	2.3k	3.8			32p	A	
64	2N508	200m	2.5MΔ	3.3m	#J	18	18	5.0	200m	7.0u0	1.00	20m0	99 Δ					35pZ	A	
65	2N655	200m	2.5M	2.6m	#J	30	25	25	250m	15u0	6.00	1.0m0	130		5.7k			10p	A	
66	HEP251-RT	200m	2.5M	2.6m	#J	20	20	2.5	200m	15u	2.0	20m0	150 †						T05	
67	HEP633-RT	200m	2.5M	2.6m	#J	40	25	2.5	200m	15u	2.5	20m0	160 †						T05	
68#	SFT323	200m	2.6M	3.3m	#J	24	12	250m	15u	1.00	100m0	85 †							T01	
69#	2G303	200m	3.0MΔ	3.0m	#S	30	30	3.0	300m	6.0u0	1.00	30 Δ						12pZ	A	
70	2N381	200m	3.0M	5.0m	#J	50	25	20	400m	10u0	5.00	1.0m0	35 Δ	420u	300	6.6		20p	A	
71	2N1447	200m	3.0M	3.3m	#J	45	25	15	400m	10u0	6.00	1.0m	45	620nb	25	500m		20p	A	
72	HEP634-RT	200m	3.0M	3.3m	#J	40	25	2.5	200m	15u	2.5	20m0	350 †						T05	
73	2N1413	200m	3.2M	3.3m	#J	35	25	10	200m	12u0	5.0	1.0m	30	650nb	29	4.8		26p	A	
74	2N1189	200m	3.5M	2.6m	#J	45	30	15	500m	50u	6.00	1.0m	120	100nb	31			12p	A	
75	2N1353f	200m	3.5M	3.3m	#J	15	10	10	200m	6.0u0	1.00	10m0	70 †	b	100			12p	A	
76	UPI1353	200m	3.5M	3.3m	#J	15	10	10	200m	6.0u0	1.00	10m0	75 †					12p	A	
77	2N1414	200m	3.6M	3.3m	#J	35	25	10	200m	12u0	5.0	1.0m	4							

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	T M A M P	ABS MAX RATINGS @25°C				MAX. I _{cb} @MAX V _{cb} (A)	TYPICAL h _f PARAMETERS				COMMON EMITTER			Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# E O D E
						BV _{cb0} (V)	BV _{ceo} (V)	BV _{eco} (V)	I _c (A)		V _{cb} (V)	le (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (X.0001)					
						105	105	75	200m		25	14u	2	25	100m	2	20				
1	2N398B	250m	1.0M	3.3m	#A	105	105	75	200m	6.0u	25	5.0m	20	75	75	75	75	35p	ΔA	T05	A
2#	2SB189	250m	1.0M	5.0m	#J	25	25	10	250m	14u	1.0	100m	70	75	75	75	75	35p	A	R194	
3	2SB476	250m	1.2M	3.8m	#J	20	10	6.0	500u	2	0.0	2	75	75	75	75	75	35p	A	TO39	
4#	2SB476S	250m	1.2M	3.8m	#J	20	10	10	2.0	500u	0.0	2.0	80	75	75	75	75	35p	A	TO39	
5#	2SB476W	250m	1.2M	3.8m	#J	20	10	10	2.0	500u	0.0	2.0	100	75	75	75	75	35p	A	TO39	
6#	2SB533	250m	1.2M	4.2m	#J	20	10	12	2.0	200u	0.0	2.0	75	75	75	75	75	35p	A	TO39	
7	2N597	250m	3.0M	3.3m	#J	45	40	45	500m	25u	1.0	100m	40	75	75	75	75	35p	ΔA	T05	A
8	2N1997I	250m	3.0M	3.3m	#S	45	15	45	500m	5.0u	1.0	100m	40	75	75	75	75	35p	A	T05	A
9	2N2930I	250m	4.0M	3.3m	#S	30	12	20	500m	7.0u	5.0	10m	60	75	75	75	75	35p	ΔA	T05	A
10	2N598I	250m	5.6M	3.3m	#J	35	35	30	500m	25u	1.0	100m	70	75	75	75	75	35p	ΔA	T05	A
11	JAN2N598I	250m	5.6M	3.3m	#S	35	35	30	500m	25u	1.0	200m	50	75	75	75	75	35p	ΔA	T05	A
12	2N1998I	250m	5.6M	3.3m	#S	35	15	30	500m	5.0u	1.0	100m	70	75	75	75	75	35p	ΔA	T05	A
13	2N1174I	250m	7.0M	3.3m	#J	35	30	35	200m	10u	1.0	500u	85	75	75	75	75	35p	ΔA	TO29	
14	2N1478	250m	8.0M	3.3m	#J	30	20	20	500m	5.0u	1.0	100m	70	75	75	75	75	35p	ΔA	TO9	A
15	2N599I	250m	10M	3.3m	#J	30	20	20	500m	25u	1.0	200m	75	75	75	75	75	35p	ΔA	TO5	A
16	JAN2N599I	250m	10M	3.3m	#S	30	20	20	500m	25u	1.0	200m	75	75	75	75	75	35p	ΔA	TO5	A
17	2N1999I	250m	10M	3.3m	#S	30	15	20	500m	5.0u	1.0	100m	100	75	75	75	75	35p	ΔA	TO5	A
18	2N2374	250m	15.0M	3.0m	#S	35	35	35	500m	10u	1.0	2.0m	140	75	75	75	75	35p	A	TO5	A
19	2N1495I	250m	15.0M	3.3m	#S	40	25	4.0	500m	7.0u	5.0	200m	25	75	75	75	75	35p	ΔA	TO9	A
20	2N1495A	250m	15.0M	3.3m	#S	40	25	4.0	500m	2.0u	5.0	200m	25	75	75	75	75	35p	ΔA	TO9	A
21	JAN2N1195	250m	400M	3.3m	#S	30	20	1.0	40m	5.0u	10	10m	24	75	75	75	75	35p	ΔA	TO5	A
22#	ACY41I	260m	600k	4.0m	#J	32	18	12	500m	100u	6.0	1.0m	90	75	75	75	75	35p	ΔA	TO5	A
23#	ACY40I	260m	800k	4.0m	#J	32	18	12	500m	100u	6.0	1.0m	45	75	75	75	75	35p	ΔA	TO5	A
24#	ACY17I	260m	1.0M	4.0m	#J	70	32	12	500m	100u	6.0	1.0m	85	75	75	75	75	35p	ΔA	TO5	A
25#	ACY18I	260m	1.0M	4.0m	#J	50	30	12	500m	100u	6.0	1.0m	60	75	75	75	75	35p	ΔA	TO5	A
26#	ACY20	260m	1.0M	4.0m	#J	40	20	12	500m	100u	6.0	1.0m	85	75	75	75	75	35p	ΔA	TO5	A
27#	ACY22I	260m	1.0M	4.0m	#J	20	15	12	500m	100u	6.0	1.0m	75	75	75	75	75	35p	ΔA	TO5	A
28#	ACY39I	260m	1.0M	4.0m	#J	110	40	25	500m	100u	6.0	1.0m	85	75	75	75	75	35p	ΔA	TO5	A
29#	ACY44	260m	1.0M	4.0m	#J	50	30	12	500m	100u	6.0	1.0m	60	75	75	75	75	35p	ΔA	TO5	A
30#	ACY19I	260m	1.3M	4.0m	#J	50	30	12	500m	100u	6.0	1.0m	140	75	75	75	75	35p	ΔA	TO5	A
31#	ACY2I	260m	1.3M	4.0m	#J	40	20	12	500m	100u	6.0	1.0m	140	75	75	75	75	35p	ΔA	TO5	A
32	2N2207	260m	140M	5.2m	#S	70	50	.50	50m	10u	6.0	50m	134	75	75	75	75	35p	ΔA	TO7	H
33#	2SB377	270m	1.4M	4.0m	#J	32	30	30	150m	10u	6.0	50m	134	75	75	75	75	35p	ΔA	TO5	A
34#	2SB383	270m	3.0M	3.3m	#J	32	30	30	150m	10u	6.0	50m	134	75	75	75	75	35p	ΔA	TO5	A
35	2N2706	280m	2.5M	3.3m	#J	32	32	12	200m	10u	0.0	50m	115	75	75	75	75	35p	ΔA	TO1	A
36#	OC122	295m	1.3M	4.5m	#J	32	32	12	500m	500u	2.0	100m	180	75	75	75	75	35p	ΔA	TO7	H
37#	OC123	295m	1.5M	4.5m	#J	50	50	15	500m	500u	2.0	100m	160	75	75	75	75	35p	ΔA	TO7	H
38	2N672I	300m	5.0m	5.0m	#J	25	25	25	250m	25u	2.0	25u	2.0	75	75	75	75	35p	ΔA	R2	A
39	2N1008	300m	2.7m	2.7m	#S	20	20	15	300m	10u	5.0	10m	40	75	75	75	75	35p	ΔA	TO5	A
40	2N1008A	300m	2.7m	2.7m	#S	40	40	15	300m	10u	5.0	10m	40	75	75	75	75	35p	ΔA	TO5	A
41	2N1008B	300m	2.7m	2.7m	#S	60	60	15	300m	15u	5.0	10m	40	75	75	75	75	35p	ΔA	TO5	A
42	2N1176	300m	5.0m	5.0m	#S	10	10	10	300m	25u	5.0	10m	20	75	75	75	75	35p	ΔA	TO5	A
43	2N1176A	300m	5.0m	5.0m	#J	40	40	300m	300m	5.0	5.0	10m	20	75	75	75	75	35p	ΔA	TO5	A
44	2N1176B	300m	5.0m	5.0m	#S	60	60	15	300m	5.0	5.0	10m	20	75	75	75	75	35p	ΔA	TO5	A
45	2N1287	300m	2.5m	2.5m	#S	25	25	15	300m	15u	5.0	10m	40	75	75	75	75	35p	ΔA	F15	C
46	2N1287A	300m	2.5m	2.5m	#S	25	25	15	300m	15u	5.0	10m	60	75	75	75	75	35p	ΔA	F15	C
47	2N2100A†	300m	4.0m	4.0m	#S	40	20	4.0	500m	12u	1.0	200m	30	75	75	75	75	35p	ΔA	TO9	A
48	2N674	300m	400k	5.0m	#J	75	75	70	20	100u	1.5	1.0	40	75	75	75	75	35p	ΔA	R2	A
49	2N1124	300m	400k	5.0m	#J	40	35	40	250m	75u	6.0	10m	40	75	75	75	75	35p	ΔA	R2	A
50	2N670	300m	700k	5.0m	#J	40	40	40	250m	25u	1.5	1.0	100	75	75	75	75	35p	ΔA	R2	A
51#	NKT223	300m	.75M	5.0m	#J	30	30	10	500m	10u	4.5	1.0m	50	75	75	75	75	35p	ΔA	TO5	A
52#	NKT224	300m	.75M	5.0m	#J	30	30	10	500m	10u	4.5	1.0m	30	75	75	75	75	35p	ΔA	TO5	A
53#	NKT225	300m	.75M	5.0m	#J	30	30	10	500m	10u	4.5	1.0m	15	75	75	75	75	35p	ΔA	TO5	A
54#	NKT229	300m	.75M	5.0m	#J	30	30	10	500m	10u	4.5	1.0m	85	75	75	75	75	35p	ΔA	TO5	A
55	2N1125	300m	1.0M	5.0m	#J	40	40	40	250m	75u	1.0	500m	50	75	75	75	75	35p	ΔA	R2	A
56#	AC180	300m	1.0M	4.0m	#S	32	24	10	1.0	200u	1.0	600m	110	75	75	75	75	35p	ΔA*	R178	A
57#	NKT237	300m	1.0M	5.0m	#J	70	32	12	1.0	100u	0.0	300m	50	75	75	75	75	35p	ΔA	TO5	A
58#	NKT238	300m	1.0M	5.0m	#J	50	30	12	1.0	100u	0.0	300m	40	75	75	75	75	35p	ΔA	TO5	A
59#	NKT239	300m	1.0M	5.0m	#J	50	30	12	1.0	100u	0.0	300m	80	75	75	75	75	35p	ΔA	TO5	A
60#	NKT240	300m	1.0M	5.0m	#J	40	20	12	1.0	100u	0.0	50m	50	75	75	75	75	35p	ΔA	TO5	A
61#	NKT241	300m	1.0M	5.0m	#J	40	20	12	1.0	100u	0.0	50m	90	75	75	75	75	35p	ΔA	TO5	A
62#	NKT242	300m	1.0M	5.0m	#J	20	15	12	1.0	100u	0.0	300m	30	75	75	75	75	35p	ΔA	TO5	A
63#	NKT243	300m	1.0M	5.0m	#J	110	40	12	1.0	100u	0.0	300m	50	75	75	75	75	35p	ΔA	TO5	A
64#	NKT244	300m	1.0M	5.0m	#J	32	18	12	1.0	100u	0.0	300m	30	75	75	75	75	35p	ΔA	TO5	A
65#	NKT245	300m	1.0M	5.0m	#J	32	18	12	1.0	100u	0.0	300m	50	75	75	75	75	35p	ΔA	TO5	A
66#	2SB481	300m	1.2M	3.3m	#J	35	30	12	400m	20u	1.0	400m	80	75	75	75	75	35p	ΔA	TO5	A
67#	ASY481V†	300m	1.2M	3.3m	#J	64	45	16	300m	18u	5.0	100m	45	75	75	75	75	35p	ΔA	TO1	B
68#	ASY481V	300m	1.2M	3.3m	#J	64	45	16	300m	18u	5.0	100m	75</								

3. GERMANIUM NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/C			ABS MAX RATINGS @25°C						TYPICAL 'h' PARAMETERS				Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# C E O D E
				M A X P	V Bcvo (V)	V Bceo (V)	V Bcbo (V)	Ic (A)	Icbo @MAX Vcb (A)	BIAS		COMMON EMITTER								
										Vcb (V)	Ic (A)	hfe	hoe (mhos)	hie (Ω)	hre X.0001					
1	2N1010	20m	2.0M	667u	*A	10	10	10	2.0m	10u	3.0	30m	35							
2	2N100	25m	5.0M		*A	25			5.0m	2.0u										
3	2N166	25m	5.0M		*A	6.0			2.0m	5.0u	6.0	1.0m	32						R5	
4	2N170	25m	5.0M	1.0m	*A	6.0			2.0m	5.0u	5.0	1.0m	32	300ub	55	4.0	3.0f		R163	
5	2N35	50m			*A	25			8.0m		6.0	1.0m	40						O3j	
6	2N213	50m			*A	40		25	100m	200u	6.0	1.0m	70						O22	
7	2N124	50m	300k	714u		10		5.0	8.0m	2.0u	5.0	1.0m	18				10p		O3e	
8	2N306	50m	600kΔ	1.0m		20		15	2.0m	5.0u	6.0	1.0m	25						O22	
9	2N507	50m	600kΔ	1.0m		40			100m	125u	5.0	1.0m	50						O22	
10	2N103	50m	.75M			35			1.0m	5.0u	4.5	1.0m	4.0				20p		O3e	
11	2N97	50m	1.0M			30			1.0m	2.0u	4.5	1.0m	13				19p		O5	
12	2N98	50m	2.5M			40			1.0m	2.0u	4.5	1.0m	40				14p		O3e	
13	2N194	50m	3.0M	1.0m				18	100m	25u	6.0	1.0m	8.0				11p		O22	
14	2N194A	50m	3.0M	1.0m				18	100m	5.0u	6.0	1.0m	8.0				11p		O22	
15	2N211	50m	3.0M	1.0m				10	50m	20u	6.0	1.0m	5.0				10p		O22	
16	2N216	50m	3.0M	1.0m				18	50m	5.0u	6.0	1.0m	7.5				11p		O22	
17	2N515	50m	3.0M	1.0m				18	10m	5.0u	6.0	1.0m	7.5				11p		O22	
18	2N516	50m	3.0M	1.0m				18	10m	5.0u	6.0	1.0m	7.5				11p		O22	
19	2N517	50m	3.0M	1.0m				18	10m	5.0u	6.0	1.0m	7.5				11p		O22	
20	TR194	50m	3.0M	1.0m				15	50m		6.0	1.0m	8.0				10p		A	
21	TR216	50m	3.0M	1.0m				15	50m		6.0	1.0m	8.0				11p		A	
22	2N99	50m	3.5M			40			1.0m	2.0u	4.5	1.0m	40				10p		O3e	
23	TR193	50m	3.5M	1.0m				15	50m		6.0	1.0m	60				10p		AB	
24	TR211	50m	3.5M	1.0m				10	50m		6.0	1.0m	30							
25	2N125	50m	5.0M	1.4m		10		5.0	8.0m	2.0u	5.0	1.0m	36	230nb	62	3.0	90	10p	O3e	
26	2N126	50m	5.0M	1.4m		10		5.0	8.0m	2.0u	5.0	1.0m	20				14p		R26	
27	2N1058	50m	6.0M	1.0m				20	50m	50u*	6.0	1.0m	10				10p		O22	
28	TR212	50m	6.0M	1.0m				10	50m		6.0	1.0m	10				10p		A	
29	2N169	55m	4.0M	1.1m		15		15	20m	5.0u	1.0	1.0m	25				2.4p		O17	
30	2N169A	55m	5.0M	1.1m		25		25	20m	5.0u	1.0	1.0m	25				2.4p		O17	
31	2N168	55m	6.0M	1.1m		15		15	20m	5.0u	1.0	1.0m	25				2.4p		O17	
32	2N78A	65m		1.1m		20		5.0	20m	3.0u									O5	
33	2N145	65m		1.4m		20			5.0m	3.0u	9.0	1.0m					1.0p		O3e	
34	2N146	65m		1.4m		20			5.0m	3.0u	9.0	1.0m					1.0p		O3e	
35	2N147	65m		1.4m		20			5.0m	3.0u	9.0	1.0m					1.0p		O3e	
36	2N148	65m		1.4m		16			5.0m	3.0u	12	500u	35				3.0p		O3e	
37	2N172	65m		1.4m		16			5.0m	3.0u	9.0	1.0m					1.0p		O3e	
38	2N253	65m		1.4m		12			5.0m	3.0u							1.0p		O3e	
39	2N254	65m		1.4m		20			5.0m	3.0u							1.0p		O3e	
40	JAN2N78A	65m	3.4MΔ	920u	#S	20		20	20m	3.0u	1.0	1.0m	45		b	140	6.0p		O17	
41	2N164	65m	4.0MΔ		#J	15		1.0	30m	5.0u	1.0	1.0m	80				10p		O5	
42	2N165	65m	5.0M	1.1m	#J	15			20m	5.0u	1.0	1.0m	72				2.4p		R5	
43	2N292	65m	5.0M	1.1m	#S	15			20m	5.0u	1.0	1.0m	25	67u		1.0	2.4p		O5	
44	2N448	65m	5.0M	1.1m	#S	15			20m	5.0u	1.0	1.0m	25	67u		1.0	2.4p		O5	
45	TR213	65m	5.0M	1.1m	#J	15			20m	5.0u	5.0	1.0m	25				2.4p		O5	
46	2N167f	65m	8.0M	1.1m	#S	30		30	75m	1.5u	5.0	1.0m	97.5m	200nb	40	1.5	4.0p		O17a	
47	2N168A	65m	8.0M	1.1m	#A	15		15	20m	5.0u							2.4p		O17	
48	2N293	65m	8.0M	1.1m	#S	15		15	20m	5.0u	1.0	1.0m	25	67u		.50	2.4p		O5	
49	2N449	65m	8.0M	1.1m	#J	15		15	20m	5.0u	1.0	1.0m	72				2.4p		O17	
50	2N1086	65m	8.0M	1.1m	#J	9.0		9.0	20m	3.0u	5.0	1.0m	40						O5	
51	2N1086A	65m	8.0M	1.1m	#J	9.0		9.0	20m	3.0u	5.0	1.0m	40						O5	
52	2N1087	65m	8.0M	1.1m	#J	9.0		9.0	20m	3.0u	5.0	1.0m	40						O5	
53	2N1121	65m	8.0M	1.1m	#J	30		15	20m	5.0u	1.0	1.0m	34						O5	
54	TR167	65m	8.0M	1.1m	#S	30		5.0	75m	8.0u	5.0	1.0m	25			4.0			O5	
55	2N78	65m	9.0M	1.1m	#S	15		15	5.0	20m	3.0u	5.0	1.0m	58	200nb	55	2.0	6.0p	O5	
56	2N1198	65m	9.0M	1.1m	#J	25		25	5.0	75m	1.5u	1.0	1.0m	30	200nb	82	1.5	2.5p	O17a	
57	JAN2N167A1	70m	5.0MΔ	1.1m	#A	27		5.0	75m	2.0u	1.0	1.0m	17				6.0p		O5	
58	2N312	75m		1.3m	#J	15		6.0	60u	5.0u	5.0	1.0m	25						Δ	
59	2N1510	75m		1.3m	#J	75		8.0	20m	5.0u	1.0	1.0m	30						Δ	
60	2N167A	75m	9.0M	1.2m	#S	30		30	5.0	25m	1.5u	1.0	8.0m	30	200nb	55	1.5	6.0p	Δ	
61	2N1217	75m	9.0M	1.3m	#S	20		20	5.0	25m	1.5u	1.0	2.0m	60			2.5p		Δ	
62	2N1694t	75m	9.0M	1.3m	#J	20		20	5.0	25m	1.5u	1.0	2.0m	25			2.5p		Δ	
63	2N1288	75m	6.0M	1.3m	#J	15		5.0	50m	5.0u	1.0	1.0m	100			3.0p		Δ		
64	GT905R	90m		1.8m	#S			18	6.0u	4.5	1.0m	40					14p		Δ	
65	GT949R	90m		1.8m	#S			12	6.0u	4.5	1.0m	120					14p		Δ	
66	2N556f	100m			#J	25		10	200m	25uΔ	2.0	1.0m	30				20p		TO5	
67	2N557f	100m			#J	20		10	200m	25uΔ	2.0	1.0m	20				20p		TO5	
68	2N558f	100m			#J	15		5.0	200m	25uΔ	2.0	1.0m	60				20p		TO5	
69	2N646	100m		1.7m	#S	25		25	12	50m	14u	1.5	30m	50			40p		TO40	
70	2N647	100m		2.0m	#A	25		12	50m	14u	1.0	50m	70						Δ	
71	2N649	100m		2.0m	#A	20		18	50m	14u	1.0	50m	65						Δ	
72	TR03	100m			#S	20			200m	25u	2.0	1.0m	53						Δ	
73	TR05	100m			#S	20			200m	25u	2.0	1.0m	30						Δ	
74	TR07	100m			#S	15			200m	25u	2.0	1.0m	40						Δ	
75	2N444	100m	.50MΔ	2.0m	#S	15		15	200m	2.0u	4.5	1.0m	15				13p		TO5	
76	TR09	100m	.70M		#S	30			200m	25u	3.5	1.0m	30						Δ	
77	2N445	100m	2.0MΔ	2.0m	#S	15		12	200m	2.0u	4.5	1.0m	35				13p		TO5	
78	SK3010-RT	100m	2.0MΔ	2.0m	#S	25		25	12	100m	1.0	50m	120						Δ	
79	2N438f	100m	2.5MΔ	1.7m	#J	30		25	25m	10u	6.0	1.0m	25			1.0k	9.0p		TO5	
80	2N1367	100m	2.5MΔ	1.6m	#S	18		3.0	25m	15u	6.0	1.0m	10				14p		TO5	
81	2N356f	100m	3.0MΔ	2.0m	#S	20		18	500m	5.0u	5.0	1.0m	30				14p		TO5	
82	2N182	100m	3.8M	2.0m	#J	25		15		6.0	1.0m	25					10p		AB	
83	TR182	100m	3.8M	2.0m	#J	25		15		6.0	1.0m	25				10			AB	
84	2N164A	100m	4.0MΔ		#J	15		1.0	30m	5.0u	1.0	1.0m	80						Δ	
85	TR04	100m	4.0M		#S	20			200m	25u	2.0	1.0m	30						Δ	
86	TR08	100m	4.0M		#S	20														

3. GERMANIUM NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	T M E A M X P	ABS MAX RATINGS @25°C				MAX. I _{cbo} @MAX V _{cb} (A)	TYPICAL h _{FE} PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# E O D E	
						BV _{ceo} (V)	BV _{ceo} (V)	V _{bebo} (V)	I _c (A)		BIAS			COMMON EMITTER							
											V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (X.0001)					
1	2N2354	180m		3.0m	#S	20	15 §	10	150m	50u	1.5∅	35m∅	50 †Δ					T022	F		
2	2N1059	180m	10k†	3.6m	∅J	40	15 §		100m	50u	6.0∅	35m∅	75 †					T022	F		
3	2N1101	180m	10k†	3.6m	∅J	20	15		100m	50u	1.6∅	35m∅	40 †					T022	F		
4	2N1102	180m	10k†Δ	3.6m	∅J	40	25		100m	50u	1.6∅	35m∅	40 †					T022	F		
5	2N1431	180m	10k†Δ	3.6m	∅J	20	15	10	100m	50u	1.5∅	35m∅	75 †Δ					T022	F		
6	2N214A	180m	100k	3.0m	J	40	25	10	100m	50u	1.5∅	35m∅	100	50u	500	10	28p	A	T05		
7	2N213A	180m	150k	2.5m	∅J	40	25 §	10	100m	50u	6.0∅	1.0m∅	185	50u	5.5k		10p	A	T022	F	
8	2N1102/5	180m	150k	3.5m	∅J	40			100m	50u	1.5	35m∅	40					A	T05		
9	2N228	180m	60M	3.3m	∅J	40	15 §	10	100m	100u	6.0∅	1.0m∅	80		2.3k			A	T022	F	
10	2N229	180m	60MΔ	3.0m	#J	10	10 §	20	100m	100u	6.0∅	1.0m∅	75					A	T022	F	
11	2N214	180m	80M	3.0m	#J	40	25	10	100m	50u	1.5∅	35m∅	75 †	50u	500	10	28p	A	T022	F	
12#	2SD186	200m		3.0m	#J	20			150m	15u	1.5∅	10m∅	150					A	T01	F	
13#	2SD187	200m			#S	25			150m	15u	1.5∅	30m∅	150					A	T01		
14#	HSE111-RT	200m	2.0M§	2.6m	#J	30	15	20	10u	10u	1.0∅	10m∅	40 †Δ				70p§	A	T05	A	
15#	AC172	200m	2.5M§	2.7m	#J	32	12	10	10m	10u∅	5.0∅	500u∅	45 †					A	T01	F	
16#	AC183	200m	3.5M§	3.3m	#J	32	18 §	10	150m	20u∅	6.0∅	1.0m	50 †					A	T01		
17#	2N5761	200m	5.0M	2.6m	#J	20	20	15	400m	20u	4.0∅	400m∅	30 †				15p	A	T05	A§	
18#	HSE115-RT	200m	5.0M§	2.6m	#J	25	15	25	10u	1.0∅	10m∅	100 †Δ						A	T05	A	
19	2N1605A	200m	6.0M	2.6m	#J	40	20	10	100m	10u	2.5∅	20m	60 †				15p	AΔ	T05	A	
20	2N576A†	200m	8.0M	2.7m	#J	40	15	15	400m	40u	4.0∅	400m∅	30 †				15p	A	T05	A§	
21#	HSE109-RT	200m	8.0M§	2.6m	#J	40	15	25	15u	1.0∅	10m∅	20 †Δ						A	T05	A	
22#	HSE113-RT	200m	10M§	2.6m	#J	40	20	20	10u	1.0∅	10m∅	60 †Δ						A	T05	A	
23#	NK1781	215m		3.3m	#J	32		5.0	1.0	30u∅	0.0∅	50m∅	52 †Δ						T01	A	
24#	AC185	225m	4.0M§	3.0m	#S	32	24 §	10	500m	20u∅	1.0∅	200m∅	110 †*					A	R178		
25	JAN2N1173	250m		3.3m	#S	35	20	35	200m	10u∅	1.0∅	500u∅	50 †				25p	A	T029	A	
26#	2SD128A	250m			#J	32	30 §		500m	20u∅	1.0∅	500m∅	46 †#Δ					A	T01		
27	2N1173	250m	6.0M	3.3m	#J	35		35	200m	10u∅	1.0∅	500u∅	80	190nb	56	7.0	20p	A	T029		
28	2N1473	250m	8.0M	4.2m	#J	40	40 §	15	400m	5.0u∅	60∅	400m	50 †				15p	A	T05	A§	
29	2N2430	280m	2.5M§	2.7m	#	32	32		500m	10u	0.0	50m	105				70p	A	T01	A	
30#	2SD30	300m			#	25			200m	15u	1.5∅	100m	150					A	T01		
31#	AC181	300m	1.0M§Δ	4.0m	#S	32	24 §	10	1.0	200n	1.0∅	600m∅	110 †#*					A*	R178		
32	40396/N	300m#	4.0M	2.2m	#J	18	18 §	2.5	500m	14u∅	1.0∅	50m∅	50 †Δ						T01		
33	HA5020	300m	2.0M	2.2m	∅S	20			200m	5.0u∅	5.0	1.0m	49				15p	A			
34	HA5022	300m	4.0M	2.2m	∅S	25		25	200m	4.0u∅	5.0	1.0m	49				15p	A			
35	HA5024	300m	4.0M	6.6m	∅J	20		20	200m	5.0u∅	5.0	1.0m	49				15p	AΔ			
36	HA5021	300m	5.0M	2.2m	*A	20		20	200m	10u∅	5.0	1.0m	49				15p	A			
37	HA5025	300m	6.0M	6.6m	∅J	20		20	200m	5.0u∅	5.0	1.0m	49				15p	AΔ			
38	HA5023	300m	8.0M	2.2m	∅S	20			200m	5.0u∅	5.0	1.0m	49				15p	A			
39	HA5026	300m	8.0M	6.6m	∅J	20		20	200m	5.0u∅	5.0	1.0m	49				15p	AΔ			
40	2N1585	300m	4.0M	4.0m	#J	25		2.0	100m	100u	10∅	10m∅	20 †				18p	ME	T05		
41#	AC127	340m*	2.5M§	2.7m	#J	32	12	10	500m	15u∅	0.0	20m∅	100 †				70p§	A	T01	F	
42#	AC127-01	340m*	2.5M§	4.0m	#J	32	12	10	500m	10u∅	0.0	500m∅	50 †				70p§	A	X9c	A	
43	PTC134-RT	350m	2.5M§Δ		#	36	36	14	500m	7.0u	10∅	10m∅	120 †Δ						T01	A	
44	HA5002	400m	1.0M	9.9	∅J	20		20	200m	20u∅	5.0	1.0m	40					A			
45	HA5005	400m	1.0M	9.9	∅J	10		10	200m	30u∅	5.0	1.0m	20				20p	A			
46	HA5012	400m	1.0M	9.9	∅J	20		20	200m	20u∅	5.0	1.0m	40					A			
47	HA5016	400m	1.0M	9.9m	∅J	30		30	200m	5.0u∅	5.0	1.0m	40					A			
48	HA5003	400m	1.5M	9.9	∅J	30		20	200m	15u∅	5.0	1.0m	50					A			
49	HA5011	400m	1.5M	9.9	∅J	40		30	200m	20u∅	5.0	1.0	50					A			
50	HA5014	400m	2.3M	9.9	∅J	40		30	200m	20u∅	5.0	1.0m	80				40p	A			
51	HA5001	400m	2.5M	9.9	∅J	30		20	200m	10u∅	5.0	1.0m	60				20p	A			
52	HA5009	400m	2.5M	9.9	∅J	10		10	200m	30u∅	5.0	1.0m	15				40p	A			
53#	FTR174	500m	1.0G§	4.0m	§J	35	35 §	3.0	30m	50n†∅	10∅	4.0m∅	60 †Δ				700f§	A	DPL†	T092	C
54#	AC176	700m	1.0M§Δ	25m	#J	32	32	5.0	1	30u∅	0.0	500m∅	180 †Δ					A	T01		
55#	2SD72	720m∅	750k§		#J	25	25 §	6.0	600m	50u	1.0∅	200m∅	80 †					A	T01		
56#	AC187K	800m	3.0M§	13m	#J	25	15	10	1.0	200u	0.0	300m	200 †				150 §	A	X9d	A	

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C	M E A M P	ABS MAX RATINGS @25°C				MAX. Icbo @MAX Vcb	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C O D E
					BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)		BIAS			COMMON EMITTER						
										Vcb (V)	Ic (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)				
1	2N2337	150m	1.0M	1.0m	50	35	15	100m	50u	4.00	25u0	15 Δ	20pZ	A	TO18	A			
2	2N2372	150m	1.0M	7.14u	15	15	15	50m	50u	4.00	25u0	20 Δ	15pZ	A	TO18	A			
3	2N2373	150m	1.0M	7.14u	15	15	15	50m	50u	4.00	25u0	20 Δ	15pZ	A	TO18	A			
4	2N8581	150m	5.0MΔ	1.3m	40	40	25	50m	100n0	6.00	1.0m	15 Δ	12pZ	A	TO18	A			
5	2N8591	150m	6.0MΔ	1.3m	40	40	25	50m	100n0	6.00	1.0m	30 Δ	9.0pZ	A	TO18	A			
6	2N2274	150m	6.0MΔ	1.3m	25	25	25	50m	3.0n0	5.00	5.0m0	10 tΔ	9.0pZ	Δ	R177	A			
7	2N2275	150m	6.0MΔ	1.3m	25	25	25	50m	3.0n0	5.00	5.0m0	10 tΔ	9.0pZ	Δ*	R177	A			
8	2N2276	150m	6.0MΔ	1.3m	15	10	10	50m	3.0n0	5.00	5.0m0	10 tΔ	9.0pZ	Δ*	R177	A			
9	2N2277	150m	6.0MΔ	1.3m	15	10	10	50m	3.0n0	5.00	5.0m0	10 tΔ	9.0pZ	Δ*	R177	A			
10	2N3317	150m	6.4MΔ	1.3m	30	30	30	50m	1.0n0	6.00	1.0m	1.6	9.0pZ	Δ	R177	A			
11	2N8601	150m	6.5MΔ	1.3m	25	25	20	50m	100n0	6.00	1.0m	15 Δ	9.0pZ	Δ	TO18	A			
12	2N496	150m	7.2MΔ	1.3m	10	10	10	50m	100n0	6.00	1.0m	9.0 Δ	12pZ	Δ	TO1	A			
13	JAN2N1119t	150m	7.2MΔ	1.3m	12	10 #	12	100n0	5.00	15m0	15 tΔ	9.0pZ	Δ	TO5	A				
14	2N2378	150m	7.2MΔ	1.3m	10	10	10	50m	100n0	5.00	15m0	15 tΔ	12pZ	Δ	TO18	A			
15	JAN2N2378	150m	7.2MΔ	1.3m	10	10	10	100n0	5.00	15m0	15 tΔ	12pZ	Δ	TO18	A				
16	2N8611	150m	7.5MΔ	1.3m	25	25	20	50m	100n0	6.00	1.0m	30 Δ	9.0pZ	Δ	TO18	A			
17	2N3318	150m	7.6MΔ	1.3m	15	15	15	50m	1.0n0	6.00	1.0m	1.9	9.0pZ	Δ	R177	A			
18	2N495	150m	8.0M*Δ	1.2m	25	25	25	50m	1.0u	6.0	1.0m	15 Δ	7.0p	A	TO1	A			
19	2N8621	150m	8.0MΔ	1.3m	15	15	10	50m	100n0	6.00	1.0m	20 Δ	9.0pZ	Δ	TO18	A			
20	JAN2N1118	150m	8.0M*Δ	1.3m	25	25	20	1.0u	6.0	1.0m	15 Δ	2.5uZb	90 Z	9.0pZ	Δ	TO5	A		
21	2N2377	150m	8.0M*Δ	1.3m	25	25	10	50m	1.0u	6.00	1.0m	15 Δ	2.5uZb	90 Z	12pZ	Δ	TO18	A	
22	JAN2N2377	150m	8.0M*	1.3m	25	25	10	1.0u	6.00	1.0m	15 Δ	2.5ub	90 Z	12pZ	Δ	TO18	A		
23	2N8631	150m	10MΔ	1.3m	15	15	10	50m	100n0	6.00	1.0m	40 Δ	9.0pZ	Δ	TO18	A			
24	HSE301-RT	150m	10MΔ	1.5m	30	20	5.0	100n0	5.00	10m0	40 tΔ	12pZ	Δ	R124d	A				
25	2N3319	150m	12MΔ	1.3m	10	6.0	10	50m	3.0n0	6.00	1.0m	3.0	10pZ	Δ	R177	A			
26	2N8641	150m	16MΔ	1.3m	6.0	6.0	6.0	50m	100n0	6.00	1.0m	25 Δ	9.0pZ	Δ	TO18	A			
27	2N1118A	150m	18M*	1.3m	25	25	10	50m	1.0u	6.00	1.0m	25	6.0p	A	TO5	A			
28	2N2165	150m	18M	1.3m	30	30	30	20n0	6.00	1.0m	25	6.0p	S	TO5	A				
29	2N2166	150m	18M	1.3m	15	15	15	20n0	6.00	1.0m	25	6.0p	S	TO5	A				
30	2N1119t	150m	20M	1.3m	10	10	10	50m	100n0	5.0	15m	25 t	6.0p	PA	TO5	A			
31	2N2162	150m	20M	1.3m	30	30	30	10n0	3.00	1.0m	35	6.0p	S	TO5	A				
32	2N2163	150m	20M	1.3m	15	15	15	10n0	3.00	1.0m	35	6.0p	S	TO5	A				
33	2N1118	150m	21M*	1.3m	25	25	10	50m	1.0u	6.00	1.0m	30	6.0p	PA	TO5	A			
34	2N8651	150m	24MΔ	1.3m	10	10	6.0	50m	100n0	6.00	1.0m	100 Δ	9.0pZ	Δ	TO18	A			
35	BFV25	150m	30MΔ	1.1m	60	45	6.0	30m	50n0	5.00	1.0m	60 Δ	6.0pZ	PE	S5a	P			
36	BFV26	150m	30MΔ	1.1m	60	45	6.0	30m	50n0	5.00	1.0m	150 Δ	6.0pZ	PE	S5a	P			
37	2N2167	150m	36M	1.3m	12	12	12	20n0	6.00	1.0m	38	6.0p	S	TO5	A				
38	2N2164	150m	44M	1.3m	12	12	12	20n0	3.00	1.0m	40	6.0p	S	TO5	A				
39	2SA429	150m	100M	1.3m	150	150	3.0	30m	1.0u	2.00	2.0m	60 t	4.0p	SL	R67a	B			
40	2SA429Gt	150m	100M	1.7m	150	150	5.0	30m	100n0	3.00	1.0m	240 tZ	3.0p	D	R67a	A			
41	2SA628t	150m	100M	1.5m	30	25	4.0	100m	1.0u	6.00	1.0m	100 t		PEt	TO92	D			
42	2SA628At	150m	100M	1.5m	60	60	4.0	100m	1.0u	6.00	1.0m	100 t		PEt	TO92	D			
43	2SA725	150m	100M	1.5m	35	35	5.0	100m	100n0	6.00	1.0m	600 t		PEt	TO92	D			
44	2SA726	150m	100M	1.5m	50	50	5.0	100m	100n0	6.00	1.0m	600 t		PEt	TO92	D			
45	BFV30t	150m	140MΔ	1.1m	20	15	4.0	100m	50n0	1.00	5.0m0	15 Δ	7.0pZ	PE	S5a	P			
46	BFV33	150m	140MΔ	1.0m	25	20	5.0	50m	1.0u	1.00	10m0	30 Δ	5.0pZ	D	S5a	P			
47	BCW61BA1	150m	150M	1.4m	32	5.0	200m	20n0	5.00	2.0m0	200	18u	2.7k	1.5	6.0pZ	PE	X156a	A	
48	BCW61BB1	150m	150M	1.4m	32	5.0	200m	20n0	5.00	2.0m0	260	24u	3.6k	2.0	6.0pZ	PE	X156a	A	
49	BCW61BC1	150m	150M	1.4m	32	5.0	200m	20n0	5.00	2.0m0	330	30u	4.5k	2.0	6.0pZ	PE	X156a	A	
50	BCW61BD1	150m	150M	1.4m	32	5.0	200m	20n0	5.00	2.0m0	520	50u	7.5k	3.0	6.0pZ	PE	X156a	A	
51	BCX71BG1	150m	150M	1.4m	45	5.0	200m	20n0	5.00	2.0m0	200	18u	2.7k	1.5	6.0pZ	PE	X156a	A	
52	BCX71BH1	150m	150M	1.4m	45	5.0	200m	20n0	5.00	2.0m0	260	24u	3.6k	2.0	6.0pZ	PE	X156a	A	
53	BCX71BJ1	150m	150M	1.4m	45	5.0	200m	20n0	5.00	2.0m0	330	30u	4.5k	2.0	6.0pZ	PE	X156a	A	
54	BCX71BK1	150m	150M	1.4m	45	5.0	200m	20n0	5.00	2.0m0	520	50u	7.5k	3.0	6.0pZ	PE	X156a	A	
55	BFV20	150m	150MΔ	1.0m	40	30	5.0	600m	50n0	100	150m0	40 tΔ	10pZ	PE	S5a	P			
56	BFV21	150m	150MΔ	1.0m	40	30	5.0	600m	50n0	100	150m0	100 tΔ	10pZ	PE	S5a	P			
57	BFV22	150m	150MΔ	1.0m	50	50	5.0	600m	50n0	100	1.0m0	80 tΔ	10pZ	PE	S5a	P			
58	2SA956H3t	150m	280M	1.2m	60	40	8.0	100m	100n0	1.00	10m0	80 tΔ*	7.5p	Et	X156b	A			
59	2SA956H4t	150m	280M	1.2m	60	40	8.0	100m	100n0	1.00	10m0	110 tΔ*	7.5p	Et	X156b	A			
60	2SA956H5t	150m	280M	1.2m	60	40	8.0	100m	100n0	1.00	10m0	150 tΔ*	7.5p	Et	X156b	A			
61	2SA956H6t	150m	280M	1.2m	60	40	8.0	100m	100n0	1.00	10m0	200 tΔ*	7.5p	Et	X156b	A			
62	BFV311	150m	350MΔ	1.1m	12	12	4.0	200m	150n0	1.00	30m0	30 tΔ	8.0pZ	PE	S5a	P			
63	BFV321	150m	350MΔ	1.1m	10	10	3.5	200m	200n0	1.00	30m0	20 tΔ	8.0pZ	PE	S5a	P			
64	2N4411	150m	400MΔ	833u	15	12	5.0	25m	50n0	5.00	500u	40 tΔ	700fZ	E	TO72	G			
65	BFV29t	150m	400MΔ	1.1m	20	15	5.0	200m	50n0	5.00	10m0	30 tΔ	4.5p	PE	S5a	P			
66	BF516	150m	850M	1.3m	40	35	6.0	20m	50n0	100	3.0m0	25 tΔ	300ft	PL	TO72	A			
67	A441	150mZ	5.0G	1.1m	15	12	2.0	35m	50n0	5.00	3.0m0	20 #Δ	600ft	PE	TO72	G			
68	BF969	160m	850M	1.6m	40	35	3.0	30m	100n0	100	3.0m0	50 t	500f	PL	W49	A			
69	BF967	160m	950M	1.6m	30	30	3.0	20m	100n0	100	1.0m0	60 t	420f	PL	W49	A			
70	BF967Z	160m#	950M	1.6m	30	30	3.0	20m	100n0	100	3.0m	60 t	450ft	PL	W121	A			
71	BF979	160m	1.6G	1.6m	25	20	3.0	30m	100n0	100	10m0	20 tΔ	27p	PL	W49	A			
72	BCW88	167m	100MΔ	1.3m	45	45	5.0	100m	20n0	5.00	2.0m0	250 tΔ	7.0pZ	PE	W71	A			
73	BF680	170m	650M	1.6m	40	35	3.0	30m	100n0	100	3.0m0	50 t	600f	PE	W31	A			
74	BF679	170m	1.0G	1.6m	40	35	3.0	30m	100n0	100	3.0m0	35 tΔ	600f	PE	W31	A			
75	BF679M	170m	1.0G	1.6m	40	35	3.0	30m	100n0	100	3.0m0	30 tΔ	600f	PE	W31	A			
76	BF679S	170m*	1.0G	1.6m	40	35	3.0	30m	100n0	100	3.0m0	25 tΔ	600f	PE	W31	A			
77	BF479S	170m	1.3G	1.6m	25	25	3.0	50m	100n0	100	8.0m	60 t	500f	PE	W31	A			
78	BF479	170m	1.4G	1.6m	30	25	3.0	50m	100n0	100	10m0	20 tΔ	700f	PE	W31	A			
79	BFR38	175m	850M	1.6m	40	35	3.0	20m	50n0	100	3.0m0	25 t	300ft	PE	TO72	G			
80	MT0404	180m	150MΔ	1.4m	25	25	4.0	4.0	100n0	5.00	50m0	30 tΔ	12pZ	PL	X173	B			
81	MT0404-1	180m	200MΔ	1.4m	40	30 *	5.0	5.0	50n0	1.00	10m0	20 tΔ	10pZ	PL	X173	B			
82	MT0404-2	180m	200MΔ	1.4m	40	30 *	5.0	5.0	50n0	1.00	10m0	40 tΔ	10pZ	PL</					

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	TEMPERATURE M E A P X	ABS MAX RATINGS @25°C						TYPICAL 'h' PARAMETERS												
					BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	Icbo @MAX Vcb (A)	BIAS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	L C O D E				
										Vcb (V)	Ie (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)								
1	MMT3799	225m	40MsΔ	2.0m	TJ	60	60	3.0	50m	50n∅	10∅	10m∅	475	30u	16k	4.0	4.0p∅	AN∅	W6	D			
2	MMT3905	225m	200MsΔ	1.8m	∅J	40	40	5.0	200m	50n∅	1.0∅	10m∅	50 1Δ#				4.5p	AN	W6a	C			
3	MMT3906	225m	250MsΔ	1.8m	∅J	40	40	5.0	200m	50n∅	1.0∅	10m∅	100 1Δ#				4.5p	AN	W6a	C			
4	MMT2907†	225m	340Ms	1.8m	∅J	60	40*	5.0	300m	50n∅	10∅	1.0m∅	50 1Δ#				4.8p	AN†	W6a	C			
5	MMT731	225m	400MsΔ	2.0m	TJ	80	80	4.0	200m	100n∅	1.0∅	1.0m∅	30 1Δ#				5.0p∅	AN	W6	C			
6	MMT3546†	225m	700MsΔ	2.0m	TJ	15	12	4.5	250m	100n∅	1.0∅	1.0m∅	30 1Δ#				6.0p∅	AN	W6	C			
7#	BFR99	225m	2.3Gs	1.2	∅J	30	25	3.0	50m	50n∅	10∅	10m∅	25 1Δ				1.1p	PE	TO72	A			
8#	BCY29	230m*	500k	2.2m	∅J	60	60	30	50m	100m∅			25				45p	A	TO5	A			
9#	BC415	240m	200Ms	3.0m	∅J	45	30		100m		5.0	2.0m∅	125 1Δ					PE	R221a	F			
10#	BC416	240m	200Ms	3.0m	∅J	50	45		100m		5.0	2.0m∅	125 1Δ					PE	R221a	F			
11	2N935	250m	1.8m	∅S	50	40		20	50m	100n∅	50∅	100uΔ	9.0 1Δ							TO18	A		
12	2N936	250m	1.8m	∅S	50	35		20	50m	100n∅	50∅	100uΔ	18 1Δ							TO18	A		
13	2N937	250m	1.8m	∅S	50	30		20	50m	100n∅	50∅	100uΔ	36 1Δ							TO18	A		
14	2N3342†	250m	1.6m	∅S	20	8.0		20	50m	20n∅	1.0∅	5.0m∅	30 1Δ							TO18	A		
15#	2SA539	250m	2.5m	∅J	60	45		5.0	200m	100n∅	1.0∅	50m∅	80 1Δ*							R182b	B		
16#	2SA564	250m	2.5m	∅J	25	25		5.0	50m	1.0u∅	5.0	2.0m	250 1Δ*					PE	TO92	B			
17#	2SA564A	250m	2.5m	∅J	45	45		5.0	50m	1.0u∅	5.0	2.0m	250 1Δ*					PE	TO92	B			
18#	2SA723	250m	2.5m	∅J	40	20		5.0	500m	200n∅	1.0∅	100m∅	120 1Δ#*					PE†	R182b	B			
19#	BC224	250m	2.0m	∅S	30	30		6.0	30m	100n∅	5.0∅	1.0m∅	150 1Δ							TO92	B		
20	2N1275	250m	1.8m	∅A	100	80		60	50m	1.0u∅	50∅	1.0m∅	9.0 1Δ							TO5	A		
21	2N3401∅	250m	100kΔ	2.0m	∅S	25	25		25	100m	100n∅	5.0∅	4.0 1Δ							TO5	A		
22	2N1034	250m	200k	1.8m	∅J	50	40		20	50m	1.0u∅	6.0	1.0m∅	15		15u	900	7.0p	FA	TO5	A		
23	2N1655	250m	200k	1.8m	∅J	125	100		125	50m	1.0u∅	50∅	1.0m∅	15 1Δ		11u	1.5k	7.5	50p	FAΔ	TO5	A	
24	2N1654	250m	250k	1.8m	∅J	100	80		100	50m	1.0u∅	50∅	1.0m∅	30 1Δ		11u	1.5k	7.5	50p	FAΔ	TO5	A	
25	2N1656	250m	250k	1.8m	∅J	125	100		125	50m	1.0u∅	50∅	1.0m∅	30 1Δ		11u	1.5k	7.5	50p	FAΔ	TO5	A	
26	2N1035	250m	300k	1.8m	∅J	50	50		20	50m	1.0u∅	6.0	1.0m∅	30		40u	1.7k		70p	FA	TO5	A	
27	2N1037	250m	300k	1.8m	∅J	50	35		20	50m	1.0u∅	6.0∅	1.0m∅	25		20u	1.4k		70p	FA	TO5	A	
28	2N1623	250m	300k	1.8m	∅J	50	20		20	50m	1.0u∅	6.0∅	1.0m∅	25 1Δ		35u	1.0k		70p	FAΔ	TO5	A	
29	2N1036	250m	500k	1.8m	∅J	50	30		20	50m	1.0u∅	6.0	1.0m∅	60		50u	2.5k		70p	FA	TO5	A	
30	2N1643	250m	700k	1.8m	∅J	25	25		20	50m	1.0n∅	6.0∅	1.0m∅	18		35ub			50p	A	TO5	A	
31	2N2002	250m	800k	1.6m	∅J	30	5.0		30	100m	1.0n	6.0	1.0m∅						20p∅	A	TO5	A	
32	2N2003	250m	800k	1.6m	∅J	30	5.0		30	100m	3.0n	6.0	1.0m∅						20p∅	A	TO5	A	
33	2N2004	250m	800k	1.6m	∅J	50	15		50	100m	50u	6.0∅	1.0m∅	12 1Δ					8.0p	A	TO5	A	
34	2N2005	250m	800k	1.6m	∅J	50	15		50	100m	50u	6.0	1.0m∅						10p∅	A	TO5	A	
35	2N2006	250m	800k	1.6m	∅J	60	35		60	100m	50u	6.0	1.0m∅						10p∅	A	TO5	A	
36	2N2007	250m	800k	1.6m	∅J	60	35		60	100m	50n	6.0	1.0m∅						10p∅	A	TO5	A	
37	2N938	250m	1.0MΔ	1.6m	∅S	40	35		40	100m	25n∅	6.0	1.0m	9.0 1Δ							TO18	A	
38	2N943∅	250m	1.0MΔ	1.6m	∅S	40	18		40	50m	5.0n∅	50∅	100uΔ	10 1Δ					14p∅	FA	TO18	A	
39	2N944∅	250m	1.0MΔ	1.6m	∅S	40	18		40	50m	5.0n∅	6.0	1.0m	25 1Δ					14p∅	FA	TO18	A	
40	2N945∅	250m	1.0MΔ	1.6m	∅S	50	50		50	50m	5.0n∅	6.0	1.0m	25 1Δ					14p∅	FA	TO18	A	
41	2N946∅	250m	1.0MΔ	1.6m	∅S	80	80		80	50m	5.0n∅	6.0	1.0m	25 1Δ					14p∅	FA	TO18	A	
42	2N1024	250m	1.0MΔ	1.6m	∅J	18	15		18	100m	25n∅	6.0	1.0m	9.0 1Δ					14p∅	FA	TO5	A	
43	2N1025	250m	1.0MΔ	1.6m	∅J	40	35		40	100m	25n∅	6.0	1.0m	9.0 1Δ							TO5	A	
44	JAN2N1025	250m	1.0MΔ	1.4m	∅A	40	35		40		25n∅	6.0	1.0m	9.0 1Δ							TO5	A	
45	2N1474	250m	1.0MΔ	1.6m	∅J	60	60		60	100m	50n∅	6.0	1.0m	12 1Δ			2.5u∅b	75 ∅	20 ∅	12p∅	A	TO5	A
46	2N1475	250m	1.0MΔ	1.6m	∅J	60	60		60	100m	50n∅	6.0	1.0m	36 1Δ							TO5	A	
47	2N1476	250m	1.0MΔ	1.6m	∅J	100	100		100	100m	200n∅	6.0	1.0m	12 1Δ							TO5	A	
48#	2N1477	250m	1.0MΔ	1.6m	∅J	100	100		100	100m	200n∅	6.0	1.0m	30 1Δ							TO5	A	
49	2N1919∅	250m	1.0MΔ	1.6m	∅S	40	18		40	50m	6.0	1.0m							7.0p	AΔ	TO5	A	
50	2N1920∅	250m	1.0MΔ	1.6m	∅S	40	18		40	50m	6.0	1.0m							7.0p	AΔ	TO5	A	
51	2N1921∅	250m	1.0MΔ	1.6m	∅S	50	50		50	50m	6.0	1.0m							7.0p	AΔ	TO5	A	
52	2N1922∅	250m	1.0MΔ	1.6m	∅S	80	80		80	50m	6.0	1.0m							7.0p	AΔ	TO5	A	
53#	BCY30	250m	1.2M∅	2.0m	∅J	64	64		45	100m	50n∅	6.0∅	1.0m∅	25		17u	1.1k	3.0			TO5	A	
54#	OC200	250m	1.2M∅	2.0m	∅J	30	25		20	50m	500n∅	6.0∅	1.0m∅	28		24u	900	3.0			R8	A	
55#	OC203	250m	1.2M∅	2.0m	∅J	60	50		30	50m	1.5u	6.0∅	1.0m∅	20							R8	A	
56#	BCY33	250m	1.5M∅	2.0m	∅J	32	32		16	100m	50n∅	6.0∅	1.0m∅	25		17u	1.1k	3.0			TO5	A	
57#	BCY31	250m	1.7M∅	2.0m	∅J	64	64		45	100m	50n∅	6.0∅	1.0m∅	35		25u	1.4k	6.0			TO5	A	
58	2N939	250m	2.0MΔ	1.6m	∅S	40	35		40	100m	25n∅	6.0	1.0m	18 1Δ							TO18	A	
59	2N940	250m	2.0MΔ	1.6m	∅S	40	35		40	100m	25n∅	6.0	1.0m	36 1Δ							TO18	A	
60	2N1026	250m	2.0MΔ	1.6m	∅J	40	35		40	100m	25n∅	6.0	1.0m	18 1Δ							TO5	A	
61	JAN2N1026	250m	2.0MΔ	1.4m	∅A	40	35		40		25n∅	6.0	1.0m	18 1Δ			2.5u∅b	75 ∅	20 ∅	12p∅	A	TO5	A
62	2N1220	250m	2.0MΔ	1.6m	∅J	30	25		20	100m	100n∅	25∅	50m∅	9.0 1Δ							TO5	A	
63	2N1222	250m	2.0MΔ	1.7m	∅J	30	25		10	100m	10u∅	6.0∅	1.0m	9.0 1Δ							TO5	A	
64	2N1223	250m	2.0MΔ	1.7m	∅J	40	40		10	100m	10u∅	6.0∅	1.0m	6.0 1Δ							TO5	A	
65	2N1469	250m	2.0MΔ	1.6m	∅J	40	35		40	100m	25n∅	6.0	1.0m	36 1Δ							TO5	A	
66	JAN2N1469	250m	2.0MΔ	1.4m	∅A	40	35		40		25n∅	6.0	1.0m	36 1Δ							TO5	A	
67	2N1474A	250m	2.0MΔ	1.6m	∅J	60	60		60	100m	50n∅	6.0	1.0m	18 1Δ							TO5	A	
68	2N1917∅	250m	2.0MΔ	1.7m	∅S	25	8.0		25	50m	2.5n	6.0	1.1m	50					7.0p	AΔ	TO5	A	
69	2N3343∅	250m	2.0MΔ	1.7m	∅S	25	8.0		25	50m	3n∅	50∅	25m∅	20 1Δ							TO5	A	
70	2N3344∅	250m	2.0MΔ	1.7m	∅S	30	30		30	50m	2n∅	50∅	1.0m∅	25 1Δ							TO5	A	
71	2N3345∅	250m	2.0MΔ	1.7m	∅S	50	50		50	50m	5n∅	50∅											

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @ 25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	TEMPERATURE M A X P	ABS MAX RATINGS @ 25°C				MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# L O A D E
						V _{Bcbo} (V)	V _{Bceo} (V)	V _{Bebo} (V)	I _c (A)		BIAS			COMMON EMITTER						
											V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (X.0001)				
1	2N1256†	275m	30MΔ	1.8m	SS	40	40	5.0	100m	200n	1.0	10m	25 Δ			10p		T05		
2	2N1259†	275m	40MΔ	1.8m	SS	50	50	5.0	100m	200n	1.0	10m	25 Δ			10p		T05		
3	2N1255†	275m	50MΔ	1.8m	SS	30	30	5.0	100m	200n	1.0	10m	40 Δ			10p		T05		
4	2N1257†	275m	50MΔ	1.8m	SS	40	40	5.0	100m	200n	1.0	10m	40 Δ			10p		T05		
5	2N1258†	275m	50MΔ	1.8m	SS	30	30	5.0	100m	200n	1.0	10m	75 Δ			10p		T05		
6	BSY59†	280m	100MΔ	2.2m	SJ	30	30	5.0	800m	100m	1.0	100m	160 †			12p	PE†	T05 S1	A	
7	BC307	280m	130MΔ	2.2m	SJ	50	45	5.0	100m	100n	5.0	2.0m	75 Δ*			4.0p	PE†	R183	F	
8	BC308	280m	130MΔ	2.2m	SJ	30	25	5.0	100m	100n	5.0	2.0m	75 Δ*			4.0p	PE†	R183	F	
9	BC309	280m	130MΔ	2.2m	SJ	25	20	5.0	100m	100n	5.0	2.0m	125 Δ*			4.0p	PE†	R183	F	
10	BSW20A†	280m	150MΔ	2.2m	SJ	35	30	*	5.0	100m	100u	1.0	10m	100 Δ		7.0p	PE†	R185	A	
11	BSW20V†	280m	150MΔ	2.2m	SJ	35	30	*	5.0	100m	100u	1.0	10m	40 Δ		7.0p	PE†	R185	A	
12	ZSP561	300m	3.0m	3.0m	Δ	50	50	5.0	150m	100n	1.0	20m	40 Δ*			13p	PE	R67a	A	
13	ZSP562	300m	3.0m	3.0m	Δ	30	30	5.0	400m	100n	1.0	100m	70 Δ*			13p	PE	R67a	A	
14	BC181	300m	2.4m	2.4m	SJ	40	25	5.0	200m	100n	5.0	2.5m	60 Δ#			13p	PE†	R203c	A	
15	BC261	300m	2.0m	2.0m	SJ	45	45	5.0	100m	50n	5.0	2.0m	125 Δ*			13p	PE†	R64b	A	
16	BC263	300m	2.0m	2.0m	SJ	20	20	5.0	100m	50n	5.0	2.0m	125 Δ*			5.0p	PE†	R179x	A	
17	BC315	300m	2.4m	2.4m	SS	45	35	5.0	100m	15n	5.0	2.0m	125			5.0p	PE†	R203c	A	
18	IT136T071*	300m	1.7m	1.7m	SJ	60	60	7.0	100m	100p	5.0	1.0m	150 Δ			3.0p	PL	T071	PA	
19	IT137T071*	300m	1.7m	1.7m	SJ	60	60	7.0	100m	100p	5.0	1.0m	150 Δ			3.0p	PL	T071	PA	
20	IT138T071*	300m	1.7m	1.7m	SJ	55	55	7.0	100m	100p	5.0	1.0m	100 Δ			3.0p	PL	T071	PA	
21	IT139T071*	300m	1.7m	1.7m	SJ	45	45	7.0	100m	100p	5.0	1.0m	70 Δ			3.0p	PL	T071	PA	
22	IT2904	300m	1.7m	1.7m	SS	60	60	5.0	600m	20n	1.0	100m	20 Δ			8.0p		S7	L	
23	IT2905	300m	1.7m	1.7m	SS	60	60	5.0	600m	20n	1.0	100m	35 Δ			8.0p		S7	L	
24	IT2906	300m	1.7m	1.7m	SS	60	60	5.0	600m	20n	1.0	100m	20 Δ			8.0p		S7	L	
25	IT2907	300m	1.7m	1.7m	SS	60	60	5.0	600m	20n	1.0	100m	35 Δ			8.0p		S7	L	
26	2CY30	300m	.25MΔ	1.7m	SA	64	64	45	20u	20u	6.0	1.0m	15 Δ			80p	A	T05	R177b	
27	2S322A	300m	.35MΔ			25	25	20	50m			10m	15 Δ			80p	A	T05	R8	
28	2CY33	300m	.40MΔ	1.7m	SA	32	32	12	100m	20u	6.0	1.0m	15 Δ			80p	A	T05	R8	
29	OC204	300m	.45MΔ	2.5m	SJ	32	32	12	250m	.50u	1.0	150m	10 Δ					R8		
30	OC205	300m	.45MΔ	2.5m	SJ	60	60	12	250m	1.5u	1.0	150m	10 Δ					R8		
31	2S301	300m	.70M	1.7m	SJ	80	60	30	100m	10u	6.0	1.0m	18			40p	A	T05		
32	2S305	300m	.70M	1.7m	SJ	125	125	50	100m	10u	6.0	1.0m	15			40p	A	T05		
33	2S3010	300m	.70M	1.7m	SS	40	40	20	100m	10u	6.0	1.0m	8.0	13u	525	2.0	40p	A	T05	
34	2S325	300m	.75M	2.4m	Δ	125	125	50	100m	1.0u	6.0	1.0m	20			40p	A	T05		
35	2S302	300m	.80M	1.7m	SJ	40	25	20	100m	10u	6.0	1.0m	20			40p	A	T05		
36	2S302A	300m	.80M	1.7m	SS	25	25	10	100m	10u	6.0	1.0m	11	17u	800	2.7	40p	A	T05	
37	2S3020	300m	.80M	1.7m	SJ	40	40	20	100m	10u	6.0	1.0m	11	17u	800	2.7	40p	A	T05	
38	OC206	300m	.85MΔ	2.5m	SJ	32	32	12	250m	.50u	1.0	150m	16 Δ					R8		
39	2N3842	300m	1.0MΔ	1.7m	SS	120	120	120	100m	20n	5.0	1.0m	10 Δ			9p		T018	A	
40	2S321	300m	1.0M	2.4m	Δ	80	80	30	50m	10u	6.0	1.0m	15			40p	A	T05		
41	2S322	300m	1.0M	2.4m	Δ	40	40	20	50m	10u	6.0	1.0m	20			40p	A	T05		
42	2S303	300m	1.2M	1.7m	SJ	25	25	20	100m	10u	6.0	1.0m	35			40p	A	T05		
43	2S3030	300m	1.2M	1.7m	SS	25	25	10	100m	10u	6.0	1.0m	19	29u	1.5k	4.3	40p	A	T05	
44	2N3841	300m	1.5MΔ	1.7m	SS	100	100	80	100m	2n	5.0	1.0m	20 Δ			9p		T018	A	
45	2S323	300m	2.0M	2.4m	Δ	25	25	20	50m	10u	6.0	1.0m	35			40p	A	T05		
46	2S324	300m	3.0M	2.4m	Δ	15	15	15	50m	10u	6.0	1.0m	75			40p	A	T05		
47	2S304	300m	3.5M	1.7m	SJ	15	15	15	100m	10u	6.0	1.0m	75			40p	A	T05		
48	3N90	300m	6.0MΔ	1.7m	SS	50	50	30	20m	.01u						10p		T072	GD	
49	3N91	300m	6.0MΔ	1.7m	SS	50	50	30	20m	.01u						10p		T072	GD	
50	3N92	300m	6.0MΔ	1.7m	SS	50	50	30	20m	.01u						10p		T072	GD	
51	3N93	300m	6.0MΔ	1.7m	SS	50	50	30	20m	.01u						10p		T072	GD	
52	JAN3N93	300m	6.0MΔ	1.7m	SS	50	50	50	20m	.01u						10p		T072	GD	
53	3N94	300m	6.0MΔ	1.7m	SS	50	50	50	20m	.01u						10p		T072	GD	
54	3N95	300m	6.0MΔ	1.7m	SS	50	50	50	20m	.01u						10p		T072	GD	
55	3N129	300m	8.0MΔ	1.6m	SS	20	20	10	20m	1.0n						10p		T072	GC	
56	3N130	300m	8.0MΔ	1.6m	SS	30	30	20	20m	1.0n						10p		T072	GC	
57	3N131	300m	8.0MΔ	1.6m	SS	40	40	30	20m	1.0n						10p		T072	GC	
58	3N132	300m	8.0MΔ	1.6m	SS	50	50	40	20m	1.0n						10p		T072	GC	
59	3N133	300m	8.0MΔ	1.6m	SS	60	60	50	20m	1.0n						10p		T072	GC	
60	3N134	300m	8.0MΔ	1.7m	SS	20	20	15	20m	.01u						12p		T072	GC	
61	3N135	300m	8.0MΔ	1.7m	SS	40	40	30	20m	.01u						12p		T072	GC	
62	3N136	300m	8.0MΔ	1.7m	SS	60	60	50	20m	.01u						12p		T072	GC	
63	2N864A†	300m	12MΔ	1.6m	SS	6.0	6.0	6.0	100m	1.0n	6.0	1.0m	25 Δ	700		9.0p		T018	GC	
64	JAN3N108	300m	12MΔ	1.6m	SS	50	50	20	20m	250p						10p		T072	GC	
65	3N114	300m	12MΔ	1.7m	SS	30	30	12	20m	.01u						10p		T072	GD	
66	3N115	300m	12MΔ	1.7m	SS	30	30	12	20m	.01u						10p		T072	GD	
67	3N116	300m	12MΔ	1.7m	SS	30	30	12	20m	.01u						10p		T072	GD	
68	3N117	300m	12MΔ	1.6m	SS	50	50	20	20m	.01u						10p		T072	GD	
69	3N118	300m	12MΔ	1.7m	SS	50	50	20	20m	.01u						10p		T072	GD	
70	3N119	300m	12MΔ	1.7m	SS	50	50	20	20m	.01u						10p		T072	GD	
71	2H1254†	300m	25MΔ	2.0m	SA	25	25	5.0	200n		10	2.0m	25	b	30	10p	ME	T018		
72	2H1256†	300m	25MΔ	2.0m	SA	35	35	5.0	200n		10	2.0m	25	b	30	10p	ME	T018		
73	2H1258†	300m	25MΔ	2.0m	SA	25	25	5.0	200n		10	2.0m	25	b	30	10p	ME	T018		
74	ZT152	300m	30MΔ	2.4m	SA	20	20	15	500m	10u	6.0	100m	35 †			5.0p	PE	T018		
75	2H1255†	300m	40MΔ	2.0m	SA	25	25	5.0	200n		10	2.0m	55	b	30	10p	ME	T018		
76	2H1257†	300m	40MΔ	2.0m	SA	35	35	5.0	200n		10	2.0m	55	b	30	10p	ME	T018		
77	2H1259†	300m	40MΔ	2.0m	SA	25	25	5.0	200n		10	2.0m	55	b	30	10p	ME	T018		
78	2SA637	300m	40MΔ	2.0m	SJ	150	150	5.0	50m	1.0u	3.0	15m	30 †			10p	DPL	T018	A	
79	2SA685	300m	40MΔ	3.0m	J	150	150	5.0	50m	1.0u	3.0	15m	30 †			10p	D	T092	B	
80																				

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	fab	DERATE IN FREE AIR W/°C	T M A X P	ABS MAX RATINGS @25°C				MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			Cob (F)	STRUC-TURE	DWG Y200 S/a TO200 Ser.	# C O D E					
						V _{cb} (V)	V _{ceo} (V)	V _{ebo} (V)	I _c (A)		BIAS											
											V _{cb} (V)	I _e (A)	h _{fe}					COMMON EMITTER				
h _{ie} (Ω)	h _{re}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re}	h _{oe} (mhos)																	
1#	BC260C	300m	180M\$	2.0m	SJ	20	20	5.0	100m	1.0m	1.0m	200	1.0m	70	1.0m	6.0u	1.5k	250m	4.0p	PE	T018	A
2	MPSH54	300m	185M\$	2.7m	TJ	80	80	4.0	100m	50n	100	1.5m	70	1.0m	6.0u	1.5k	250m	1.0p	AN	T092	A	
3	MPSH55	300m	185M\$	2.7m	TJ	80	80	4.0	100m	50n	100	1.5m	70	1.0m	6.0u	1.5k	250m	1.0p	AN	T092	A	
4	CS4012T	300m	190M	3.0m	J	25	25	4.0	500m	5.0m	4.0m	70	1.0m	6.0u	1.5k	250m	6.0p	E	T0105	A		
5	CS4013T	300m	190M	3.0m	J	25	25	4.0	500m	5.0m	4.0m	160	1.0m	6.0u	1.5k	250m	6.0p	E	T0105	A		
6#	BC187	300m	191M\$	2.0m	SJ	30	25	5.0	100m	100n	5.0m	2.0m	140	29u	2.0k	1.4	4.5p	PE	T018	A		
7	2N3644T	300m	200M\$	3.0m	J	45	45	5.0	500m	35n	100	1.0m	80	8.0p	1.5k	250m	8.0p	PE	R110a	A		
8	2N3645T	300m	200M\$	3.0m	J	60	60	5.0	500m	35n	100	1.0m	80	8.0p	1.5k	250m	8.0p	PE	R110a	A		
9	2N4142T	300m	200M\$	3.0m	J	60	40	5.0	200m	50n	100	150m	300	150	1.5k	250m	8.0p	PE	R110	A		
10	2N4143T	300m	200M\$	3.0m	J	60	40	5.0	200m	50n	100	150m	300	150	1.5k	250m	8.0p	PE	R110	A		
11	2N4228	300m	200M\$	3.0m	J	60	40	5.0	200m	50n	100	150m	150	150	1.5k	250m	8.0p	PE	R110	A		
12#	2SA467	300m	200M\$	3.0m	J	40	30	5.0	400m	50u	1.0m	100m	100	1.0m	1.5k	250m	10p	PE	R67a	B		
13#	2SA844	300m	200M\$	3.0m	J	55	55	5.0	100m	100n	120	2.0m	160	1.8p	1.5k	250m	1.8p	PE	X172	B		
14#	2SA844C	300m	200M\$	3.0m	J	55	55	5.0	100m	100n	120	2.0m	320	1.8p	1.5k	250m	1.8p	PE	X172	B		
15#	2SA844D	300m	200M\$	3.0m	J	55	55	5.0	100m	100n	120	2.0m	500	1.8p	1.5k	250m	1.8p	PE	X172	B		
16#	2SA844E	300m	200M\$	3.0m	J	55	55	5.0	100m	100n	120	2.0m	800	1.8p	1.5k	250m	1.8p	PE	X172	B		
17#	2SA844F	300m	200M\$	3.0m	J	55	55	5.0	100m	100n	120	2.0m	1.2k	1.8p	1.5k	250m	1.8p	PE	X172	B		
18#	2SB637K	300m	200M\$	3.0m	J	50	50	5.0	100m	100n	120	2.0m	160	1.8p	1.5k	250m	1.8p	E	T092	B		
19#	BC116	300m	200M\$	3.0m	J	45	40	5.0	500m	50n	100	2.0m	20	5.0p	1.5k	250m	5.0p	DPE	R97	B		
20#	BC126	300m	200M\$	3.0m	J	35	30	5.0	600m	0.5u	100	1.0m	20	5.0p	1.5k	250m	5.0p	DPE	R97	B		
21#	BC126A	300m	200M\$	3.0m	J	40	40	5.0	500m	0.5u	100	1.0m	20	7.0p	1.5k	250m	5.0p	DPE	T0105	A		
22#	BC177	300m	200M\$	2.0m	SJ	45	45	5.0	100m	0.5u	5.0m	2.0m	240	4.0p	1.5k	250m	4.0p	PE	T018	A		
23#	BC177A	300m	200M\$	2.0m	SJ	50	45	5.0	100m	50n	5.0m	2.0m	180	4.0p	1.5k	250m	4.0p	PE	T018	A		
24#	BC177B	300m	200M\$	2.0m	SJ	50	45	5.0	100m	0.5u	5.0m	2.0m	290	4.0p	1.5k	250m	4.0p	PE	T018	A		
25#	BC177V	300m	200M\$	2.0m	SJ	50	45	5.0	100m	0.5u	5.0m	2.0m	75	4.0p	1.5k	250m	4.0p	PE	T018	A		
26#	BC177VI	300m	200M\$	2.0m	SJ	50	45	5.0	100m	50n	5.0m	2.0m	75	4.0p	1.5k	250m	4.0p	PE	T018	A		
27#	BC178	300m	200M\$	2.0m	SJ	20	20	5.0	100m	10u	5.0m	2.0m	240	4.0p	1.5k	250m	4.0p	PE	T018	A		
28#	BC178A	300m	200M\$	2.0m	SJ	30	25	5.0	100m	100n	5.0m	2.0m	180	4.0p	1.5k	250m	4.0p	PE	T018	A		
29#	BC178B	300m	200M\$	2.0m	SJ	30	25	5.0	100m	100n	5.0m	2.0m	290	4.0p	1.5k	250m	4.0p	PE	T018	A		
30#	BC178V	300m	200M\$	2.0m	SJ	30	25	5.0	100m	10u	5.0m	2.0m	75	4.0p	1.5k	250m	4.0p	PE	T018	A		
31#	BC178VI	300m	200M\$	2.0m	SJ	30	25	5.0	100m	100n	5.0m	2.0m	75	4.0p	1.5k	250m	4.0p	PE	T018	A		
32#	BC179	300m	200M\$	2.0m	SJ	20	20	5.0	100m	0.5u	5.0m	2.0m	240	4.0p	1.5k	250m	4.0p	PE	T018	A		
33#	BC179B	300m	200M\$	2.0m	SJ	25	20	5.0	100m	50n	5.0m	2.0m	290	4.0p	1.5k	250m	4.0p	PE	T018	A		
34#	BC204A	300m	200M\$	3.0m	J	45	45	5.0	100m	50n	5.0m	2.0m	125	4.0p	1.5k	250m	4.0p	PE	R110	A		
35#	BC204B	300m	200M\$	3.0m	J	45	45	5.0	100m	50n	5.0m	2.0m	240	4.0p	1.5k	250m	4.0p	PE	R110	A		
36#	BC204V	300m	200M\$	3.0m	J	45	45	5.0	100m	50n	5.0m	2.0m	50	4.0p	1.5k	250m	4.0p	PE	R110	A		
37#	BC204VI	300m	200M\$	3.0m	J	45	45	5.0	100m	50n	5.0m	2.0m	75	4.0p	1.5k	250m	4.0p	PE	R110	A		
38#	BC205A	300m	200M\$	3.0m	J	20	20	5.0	100m	10u	5.0m	2.0m	125	4.0p	1.5k	250m	4.0p	PE	R110	A		
39#	BC205B	300m	200M\$	3.0m	J	20	20	5.0	100m	10u	5.0m	2.0m	240	4.0p	1.5k	250m	4.0p	PE	R110	A		
40#	BC205V	300m	200M\$	3.0m	J	20	20	5.0	100m	10u	5.0m	2.0m	50	4.0p	1.5k	250m	4.0p	PE	R110	A		
41#	BC205VI	300m	200M\$	3.0m	J	20	20	5.0	100m	10u	5.0m	2.0m	75	4.0p	1.5k	250m	4.0p	PE	R110	A		
42#	BC206A	300m	200M\$	3.0m	J	25	20	5.0	100m	10u	5.0m	2.0m	100	4.0p	1.5k	250m	4.0p	PE	T0106	A		
43#	BC206B	300m	200M\$	3.0m	J	20	20	5.0	100m	50n	5.0m	2.0m	240	4.0p	1.5k	250m	4.0p	PE	R110	A		
44#	BC212T	300m	200M\$	2.4m	SS	60	50	5.0	200m	15n	5.0m	2.0m	100	10p	1.5k	250m	10p	PE	R203	A		
45#	BC212A	300m	200M\$	2.4m	SS	60	50	5.0	200m	15n	5.0m	2.0m	300	10p	1.5k	250m	10p	PE	R203	A		
46#	BC212B	300m	200M\$	2.4m	SS	60	50	5.0	200m	15n	5.0m	2.0m	400	10p	1.5k	250m	10p	PE	R203	A		
47#	BC212K	300m	200M\$	3.0m	J	60	50	5.0	200m	15n	5.0m	2.0m	50	10p	1.5k	250m	10p	PE	R204a	A		
48#	BC212KA	300m	200M\$	3.0m	J	60	50	5.0	200m	15n	5.0m	2.0m	100	10p	1.5k	250m	10p	PE	R204a	A		
49#	BC212KB	300m	200M\$	3.0m	J	60	50	5.0	200m	15n	5.0m	2.0m	200	10p	1.5k	250m	10p	PE	R204a	A		
50#	BC212L	300m	200M\$	2.4m	SS	60	50	5.0	200m	15n	5.0m	2.0m	100	10p	1.5k	250m	10p	PE	T092	B		
51#	BC212LA	300m	200M\$	2.4m	SS	60	50	5.0	200m	15n	5.0m	2.0m	300	10p	1.5k	250m	10p	PE	T092	B		
52#	BC212LB	300m	200M\$	2.4m	SS	60	50	5.0	200m	15n	5.0m	2.0m	400	10p	1.5k	250m	10p	PE	T092	B		
53#	BC213T	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	100	10p	1.5k	250m	10p	PE	R203	A		
54#	BC213A	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	300	10p	1.5k	250m	10p	PE	R203	A		
55#	BC213B	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	400	10p	1.5k	250m	10p	PE	R203	A		
56#	BC213C	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	600	10p	1.5k	250m	10p	PE	R203	A		
57#	BC213K	300m	200M\$	3.0m	J	45	30	5.0	200m	15n	5.0m	2.0m	70	10p	1.5k	250m	10p	PE	R204a	A		
58#	BC213KA	300m	200M\$	3.0m	J	45	30	5.0	200m	15n	5.0m	2.0m	100	10p	1.5k	250m	10p	PE	R204a	A		
59#	BC213KB	300m	200M\$	3.0m	J	45	30	5.0	200m	15n	5.0m	2.0m	200	10p	1.5k	250m	10p	PE	R204a	A		
60#	BC213KC	300m	200M\$	3.0m	J	45	30	5.0	200m	15n	5.0m	2.0m	350	10p	1.5k	250m	10p	PE	R204a	A		
61#	BC213L	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	100	10p	1.5k	250m	10p	PE	T092	B		
62#	BC213LA	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	300	10p	1.5k	250m	10p	PE	T092	B		
63#	BC213LB	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	400	10p	1.5k	250m	10p	PE	T092	B		
64#	BC213LC	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	600	10p	1.5k	250m	10p	PE	T092	B		
65#	BC214T	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	140	10p	1.5k	250m	10p	PE	R203	A		
66#	BC214A	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	300	10p	1.5k	250m	10p	PE	R203	A		
67#	BC214B	300m	200M\$	2.4m	SS	45	30	5.0	200m	15n	5.0m	2.0m	400	10p	1.5k	250m</						

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	fab (Hz)	DEFERATE IN FREE AIR W/°C	TEMPERATURE (°C)	ABS MAX RATINGS @25°C				MAX. I _{cb} @MAX V _{cb} (A)	TYPICAL h _{FE} PARAMETERS				Cob (F)	STRUC-TURE	DWG # Y200 s/a T0200 Ser.	C E O A D E			
						V _{cb} (V)	V _{ceo} (V)	V _{be} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{FE}	COMMON EMITTER							
												hoe (mhos)			hie (Ω)			hre (X.0001)			
1	MPS3638†	310m	100m	2.8m	‡	25	25	4.0	500m	0.04	100	100	20	‡	1.2m	1.5k	26	20p	EA	T092	A
2	MPS3702	310m	100m	2.8m	‡	40	25	5.0	200m	0.10	50	60	‡				12p	EA	T092	A	
3	MPS3703	310m	100m	2.8m	‡	50	30	5.0	200m	0.10	50	60	‡				12p	EA	T092	A	
4	HEP717-RT	310m	120m	2.8m	‡	25	25	4.0	100m	0.04	100	350	‡							T092	A
5	HSE410-RT	310m	150m	2.8m	‡	50	40	4.0	500m	0.04	100	80	‡							T092	A
6	MPS3638A†	310m	150m	2.8m	‡	25	25	4.0	500m	0.04	100	100	‡							T092	A
7	AST4125†	310m	200m	2.8m	‡	30	30	4.0	200m	0.05	100	2.0	‡							R203	A
8	EN3905†	310m	200m	2.8m	‡	40	40	4.0	200m	0.05	100	1.0	‡							T0106	A
9	GET3905	310m	200m	2.8m	‡	40	40	5.0	200m	0.05	100	1.0	‡							R203a	B
10	HEP57-RT	310m	200m	2.8m	‡	25	25	4.0	200m	0.05	100	20	‡							T092	A
11	HEP715-RT	310m	200m	2.8m	‡	50	40	4.0	200m	0.05	100	120	‡							T092	A
12	HSE402-RT	310m	200m	2.8m	‡	40	40	3.0	200m	0.05	100	60	‡							T092	A
13	HSE403-RT	310m	200m	2.8m	‡	30	30	3.0	200m	0.05	100	250	‡							T092	A
14	MPS3644	310m	200m	2.8m	‡	45	45	5.0	500m	0.05	100	150	‡							T092	A
15	MPS3645	310m	200m	2.8m	‡	60	60	5.0	500m	0.05	100	150	‡							T092	A
16	AST4126†	310m	250m	2.8m	‡	25	25	4.0	200m	0.05	100	2.0	‡							R203	A
17	EN3906†	310m	250m	2.8m	‡	40	40	4.0	200m	0.05	100	1.0	‡							T0106	A
18	GET3906	310m	250m	2.8m	‡	40	40	5.0	200m	0.05	100	1.0	‡							R203a	B
19	MPS6580	310m	250m	2.8m	‡	25	25	3.0	600m	0.05	1.0	2.0	‡							R196b	C
20	MPS6533	310m	280m	2.8m	‡	40	40	4.0	600m	0.05	1.0	100	‡							T092	A
21	MPS6534	310m	280m	2.8m	‡	40	40	4.0	600m	0.05	1.0	100	‡							T092	A
22	MPS6535	310m	280m	2.8m	‡	30	30	4.0	600m	0.05	1.0	100	‡							T092	A
23	HEP716-RT	310m	300m	2.8m	‡	40	40	5.0	600m	0.05	1.0	110	‡							T092	A
24	MPS6522	310m	340m	2.8m	‡	25	25	4.0	100m	0.05	100	200	‡							T092	A
25	MPS6523	310m	340m	2.8m	‡	25	25	4.0	100m	0.05	100	2.0	‡							T092	A
26	MPSH85	310m	350m	2.8m	‡	30	30	3.0	100m	0.05	100	2.5	‡							R184	A
27	2N5910†	310m	700m	2.8m	‡	20	20	4.5	50m	0.10	50	15	‡							T0106	A
28	MPSL07†	310m	1.0G	2.8m	‡	6.0	6.0	4.5	80m	0.10	3.0	10	‡							T092	A
29	MPSL08†	310m	1.2G	2.8m	‡	12	12	4.5	80m	0.10	3.0	10	‡							T092	A
30	2N978	330m	65m	2.6m	‡	30	20	5.0	50m	0.05	100	150	‡							T018	A
31	2N327	337m	30m	2.5m	‡				50m	0.00	6.0	1.0	14							TO5	A
32	2N328	337m	35m	2.5m	‡				50m	0.00	6.0	1.0	24							TO5	A
33	2N329	337m	60m	2.5m	‡				50m	0.00	6.0	1.0	50							TO5	A
34	2N5455†	340m	450m	1.9m	‡	15	15	4.5	300m	0.05	1.0	100	30							TO52	A
35	2N5456	340m	450m	1.9m	‡	25	25	4.5	300m	0.05	1.0	100	30							TO52	A
36	BCY78†	345m	180m	2.2m	‡	32	32	5.0	200m	0.10	5.0	2.0	350							TO18	A
37	BCY78VIII†	345m	180m	2.2m	‡	32	32	5.0	200m	0.10	5.0	2.0	170							TO18	A
38	BCY78VIII†	345m	180m	2.2m	‡	32	32	5.0	200m	0.10	5.0	2.0	250							TO18	A
39	BCY78XI†	345m	180m	2.2m	‡	32	32	5.0	200m	0.10	5.0	2.0	500							TO18	A
40	BCY79†	345m	180m	2.2m	‡	45	45	5.0	200m	0.10	5.0	2.0	350							TO18	A
41	BCY79VIII†	345m	180m	2.2m	‡	45	45	5.0	200m	0.10	5.0	2.0	170							TO18	A
42	BCY79VIII†	345m	180m	2.2m	‡	45	45	5.0	200m	0.10	5.0	2.0	250							TO18	A
43	2N1196	350m		2.0m	‡	70	70	4.0	100m	0.10	2.0	5.0	‡							TO5	A
44	2N1197	350m		2.0m	‡	70	70	4.0	100m	0.10	2.0	5.0	‡							TO5	A
45	JAN2N1197	350m		2.0m	‡	70	70	4.0	100m	0.10	2.0	5.0	‡							TO5	A
46	2SA558†	350m		2.3m	‡	40	35	5.0	200m	0.10	1.0	50	‡							TO18	A
47	2SA559†	350m		2.3m	‡	20	20	5.0	200m	0.10	1.0	50	‡							TO18	A
48	2SA559A†	350m		2.3m	‡	40	35	5.0	200m	0.10	1.0	50	‡							TO18	A
49	SWT1032	350m	40m	2.8m	‡	30	30	4.0	50m	0.05	1.0	200	‡							T092	A
50	BCY21	350m	500k	2.7m	‡	50	50	30	50m	20n	6.0	1.0	10							TO5	A
51	BCY23	350m	500k	2.7m	‡	10	10	30	50m	20n	6.0	1.0	20							TO5	A
52	BCY26	350m	600k	2.7m	‡	30	30	30	50m	20n	6.0	1.0	10							TO5	A
53	BCY19	350m	70m	2.8m	‡	50	50	30	50m	0.2n	6.0	1.0	20							TO5	A
54	BCY24	350m	1.0m	2.7m	‡	30	10	30	50m	20n	6.0	1.0	10							TO5	A
55	BCY17	350m	1.2m	2.8m	‡	30	30	30	50m	0.2n	6.0	1.0	20							TO5	A
56	BCY18	350m	2.0m	2.8m	‡	30	30	30	50m	0.2n	6.0	1.0	40							TO5	A
57	BCY25	350m	2.5m	2.7m	‡	30	10	30	50m	20n	6.0	1.0	40							TO5	A
58	MPS404†	350m	4.0m	2.8m	‡	25	24	12	150m	0.10	1.5	12m	100							T092	A
59	MPS404A†	350m	4.0m	2.8m	‡	40	35	25	150m	0.10	1.5	12m	100							T092	A
60	KT501A	350m	5.0m	2.8m	‡	15	15	500m	0.10	30m	20	‡								R216d	C
61	KT501B	350m	5.0m	2.8m	‡	15	15	500m	0.10	30m	20	‡								R216d	C
62	KT501D	350m	5.0m	2.8m	‡	30	30	500m	0.10	30m	40	‡								R216d	C
63	KT501E	350m	5.0m	2.8m	‡	30	30	500m	0.10	30m	80	‡								R216d	C
64	KT501G	350m	5.0m	2.8m	‡	30	30	500m	0.10	30m	20	‡								R216d	C
65	KT501H	350m	5.0m	2.8m	‡	45	45	500m	0.10	30m	40	‡								R216d	C
66	KT501K	350m	5.0m	2.8m	‡	45	45	500m	0.10	30m	80	‡								R216d	C
67	KT501L	350m	5.0m	2.8m	‡	60	60	500m	0.10	30m	20	‡								R216d	C
68	KT501M	350m	5.0m	2.8m	‡	60	60	500m	0.10	30m	40	‡								R216d	C
69	KT501S	350m	5.0m	2.8m	‡	45	45	500m	0.10	30m	20	‡								R216d	C
70	KT501V	350m	5.0m	2.8m	‡	15	15	500m	0.10	30m	80	‡								R216d	C
71	BCY90	350m	15m	2.9m	‡	40	40	20	50m	2n	6.0	1.0	25							TO18	A
72	BCY91	350m	15m	2.9m	‡	40	40	20	50m	2n	6.0	1.0	42							TO18	A
73	BCY92†	350m	15m	2.9m	‡	40	40	20	50m	2n	6.0	1.0	70							TO18	A
74	BCY93	350m	15m	2.9m	‡	70	70	30	50m	2n	6.0	1.0	25							TO18	A
75	BCY94	350m	15m	2.9m	‡	70	70	30	50m	2n	6.0	1.0	42							TO18	A
76	BCY95†	350m	15m	2.9m	‡	70	70	30	50m	2n	6.0	1.0	70							TO18	A
77	BCY96	350m	15m	2.9m	‡	90	90	30	50m												

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C	T M E P	ABS MAX RATINGS @25°C				MAX. l _{co} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC TURE	Y200 s/a TO200 Ser.	# C O A D E
					V _{cb} (V)	V _{ceo} (V)	V _{be} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} X.0001				
1	HA7535	400m	800k	2.9m	110	110	110	100n	5.0	1.0m	20	1.2ub	30	4.0	95p	F	TO5		
2	HA7540	400m	800k	2.9m	150	150	150	100n	5.0	1.0m	20	1.2ub	30	4.0	95p	F	TO5		
3	HA7541	400m	800k	2.9m	150	150	150	100n	5.0	1.0m	45	1.2ub	30	4.0	95p	F	TO5		
4	HA7542	400m	800k	2.9m	110	110	110	100n	5.0	1.0m	45	1.2ub	30	4.0	95p	F	TO5		
5	HA7543	400m	800k	2.9m	110	110	110	100n	5.0	1.0m	90	1.2ub	30	4.0	95p	F	TO5		
6	2N1232	400m	1.0M	3.0m	60	60	60	100n	5.0	1.0m	14 Δ	1.2ub	30	4.0	95p	F	TO5	A	
7	2N1233	400m	1.0M	3.0m	60	60	60	100n	5.0	1.0m	28 Δ	1.2ub	30	4.0	95p	F	TO5	A	
8	2N1439	400m	1.0MΔ	2.2m	50	50	50	100m	5.0	1.0m	9.0	1.0m	35u	1.0k	16	5.0p	F	TO5	A
9	2N1440	400m	1.0MΔ	2.2m	60	60	60	100m	5.0	1.0m	15	1.7ub	60	16	5.0p	F	TO5	A	
10	2N1441	400m	1.0MΔ	2.2m	50	50	50	100m	5.0	1.0m	27	1.7ub	60	16	5.0p	F	TO5	A	
11	2N1442	400m	1.0MΔ	2.2m	50	50	50	100m	5.0	1.0m	43	1.2ub	60	16	5.0p	F	TO5	A	
12	2N1443	400m	1.0MΔ	2.2m	50	50	50	100m	5.0	1.0m	65	1.2ub	35u	1.0k	5.0p	F	TO5	A	
13	2N3977	400m	1.0MΔ	2.3m	15	15	15	100m	1.0n	5.0m	40 Δ	5.0m	30	14p			TO46	A	
14	2N3978	400m	1.0MΔ	2.3m	20	20	20	100m	1.0n	5.0m	30 Δ	5.0m	30	14p			TO46	A	
15	2N3979	400m	1.0MΔ	2.3m	40	40	40	100m	1.0n	5.0m	20 Δ	5.0m	20	14p			TO46	A	
16	HA7534	400m	1.0M	2.9m	60	60	60	100n	5.0	1.0m	20	1.2ub	30	4.0	95p	F	TO5		
17	HA7538	400m	1.0M	2.9m	60	60	60	100n	5.0	1.0m	42	1.2ub	30	4.0	95p	F	TO5		
18	HA7530	400m	1.0M	2.9m	40	40	40	100n	5.0	1.0m	22	1.5u	10	4.0	95p	F	TO5		
19	HA7631	400m	1.0M	2.9m	80	80	80	5.0u	10	5.0m	22	1.5u	10	4.0	95p	F	TO5		
20	HA7632	400m	1.0M	2.9m	40	40	40	5.0u	10	5.0m	22	1.5u	10	4.0	95p	F	TO5		
21	HA7633	400m	1.0M	2.9m	80	80	80	5.0u	10	5.0m	60	1.5u	10	4.0	95p	F	TO5		
22	HA7804	400m	1.0M	2.8m	10	10	10	100m	50n	5.0m	15	1.5u	10	70p	F	TO5			
23	HA7806	400m	1.0M	2.8m	15	15	15	100m	50n	5.0m	15	1.5u	10	90p	F	TO5			
24	HA7808	400m	1.0M	2.8m	15	15	15	100m	50n	5.0m	15	1.5u	10	70p	F	TO5			
25	HA7810	400m	1.0M	2.8m	10	10	10	100m	50n	5.0m	15	1.5u	10	90p	F	TO5			
26	HA7815	400m	1.0M	2.8m	30	30	30	100m	50n	5.0m	30	1.5u	10	70p	F	TO5			
27	2N1228	400m	1.2M	3.0m	15	15	15	100n	5.0	1.0m	14 Δ	1.2ub	30	15	95p	F	TO5	A	
28	2N1229	400m	1.2M	3.0m	15	15	15	100n	5.0	1.0m	28 Δ	1.2ub	30	15	95p	F	TO5	A	
29	2N1230	400m	1.2M	3.0m	35	35	35	100n	5.0	1.0m	14 Δ	1.2ub	30	8.0	95p	F	TO5	A	
30	2N1231	400m	1.2M	3.0m	35	35	35	100n	5.0	1.0m	28 Δ	1.2ub	30	8.0	95p	F	TO5	A	
31	HA7530	400m	1.2M	2.9m	35	35	35	100m	10u	5.0m	12	1.2u	30	10	95p	F	TO5		
32	HA7531	400m	1.2M	2.9m	60	60	60	100m	10u	5.0m	12	1.2u	30	10	95p	F	TO5		
33	HA7532	400m	1.2M	2.9m	15	15	15	10u	5.0m	1.0m	20	1.2u	30	15	95p	F	TO5		
34	HA7533	400m	1.2M	2.9m	35	35	35	10u	5.0m	1.0m	20	1.2u	30	8.0	95p	F	TO5		
35	HA7536	400m	1.2M	2.9m	15	15	15	10u	5.0m	1.0m	20	1.2u	30	15	95p	F	TO5		
36	HA7537	400m	1.2M	2.9m	35	35	35	10u	5.0m	1.0m	20	1.2u	30	8.0	95p	F	TO5		
37	2N327B	400m	2.0MΔ	2.3m	50	40	20	100m	1n	5.0m	1.0m	14	10u	1.0k	9.0p	PEΔ	TO5	A	
38	2N1026A	400m	2.0MΔ	500u	35	35	35	100m	0.2u	5.0m	1.0m	36	10u	1.0k	7.0p	PEΔ	TO5	A	
39	2N3064	400m	2.0M	2.3m	110	100	50	100m	0.1u	6.0m	1.0m	15 Δ	12u	1.7k	10p	PEΔ	TO5	A	
40	2N328B	400m	3.0MΔ	2.3m	50	35	20	100m	0.1u	6.0m	1.0m	28	12u	1.7k	9.0p	PEΔ	TO5	A	
41	2N3062	400m	3.0M	2.3m	90	80	40	100m	0.1u	6.0m	1.0m	20 Δ	12u	1.7k	10p	PEΔ	TO5	A	
42	2N3219	400m	3.0M	2.3m	40	35	40	100m	1.0n	6.0m	1.0m	1.0 Δ	12u	1.7k	10p	PEΔ	TO5	A	
43	2N4982	400m	3.0MΔ	2.3m	70	70	70	100m	5.0p	6.0m	1.0m	30 Δ	12u	1.7k	10p	PEΔ	TO5	A	
44	2N6567	400m	3.0MΔ	2.3m	30	30	30	100m	5.0p	6.0m	1.0m	30 Δ	12u	1.7k	10p	PEΔ	TO5	A	
45	2N3065	400m	4.0M	2.3m	110	100	50	100m	0.1u	6.0m	1.0m	30 Δ	12u	1.7k	10p	PEΔ	TO5	A	
46	2N3913	400m	4.0MΔ	2.3m	60	50	50	200m	5.0p	6.0m	1.0m	30 Δ	12u	1.7k	8p	PEΔ	TO5	A	
47	2N329B	400m	5.0MΔ	2.3m	50	30	20	100m	5.0p	6.0m	1.0m	60	15u	3.0k	9.0p	PEΔ	TO5	A	
48	2N2946	400m	5.0MΔ	2.3m	40	35	40	100m	5.0p	6.0m	1.0m	70	15u	3.0k	10p	PEΔ	TO5	A	
49	2N2946A	400m	5.0MΔ	2.3m	40	35	40	100m	5.0p	6.0m	1.0m	50 Δ	15u	3.0k	10p	PEΔ	TO5	A	
50	JAN2N2946A	400m	5.0MΔ	2.3m	40	35	40	100m	50p	6.0m	1.0m	50 Δ	15u	3.0k	10p	PEΔ	TO5	A	
51	2N3060	400m	5.0M	2.3m	70	60	30	100m	5.0p	6.0m	1.0m	30 Δ	12u	1.7k	10p	PEΔ	TO5	A	
52	2N3063	400m	5.0M	2.3m	90	80	40	100m	0.1u	6.0m	1.0m	50 Δ	12u	1.7k	10p	PEΔ	TO5	A	
53	2N3218	400m	5.0M	2.3m	25	20	25	100m	1.0n	6.0m	1.0m	1.0 Δ	12u	1.7k	10p	PEΔ	TO5	A	
54	2N3527	400m	5.0MΔ	2.3m	30	30	10	100m	1.0n	6.0m	1.0m	4.0 Δ	12u	1.7k	10p	PEΔ	TO5	A	
55	2N3677	400m	5.0MΔ	2.3m	30	20	30	100m	1.0n	6.0m	1.0m	4.0 Δ	12u	1.7k	10p	PEΔ	TO5	A	
56	2N4981	400m	5.0MΔ	2.2m	50	50	50	100m	3.0n	5.0m	1.0m	40 Δ	12u	1.7k	10p	PEΔ	TO5	A	
57	2N3840	400m	6.0MΔ	2.3m	50	50	50	100m	5.0n	5.0m	1.0m	50 Δ	12u	1.7k	9p	PEΔ	TO5	A	
58	2N3061	400m	8.0M	2.3m	70	60	30	100m	5.0n	6.0m	1.0m	60 Δ	12u	1.7k	10p	PEΔ	TO5	A	
59	2N3914	400m	8.0MΔ	2.3m	60	40	40	200m	5.0n	6.0m	1.0m	60 Δ	12u	1.7k	8p	PEΔ	TO5	A	
60	2N2945	400m	10MΔ	4.3m	25	20	25	100m	20n	5.0m	1.0m	100 Δ	12u	1.7k	10p	PEΔ	TO5	A	
61	2N2945A	400m	10MΔ	4.3m	25	20	25	100m	20n	5.0m	1.0m	70 Δ	12u	1.7k	10p	PEΔ	TO5	A	
62	JAN2N2945A	400m	10MΔ	4.3m	25	20	25	100m	200p	5.0m	1.0m	70 Δ	12u	1.7k	10p	PEΔ	TO5	A	
63	2N3058	400m	10M	2.3m	6.0	6.0	6.0	100m	10n	5.0m	1.0m	40 Δ	12u	1.7k	10p	PEΔ	TO5	A	
64	2N3059	400m	10M	2.3m	10	10	10	100m	10n	3.0m	0.1m	100 Δ	12u	1.7k	10p	PEΔ	TO5	A	
65	2N3217	400m	10M	2.3m	15	10	15	100m	1.0n	6.0m	1.0m	1.0 Δ	12u	1.7k	14p	PEΔ	TO5	A	
66	2N4980	400m	10MΔ	2.2m	30	30	30	100m	1.0n	5.0m	1.0m	60 Δ	12u	1.7k	10p	PEΔ	TO5	A	
67	2N2944	400m	15MΔ	4.3m	15	10	15	100m	10n	5.0m	1.0m	200 Δ	12u	1.7k	10p	PEΔ	TO5	A	
68	2N2944A	400m	15MΔ	2.3m	15	10	15	100m	1.0u	5.0m	1.0m	100 Δ	12u	1.7k	10p	PEΔ	TO5	A	
69	JAN2N2944A	400m	15MΔ	2.3m	15	10	15	100m	100p	5.0m	1.0m	100 Δ	12u	1.7k	10p	PEΔ	TO5	A	
70	2N3915	400m	15MΔ	2.3m	60	30	30	200m	5.0n	6.0m	1.0m	90 Δ	12u	1.7k	8p	PEΔ	TO5	A	
71	2N4007	400m	15MΔ	2.3m	20	15	20	100m	30n	6.0m	1.0m	30 Δ	12u	1.7k	10p	PEΔ	TO5	A	
72	2N4008	400m	15MΔ	2.3m	35	30	35	100m	3n	6.0m	1.0m	20 Δ	12u	1.7k	10p	PEΔ	TO5	A	
73	BCY90B	400m	15M	3.3m	40	40	20	50m	2n	6.0m	1.0m	25	4p	PE	TO5	A			
74	BCY91B	400m	15M	3.3m	40	40	20	50m	2n	6.0m	1.0m	42	4p	PE	TO5	A			
75	BCY92B	400m	15M	3.3m	40	40	20	50m	2n	6.0m	1.0m	70	4p	PE	TO5	A			
76	BCY93B	400m	15M	3.3m	70	70	30	50m	2n	6.0m	1.0m	25	4p	PE	TO5	A			
77	BCY94B	400m	15M	3.3m	70	70	30	50m	2n	6.0m	1.0m	42	4p	PE	TO5	A			

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. 2		DERATE		T M E A M X P	ABS MAX RATINGS @ 25°C					MAX. Icbo @ MAX Vcb (A)	TYPICAL 'h' PARAMETERS			Cob (F)	STRUC- TURE	DWG # Y200 s/a TO200 Ser.	# C O D E		
		COLL. DISS. @25°C (W)	fab (Hz)	IN FREE AIR W/°C	BVcbo (V)		BVceo (V)	BVebo (V)	Ic (A)	BIAS			COMMON EMITTER								
										Vcb (V)	Ic (A)		hfe	hoe (mhos)	hie (Ω)					hre X.0001	
1	2N6007†	400m	800MΔ	4.0m	Δ	Δ	50	40	5.0	500m	10nΩ	1.0Ω	1.0m	235 Δ	150uΩ	17kΩ	8.0pΩ	∅	R203a	A	
2#	BCY38	410m	1.5MΔ	3.3m	Δ	Δ	32	32	12	250m	100nΩ	6.0Ω	10mΩ	27				A	T018	A	
3#	BCY39	410m	1.5MΔ	3.3m	Δ	Δ	64	64	12	250m	100nΩ	6.0Ω	10mΩ	35				A	T05	A	
4#	BCY54	410m	2.0MΔ	3.3m	Δ	Δ	50	50	12	250m	100nΩ	6.0Ω	10mΩ	50				A	T05	A	
5#	BCY40	410m	2.5MΔ	3.3m	Δ	Δ	32	32	12	250m	100nΩ	6.0Ω	10mΩ	50				A	T05	A	
6	2N2393	450m	50MΔ	3.0m	Δ	Δ	50	35	5.0	300m	1.0uΩ	5.0Ω	1.0mΩ	15 Δ	1.0uΩ	35 Ω	8.0 Ω	45pΩ	PL	W4	A
7	2N2394	450m	60MΔ	3.0m	Δ	Δ	50	35	5.0	300m	1.0uΩ	5.0Ω	1.0mΩ	25 Δ	1.0uΩ	35 Ω	8.0 Ω	45pΩ	PL	W4	A
8#	2SA931	450m	70MΔ	3.0m	Δ	Δ	150	120	5.0	50m	1.0uΩ	5.0Ω	10 Ω	35 †			7.0p	PE	R179d	A	
9#	2SA932	450m	70MΔ	3.0m	Δ	Δ	150	150	5.0	50m	1.0uΩ	5.0Ω	10 Ω	35 †			7.0p	PE	R179d	A	
10#	BCW75-10†	450m	100MΔ	2.6m	Δ	Δ	32	32	5.0	800m	1.0Ω	100mΩ	160 Ω				18pΩ	PE	T018	A	
11#	BCW75-16†	450m	100MΔ	2.6m	Δ	Δ	32	32	5.0	800m	1.0Ω	100mΩ	250 Ω				18pΩ	PE	T018	A	
12#	BCW75-25†	450m	100MΔ	2.6m	Δ	Δ	32	32	5.0	800m	1.0Ω	100mΩ	400 Ω				18pΩ	PE	T018	A	
13#	BCW76-10†	450m	100MΔ	2.6m	Δ	Δ	45	45	5.0	800m	1.0Ω	100mΩ	160 Ω				18pΩ	PE	T018	A	
14#	BCW76-16†	450m	100MΔ	2.6m	Δ	Δ	45	45	5.0	800m	1.0Ω	100mΩ	250 Ω				18pΩ	PE	T018	A	
15#	BCW76-25†	450m	100MΔ	2.6m	Δ	Δ	45	45	5.0	800m	1.0Ω	100mΩ	400 Ω				18pΩ	PE	T018	A	
16#	BCX23	450m	100MΔ	2.5m	Δ	Δ	125	125	5.0	800m	1.0Ω	100mΩ	63 Ω				12p	PE	R179z	A	
17#	BCX39	450m	100MΔ	2.5m	Δ	Δ	100	100	7.0	800m	100nΩ	5.0Ω	2.0mΩ	250 Ω			12p	PE	T018	A	
18#	BCX78IX†	450m	200MΔ	3.5m	Δ	Δ	32	32	5.0	100m	10nΩ	5.0Ω	2.0mΩ	380 Ω			4.5pΩ	PE	R204a	A	
19#	BCX78VII†	450m	200MΔ	3.5m	Δ	Δ	32	32	5.0	100m	10nΩ	5.0Ω	2.0mΩ	120 Ω			4.5pΩ	PE	R204d	A	
20#	BCX78VIII†	450m	200MΔ	3.5m	Δ	Δ	32	32	5.0	100m	10nΩ	5.0Ω	2.0mΩ	180 Ω			4.5pΩ	PE	R204d	A	
21#	BCX78XI†	450m	200MΔ	3.5m	Δ	Δ	32	32	5.0	100m	10nΩ	5.0Ω	2.0mΩ	380 Ω			4.5pΩ	PE	R204d	A	
22#	BCX79IX†	450m	200MΔ	3.5m	Δ	Δ	45	45	5.0	100m	10nΩ	5.0Ω	2.0mΩ	250 Ω			4.5pΩ	PE	R204d	A	
23#	BCX79VII†	450m	200MΔ	3.5m	Δ	Δ	45	45	5.0	100m	10nΩ	5.0Ω	2.0mΩ	120 Ω			4.5pΩ	PE	R204d	A	
24#	BCX79VIII†	450m	200MΔ	3.5m	Δ	Δ	45	45	5.0	100m	10nΩ	5.0Ω	2.0mΩ	180 Ω			4.5pΩ	PE	R204d	A	
25#	BCX79XI†	450m	200MΔ	3.5m	Δ	Δ	45	45	5.0	100m	10nΩ	5.0Ω	2.0mΩ	380 Ω			4.5pΩ	PE	R204d	A	
26	KD5527	450m	2.0G	2.6m	Δ	Δ	20	12	2.5	50m	50nΩ	1.0Ω	3.0mΩ	20 Ω			750f	PE	R204e	V	
27#	2SA911	470m	9.0MΔ	5.0m	Δ	Δ	850	550	12	100m	1.5uΩ	5.0Ω	10mΩ	30 Δ			15pΩ	F	T039	D	
28#	2SA761	475m	80MΔ	5.0m	Δ	Δ	110	110	5.0	2.0	100uΩ	2.0Ω	400mΩ	50 †			55p	E	T05	A	
29	2N3764A†	500m	2.8m	5.0	Δ	Δ	50	5.0	1.5	100uΩ	1.5Ω	1.0 Ω	20 Ω			15pΩ	F	T046	A		
30	2N5811	500m	4.5m	5.0	Δ	Δ	35	25	5.0	750m	100nΩ	2.0Ω	2.0mΩ	60 Δ			15pΩ	F	R203a	A	
31	2N5813	500m	4.5m	5.0	Δ	Δ	35	25	5.0	750m	100nΩ	2.0Ω	2.0mΩ	150 Δ			15pΩ	F	R203a	A	
32	2N5815	500m	4.5m	5.0	Δ	Δ	50	40	5.0	750m	100nΩ	2.0Ω	2.0mΩ	60 Δ			15pΩ	F	R203a	A	
33	2N5817	500m	4.5m	5.0	Δ	Δ	50	40	5.0	750m	100nΩ	2.0Ω	2.0mΩ	100 Δ			15pΩ	F	R203a	A	
34	2N5819	500m	4.5m	5.0	Δ	Δ	50	40	5.0	750m	100nΩ	2.0Ω	2.0mΩ	150 Δ			15pΩ	F	R203a	A	
35	2N5821	500m	4.5m	5.0	Δ	Δ	70	60	5.0	750m	100nΩ	2.0Ω	2.0mΩ	60 Δ			15pΩ	F	R203a	A	
36	2N5823	500m	4.5m	5.0	Δ	Δ	70	60	5.0	750m	100nΩ	2.0Ω	2.0mΩ	100 Δ			15pΩ	F	R203a	A	
37#	2SA643	500m	2.5m	Δ	Δ	Δ	40	20	5.0	500m	200nΩ	1.0Ω	100mΩ	120 †			12pΩ	E	R205a	B	
38#	BFX30	500m	3.4m	Δ	Δ	Δ	65	65	5.0	600m#	70uΩ	.40Ω	10mΩ	50 †			4.5p	PL	T05	A	
39#	MPS3644K†	500m	3.3m	Δ	Δ	Δ	45	45	5.0	500m	35nΩ	10Ω	10mΩ	100 Δ	80u	480	1.6	4.5p	PL	X167	A
40#	MPS3644L†	500m	3.3m	Δ	Δ	Δ	45	45	5.0	500m	35nΩ	10Ω	10mΩ	100 Δ	80u	480	1.6	4.5p	PL	X168	A
41#	MPS3644M†	500m	3.3m	Δ	Δ	Δ	45	45	5.0	500m	35nΩ	10Ω	10mΩ	100 Δ	80u	480	1.6	4.5p	PL	X169	A
42#	MPS3645K†	500m	3.3m	Δ	Δ	Δ	60	60	5.0	500m	35nΩ	10Ω	10mΩ	100 Δ	80u	480	1.6	4.5p	PL	X167	A
43#	MPS3645L†	500m	3.3m	Δ	Δ	Δ	60	60	5.0	500m	35nΩ	10Ω	10mΩ	100 Δ	80u	480	1.6	4.5p	PL	X168	A
44#	MPS3645M†	500m	3.3m	Δ	Δ	Δ	60	60	5.0	500m	35nΩ	10Ω	10mΩ	100 Δ	80u	480	1.6	4.5p	PL	X169	A
45	HA7501	500m	70M	4.0m	Δ	Δ	60	60	5.0	100u	5.0	1.0m	8.0				F				
46	HA7506	500m	90M	4.0m	Δ	Δ	35	35	5.0	50u	5.0	1.0m	12				F				
47	2N5110	500m	1.0MΔ	33m	Δ	Δ	40	40	10	1	75u	10Ω	100mΩ	10 Δ			500p	F	T05	A	
48	2N5111	500m	1.0MΔ	33m	Δ	Δ	80	80	10	1	75u	10Ω	100mΩ	10 Δ			500p	F	T05	A	
49	HA7502	500m	1.0M	4.0m	Δ	Δ	60	60	5.0	10u	5.0	1.0m	16				F				
50	HA7510	500m	1.2M	4.0m	Δ	Δ	35	35	5.0	50u	5.0	1.0m	21				F				
51	HA7507	500m	1.6M	4.0m	Δ	Δ	20	20	5.0	10u	5.0	1.0m	15				F				
52	2N3910∅	500m	4.0MΔ	2.9m	Δ	Δ	60	50	5.0	200m	50nΩ	5.0Ω	1.0mΩ	40 †			8pΩ	F	T046	A	
53	2N3911∅	500m	8.0MΔ	2.9m	Δ	Δ	60	40	4.0	200m	5nΩ	5.0Ω	1.0mΩ	60 †			8pΩ	F	T046	A	
54	2N3912∅	500m	10MΔ	2.9m	Δ	Δ	60	30	3.0	200m	5nΩ	5.0Ω	1.0mΩ	90 †			8pΩ	F	T046	A	
55	MM4052	500m	12MΔ	2.8m	Δ	Δ	30	30	3.0	500p	10Ω	1.0Ω	10mΩ	20 Δ			10pΩ	F	T046	A	
56	AST3798	500m	30MΔ	2.8m	Δ	Δ	60	60	5.0	50m	10nΩ	10Ω	1.0mΩ	150 Δ	60uΩ	30k	25	4.0pΩ	∅	R203	A
57	HSE211-RT	500m	30MΔ	4.0m	Δ	Δ	40	60	5.0	500nΩ	10Ω	150mΩ	30 Δ				∅	∅	T018	A	
58	2N5254/78*	500m	60MΔ	2.8m	Δ	Δ	40	40	∅	50m	10nΩ	5.0Ω	1.0mΩ	70 Δ	70uΩ	25kΩ	12 Ω	6.0pΩ	PL	R131c	A
59	2N5255/78*	500m	60MΔ	2.8m	Δ	Δ	40	40	∅	50m	10nΩ	5.0Ω	1.0mΩ	70 Δ	70uΩ	25kΩ	12 Ω	6.0pΩ	PL	R131c	A
60	2N5256/78*	500m	60MΔ	2.8m	Δ	Δ	40	40	∅	50m	10nΩ	5.0Ω	1.0mΩ	175 Δ	70uΩ	25kΩ	12 Ω	6.0pΩ	PL	R131c	A
61	D34J1	500m	60MΔ	4.0m	Δ	Δ	60	60	5.0	500m	25nΩ	1.0Ω	10mΩ	60 †			20pΩ	PE	R203a	A	
62	D34J2	500m	60MΔ	4.0m	Δ	Δ	60	60	5.0	500m	25nΩ	1.0Ω	10mΩ	100 †			20pΩ	PE	R203a	A	
63	D34J3	500m	60MΔ	4.0m	Δ	Δ	60	60	5.0	500m	25nΩ	1.0Ω	10mΩ	250 †			20pΩ	PE	R203a	A	
64	D34J4	500m	60MΔ	4.0m	Δ	Δ	80	80	5.0	500m	25nΩ	1.0Ω	10mΩ	60 †			20pΩ	PE	R203a	A	
65	D34J5	500m	60MΔ	4.0m	Δ	Δ	80	80	5.0	500m	25nΩ	1.0Ω	10mΩ	100 †			20pΩ	PE	R203a	A	
66	D34J6	500m	60MΔ	4.0m	Δ	Δ	80	80	5.0	500m	25nΩ	1.0Ω	10mΩ	250 †			20pΩ	PE	R203a	A	
67	D34J7	500m	60MΔ	4.0m	Δ	Δ	100	100	5.0	500m	25nΩ	1.0Ω	10mΩ	60 †			20pΩ	PE	R203a	A	
68	D34J8	500m	60MΔ	4.0m	Δ	Δ	100	100	5.0	500m	25nΩ	1.0Ω	10mΩ	100 †			20pΩ	PE	R203a	A	
69	D34J9	500m	60MΔ	4.0m	Δ	Δ	100	100	5.0	500m	25nΩ	1.0Ω	10mΩ	250 †			20pΩ	PE	R203a	A	
70	D29E9	500m	80MΔ	4.0m	Δ	Δ	70	60	5.0	750m	100nΩ	2.0Ω	2.0mΩ	60 †			15pΩ	PE	T098	B	
71#	2SA532	500m	90MΔ	4.0m	Δ	Δ	50	50	4.0	200m	10u	6.0Ω	50mΩ	80 †							

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	T M A M P	ABS. MAX RATINGS @25°C				MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG #/s/a TO200 Ser.	# L O D E
					V _{cb} (V)	V _{ceo} (V)	V _{be} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (X.0001)				
1	BCW97KB	540m	135mSΔ	4.3m	SJ	70	60	5.0	400m	30nΩ	2.0Ω	2.0mΩ	100	fΔ#				R203a	PA
2	MD7004	550m	675mSΔ	3.1m	SJ	30	13	4.0	200m	100nΩ	2.0Ω	1.0mΩ	100	f#			T099	PA	
3	MD4260*	550m	1.0GΔ	3.1m	SJ	12	12	4.0	50m	10nΩ	1.0Ω	10mΩ	30	fΔ			R131b	PA	
4	MD4261*	550m	1.0GΔ	3.1m	SJ	12	12	4.0	50m	10nΩ	1.0Ω	10mΩ	30	fΔ			R131b	PA	
5	MD2904*	575m	320mSΔ	3.2m	SJ	60	40	5.0	600m	20nΩ	1.0Ω	1.0mΩ	25	fΔ#			R131b	PA	
6	MD2904A*	575m	320mSΔ	3.2m	SJ	60	40	5.0	600m	20nΩ	1.0Ω	1.0mΩ	40	fΔ#			R131b	PA	
7	MD2905*	575m	320mSΔ	3.2m	SJ	60	40	5.0	600m	20nΩ	1.0Ω	1.0mΩ	50	fΔ#			R131b	PA	
8	MD2905A*	575m	320mSΔ	3.2m	SJ	60	40	5.0	600m	20nΩ	1.0Ω	1.0mΩ	100	fΔ#			R131b	PA	
9	MD3250*	575m	600mSΔ	3.2m	SJ	50	40	5.0	50m	10nΩ	5.0Ω	10uΩ	75	f#			T099	PA	
10	MD3250A*	575m	600mSΔ	3.2m	SJ	50	40	5.0	50m	10nΩ	5.0Ω	10uΩ	75	f#			T099	PA	
11	MD3251	575m	600mSΔ	3.2m	SJ	50	40	5.0	50m	10nΩ	5.0Ω	10uΩ	100	f#			T099	PA	
12	MD3251A*	575m	600mSΔ	3.2m	SJ	50	40	5.0	50m	10nΩ	5.0Ω	10uΩ	100	f#			T099	PA	
13	#25B643	600m	5.4m	TJ	30	25	7.0	100nΩ	100	10mΩ	100	60	fΔ				B37	D	
14	#25B644	600m	5.4m	TJ	60	50	7.0	100nΩ	100	10mΩ	100	60	fΔ				B37	D	
15	MM4000	600m	3.4m	TJ	100	100	*	4.0	100m	1.0uΩ	100	10mΩ	20	f#Δ			T039	AØ	
16	PN4248	600m	4.8m	SJ	40	40	4.0	50m	10nΩ	5.0Ω	100uΩ	50	fΔ				T092	A	
17	PN4249	600m	4.8m	SJ	60	60	5.0	50m	10nΩ	5.0Ω	100uΩ	100	fΔ				T092	A	
18	PN4250	600m	4.8m	SJ	40	40	4.0	50m	10nΩ	5.0Ω	100uΩ	250	fΔ				T092	A	
19	PN4250A	600m	4.8m	SJ	60	60	5.0	50m	10nΩ	5.0Ω	100uΩ	250	fΔ				T092	A	
20	BCY30A	600m	7.0mS	4.8m	SJ	64	64	45	50m	50nΩ	6.0Ω	1.0mΩ	25		17	1.1	3.0	T05	AØ
21	BCY31A	600m	7.0mS	4.8m	SJ	64	64	45	50m	50nΩ	6.0Ω	1.0mΩ	35		25	1.4	6.0	T05	AØ
22	BCY32A	600m	7.0mS	4.8m	SJ	64	64	32	50m	50nΩ	6.0Ω	1.0mΩ	55		30	1.7	5.0	T05	AØ
23	BCY33A	600m	7.0mS	4.8m	SJ	32	32	32	50m	50nΩ	6.0Ω	1.0mΩ	25		17	1.1	3.0	T05	AØ
24	BCY34A	600m	7.0mS	4.8m	SJ	32	32	32	50m	50nΩ	6.0Ω	1.0mΩ	35		25	1.4	6.0	T05	AØ
25	#HSE193-RT	600m	10mSΔ	4.8m	SJ	200	200	5.0	50u	100	20mΩ	30	fΔ				T05	A	
26	#HSE194-RT	600m	10mSΔ	4.8m	SJ	350	250	5.0	50u	100	20mΩ	30	fΔ				T05	A	
27	2N3305	600m	20mSΔ	4.0m	SS	50	40	6.0	50nΩ	5.0Ω	1.0mΩ	40	Δ		50uΩ	3.0kΩ	6.0	T05	AØ
28	2N3306	600m	20mSΔ	4.0m	SS	50	40	6.0	500m	5.0Ω	1.0mΩ	70	Δ		80uΩ	6.0kΩ	10	T05	AØ
29	2N3857	600m	20mSΔ	3.4m	SS	45	45	30	600m	5.0Ω	6.0	1.0mΩ	45	Δ	1.5uΩ	35	20	T05	AØ
30	2N4412	600m	20mSΔ	3.4m	SS	40	30	5.0	600m	10nΩ	5.0Ω	1.0mΩ	120	Δ	500nΩ	32	32	T05	AØ
31	2N4412A	600m	20mSΔ	3.4m	SS	60	60	5.0	600m	10nΩ	5.0Ω	1.0mΩ	120	Δ	500nΩ	32	32	T05	AØ
32	2N4414	600m	20mSΔ	3.4m	SS	40	30	5.0	600m	10nΩ	5.0Ω	1.0mΩ	100	Δ	500nΩ	32	32	T05	AØ
33	2N4414A	600m	20mSΔ	3.4m	SS	60	60	5.0	600m	10nΩ	5.0Ω	1.0mΩ	100	Δ	500nΩ	32	32	T05	AØ
34	2N1991	600m	40mSΔ	4.8m	SJ	30	20	5.0	600m	100u	5.0Ω	1.0mΩ	15	f#Δ				T05	AØ
35	2N1131	600m	50mSΔ	4.0m	SJ	50	35	5.0	600m	100u	5.0Ω	1.0mΩ	15	Δ	1.0uΩ	35	35	T05	AØ
36	JAN2N1131	600m	50mSΔ	4.0m	SJ	50	40	5.0	600m	100u	5.0Ω	1.0mΩ	15	Δ	1.0uΩ	35	35	T05	AØ
37	2N1131A†	600m	50mSΔ	4.0m	SJ	60	40	5.0	600m	500nΩ	5.0Ω	1.0mΩ	15	Δ	1.0uΩ	35	35	T039	AØ
38	2N1132	600m	60mSΔ	4.0m	SJ	50	35	5.0	600m	100u	5.0Ω	1.0mΩ	25	Δ	1.0uΩ	35	35	T039	AØ
39	JAN2N1132	600m	60mSΔ	4.0m	SJ	50	40	5.0	600m	100u	5.0Ω	1.0mΩ	30	Δ	1.0uΩ	35	35	T05	AØ
40	2N1132A†	600m	60mSΔ	4.0m	SJ	60	40	5.0	600m	500nΩ	5.0Ω	1.0mΩ	25	Δ	1.0uΩ	35	35	T039	AØ
41	2N1132B†	600m	60mSΔ	4.0m	SJ	70	45	6.0	600m	10nΩ	5.0Ω	1.0mΩ	25	Δ	1.0uΩ	35	35	T039	AØ
42	2N2303	600m	60mSΔ	4.0m	SJ	50	35	5.0	600m	1.0uΩ	5.0Ω	1.0mΩ	75	Δ	1.0uΩ	35	35	T05	AØ
43	#2SA497	600m	7.0mS	5.0m	TJ	80	80	5.0	800m	10u	2.0Ω	200mΩ	70	f				T039	A
44	#2SA879	600m	8.0mS	5.4m	TJ	250	200	5.0	70m	10u	100	5.0mΩ	30	f†				T126	B
45	#2MA509	600m	100mSΔ	4.8m	SJ	35	30	5.0	500m	100nΩ	2.0Ω	50mΩ	100	f				R67a	B
46	2N4928	600m	100mSΔ	3.4m	SS	100	100	4.0	100m	50uΩ	100	1.0mΩ	20	fΔ				T05	AØ
47	2SA661	600m	100mSΔ	3.4m	SJ	70	50	5.0	200m	100nΩ	1.0Ω	50mΩ	100	f				X161	B
48	BC294	600m	100mSΔ	3.4m	SJ	60	60	5.0	600m	500nΩ	100	150mΩ	100	f				T05	AØ
49	BFX29	600m	100mSΔ	3.4m	SJ	60	60	5.0	600m	500nΩ	100	10mΩ	155	f	104u	600	1.5	T05	AØ
50	BFX87†	600m	100mSΔ	3.4m	SJ	50	50	4.0	600m	0.05uΩ	100	10mΩ	40	fΔ				T05	AØ
51	BFX88†	600m	100mSΔ	3.4m	SJ	40	40	4.0	600m	0.05uΩ	100	10mΩ	40	fΔ				T05	AØ
52	#HSE153-RT	600m	100mSΔ	4.8m	SJ	80	80	4.0	100nΩ	100	100mΩ	30	fΔ					T05	A
53	PN3638	600m	100mSΔ	4.8m	SJ	25	25	4.0	500m	35nΩ	1.0Ω	50mΩ	30	fΔ				T092	A
54	PN4354	600m	100mSΔ	4.8m	SJ	60	60	5.0	500m	100nΩ	100	10mΩ	25	fΔ				T092	A
55	PN4355	600m	100mSΔ	4.8m	SJ	60	60	5.0	500m	50nΩ	100	100uΩ	60	fΔ				T092	A
56	PN4356	600m	100mSΔ	4.8m	SJ	80	80	5.0	500m	50nΩ	100	100uΩ	25	fΔ				T092	A
57	TQ59†	600m	100mSΔ	3.4m	SJ	40	30	5.0	600m	20nΩ	5.0Ω	1.0mΩ	30	Δ	500nΩ	35	35	T05	A
58	TQ61†	600m	100mSΔ	3.4m	SJ	40	30	5.0	600m	20nΩ	5.0Ω	1.0mΩ	30	Δ	500nΩ	35	35	T05	A
59	TQ63†	600m	100mSΔ	3.4m	SJ	20	20	5.0	600m	100nΩ	5.0Ω	1.0mΩ	20	Δ	500nΩ	35	35	T05	A
60	#2SA950	600m	120mS	4.0m	SJ	30	25	5.0	800m	100nΩ	1.0Ω	100mΩ	320	f				T092	A
61	2SA509	600m	140mS	4.0m	SJ	35	30	5.0	50m	100nΩ	2.0Ω	50mΩ	100	f				R67a	B
62	2N3081	600m	150mSΔ	3.4m	SJ	70	50	6.0	600m	0.1uΩ	100	150mΩ	30	fΔ				T05	AØ
63	2N3495†	600m	150mSΔ	3.4m	SS	120	120	4.5	100m	10uΩ	100	10mΩ	40	Δ	300uΩ	1.2kΩ	2	T05	AØ
64	2N3495S†	600m	150mSΔ	3.4m	SS	120	120	4.5	100m	100nΩ	100	10mΩ	40	Δ	300uΩ	1.2kΩ	2.0	T05	AØ
65	HEP51-RT	600m	150mS	4.8m	SJ	30	25	4.0	600m	10u	20	80	f					T05	A
66	#HSE140-RT	600m	150mSΔ	4.8m	SJ	30	25	4.0	1.0uΩ	100	150mΩ	50	fΔ					T05	A
67	#HSE224-RT	600m	150mSΔ	4.8m	SJ	60	60	5.0	200nΩ	100	150mΩ	60	fΔ					T018	A
68	PN3638A	600m	150mSΔ	4.8m	SJ	25	25	4.0	500m	25nΩ	1.0Ω	50mΩ	100	fΔ				T092	A
69	TS2904	600m	150mSΔ	3.4m	SJ	60	30	5.0	600m	20nΩ	100	10mΩ	35	f				T039	AØ
70	TS2905	600m	150mSΔ	3.4m	SJ	60	30	5.0	600m	20nΩ	100	10mΩ	75	f				T039	AØ
71	BFX36*	600m	180mSΔ	2.2m	SJ	60	60	6.0	200m	10nΩ	5.0Ω	1.0mΩ	700	f	50uΩ	20kΩ	10	T077	AØ
72	2N2904†	600m	200mSΔ	3.4m	SS	60	40	5.0	600m	0.2uΩ	100	1.0mΩ	25	fΔ				T05	AØ
73	JAN2N2904†	600m	200mSΔ	3.4m	SS	60	40	5.0	600m	20nΩ	100	1.0mΩ	25	fΔ				T05	AØ
74	2N2904A†	600m	200mSΔ	3.4m	SS	60	60	5.0	600m	0.1uΩ	100	1.0mΩ	40	fΔ				T05	AØ
75	JAN2N2904A†	600m	200mSΔ	3.4m	SS	60	60	5.0	600m	10nΩ	100	1.0mΩ	40	fΔ				T05	AØ
76	2N2905†	600m	200mSΔ	3.4m	SS	60	40	5.0	600m	0.2uΩ	100	1.0mΩ	50	fΔ				T05	AØ

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3	TYPE No.	1	2	DERATE IN FREE AIR W/C	T M A M P	ABS MAX RATINGS @25°C				MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # s/a TO200 Ser.	# C O D E			
							V _{cb} (V)	V _{ceo} (V)	V _{ce} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} (X.0001)							
1		BC488L5	625m	150M	5.0m	SJ	60	60	4.0	1.0	100m	2.0	100m	100	1#			9.0p	AN	R207	A			
2		BC488L18	625m	150M	5.0m	SJ	60	60	4.0	1.0	100m	2.0	100m	100	1#			9.0p	AN	R204e	A			
3		BC488L	625m	150M	5.0m	SJ	60	60	4.0	1.0	100m	2.0	100m	100	1#			9.0p	AN	R210a	A			
4		BC490	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	60	1Δ#			9.0p	AN	R210a	F			
5		BC490-5	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	60	1Δ#			9.0p	AN	R207	A			
6		BC490-18	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	60	1Δ#			9.0p	AN	R204e	A			
7		BC490A5	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	140	1#			9.0p	AN	R207	A			
8		BC490A18	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	140	1#			9.0p	AN	R204e	A			
9		BC490A	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	140	1#			9.0p	AN	R210a	F			
10		BC490B5	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	250	1#			9.0p	AN	R207	A			
11		BC490B18	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	250	1#			9.0p	AN	R204e	A			
12		BC490B	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	250	1#			9.0p	AN	R210a	F			
13		BC490L5	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	100	1#			9.0p	AN	R207	A			
14		BC490L18	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	100	1#			9.0p	AN	R204e	A			
15		BC490L	625m	150M	5.0m	SJ	80	80	4.0	1.0	100m	2.0	100m	100	1#			9.0p	AN	R210a	F			
16	16	MP54889	625m	160M	5.0m	SJ	150	150	6.0	100m	10n	1.0	1.0m	8.0	1#			25u	12k	5.0	8.0p	PE	TO92	A
17	17	BC556A	625m	190M	5.0m	SJ	80	65	5.0	100m	15n	5.0	2.0m	180	1			25u	2.5k	3.5	8.5p	PE	R189b	A
18	18	BC556B	625m	190M	5.0m	SJ	80	65	5.0	100m	15n	5.0	2.0m	290	1			40u	4.5k	6.0	8.5p	PE	R189b	A
19	19	BC557A	625m	190M	5.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	180	1			25u	2.5k	3.5	8.5p	PE	R189b	A
20	20	BC557B	625m	190M	5.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	290	1			40u	4.5k	6.0	8.5p	PE	R189b	A
21	21	BC558A	625m	190M	5.0m	SJ	30	30	5.0	100m	15n	5.0	2.0m	180	1			25u	2.5k	3.5	8.5p	PE	R189b	A
22	22	BC558B	625m	190M	5.0m	SJ	30	30	5.0	100m	15n	5.0	2.0m	290	1			40u	4.5k	6.0	8.5p	PE	R189b	A
23	23	BC559A	625m	190M	5.0m	SJ	30	30	5.0	100m	15n	5.0	2.0m	180	1			25u	2.5k	3.5	8.5p	PE	R189b	A
24	24	BC559B	625m	190M	5.0m	SJ	30	30	5.0	100m	15n	5.0	2.0m	290	1			40u	4.5k	6.0	8.5p	PE	R189b	A
25	25	BC560A	625m	190M	5.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	180	1			25u	2.5k	3.5	8.5p	PE	R189b	A
26	26	BC560B	625m	190M	5.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	290	1			40u	4.5k	6.0	8.5p	PE	R189b	A
27	27	JE9015A	625m	180M	5.0m	SJ	50	45	5.0	100m	50n	5.0	1.0m	60	1Δ*			35u	8.5k	100	8.0p	PE	TO92	A
28	28	JE9015B	625m	180M	5.0m	SJ	50	45	5.0	100m	50n	5.0	1.0m	100	1Δ*			35u	8.5k	100	8.0p	PE	TO92	A
29	29	JE9015C	625m	180M	5.0m	SJ	50	45	5.0	100m	50n	5.0	1.0m	200	1Δ*			35u	8.5k	100	8.0p	PE	TO92	A
30	30	2SA890	625m	200M	5.7m	TJ	30	25	5.0	1.0	100m	10n	1.0m	160	1			150m			8.0p	PE	TO92	A
31	31	2SA891	625m	200M	5.7m	TJ	60	50	5.0	1.0	100m	10n	1.0m	160	1			150m			8.0p	PE	TO92	A
32	32	2ST2907T	625m	200M	5.0m	SS	60	60	5.0	600m	20n	10	100u	75	1Δ			100u	75	1Δ	8.0p	PE	R203	A
33	33	2ST2907A	625m	200M	5.0m	SS	60	60	5.0	600m	10n	10	100u	75	1Δ			100u	75	1Δ	8.0p	PE	R203	A
34	34	2ST3496T	625m	200M	5.0m	SS	80	80	4.5	100m	10n	10	100u	135	Δ			300u	1.2k	2.0	7.0p	PE	R203	A
35	35	2ST3504T	625m	200M	5.0m	SS	45	45	5.0	600m	10n	10	100u	135	Δ			800u	2.3k	15	8.0p	PE	R203	A
36	36	2ST3505T	625m	200M	5.0m	SS	60	60	5.0	600m	10n	10	100u	135	Δ			800u	2.3k	15	8.0p	PE	R203	A
37	37	2ST3644T	625m	200M	5.0m	SS	45	45	5.0	600m	35n	10	100u	100	Δ			300u	1.8k	3.0	8.0p	PE	R203e	A
38	38	2ST3645T	625m	200M	5.0m	SS	60	60	5.0	600m	35n	10	100u	100	Δ			300u	1.8k	3.0	8.0p	PE	R203e	A
39	39	2ST4403T	625m	200M	5.0m	SS	60	40	5.0	600m	10n	10	1.0m	60	Δ			100u	1.5k	8.0	8.5p	PE	R203	A
40	40	2ST3644T	625m	200M	5.0m	SS	45	45	5.0	600m	35n	10	100u	100	Δ			300u	1.8k	3.0	8.0p	PE	R210a	A
41	41	2ST3645T	625m	200M	5.0m	SS	60	60	5.0	600m	35n	10	100u	100	Δ			300u	1.8k	3.0	8.0p	PE	R210a	A
42	42	2ST3645T	625m	200M	5.0m	SS	60	60	5.0	600m	35n	10	100u	100	Δ			300u	1.8k	3.0	8.0p	PE	R210a	A
43	43	2ST3645T	625m	200M	5.0m	SS	60	60	5.0	600m	20n	10	100u	35	1Δ			100u	35	1Δ	8.0p	AN	R211	A
44	44	MP52907A	625m	200M	5.0m	SJ	60	60	5.0	600m	10n	10	100u	75	1Δ			40u	8.0k	5.0	8.0p	AN	R21	A
45	45	PN4142	625m	200M	5.0m	SJ	60	40	5.0	200m	50n	1.0	100u	120	1Δ			40u	8.0k	5.0	4.5p	AN	TO92	A
46	46	PN4143	625m	200M	5.0m	SS	60	40	5.0	200m	50n	1.0	150m	300	1Δ			40u	8.0k	5.0	8.0p	AN	TO92	A
47	47	TP3644	625m	200M	5.0m	SJ	60	40	5.0	200m	50n	1.0	150m	300	1Δ			40u	8.0k	5.0	8.0p	PE	TO92	A
48	48	TP3645	625m	200M	5.0m	SJ	60	40	5.0	200m	50n	1.0	150m	300	1Δ			40u	8.0k	5.0	8.0p	PE	TO92	A
49	49	MP53906T	625m	250M	5.0m	SJ	40	40	5.0	200m	50n	1.0	1.0m	100	1Δ			60u	12k	10	4.5p	AN	TO92	A
50	50	BC327.5	625m	280M	5.0m	SJ	50	45	5.0	500m	100n	1.0	50m	100	1Δ			50p			5.0p	AN	R207	A
51	51	BC327.18	625m	280M	5.0m	SJ	50	45	5.0	500m	100n	1.0	50m	100	1Δ			50p			5.0p	AN	R204e	A
52	52	BC328.5	625m	280M	5.0m	SJ	30	25	5.0	500m	100n	1.0	50m	100	1Δ			50p			5.0p	AN	R207	A
53	53	BC328.18	625m	280M	5.0m	SJ	30	25	5.0	500m	100n	1.0	50m	100	1Δ			50p			5.0p	AN	R204e	A
54	54	MP56533M	625m	280M	5.0m	SJ	40	40	4.0	600m	50n	1.0	100m	40	1Δ			8.0p			8.0p	PE	TO92	A
55	55	MP56534M	625m	280M	5.0m	SJ	40	40	4.0	600m	50n	1.0	100m	90	1Δ			8.0p			8.0p	PE	TO92	A
56	56	MP56535M	625m	280M	5.0m	SJ	30	30	4.0	600m	100n	1.0	100m	30	1Δ			8.0p			8.0p	PE	TO92	A
57	57	MP55139T	625m	300M	5.0m	SJ	20	20	5.0	100m	50n	2.0	10m	3.0	1Δ			5.0p			5.0p	PE	TO92	A
58	58	PN5139	625m	300M	5.0m	SS	20	20	5.0	100m	50n	2.0	1.0m	40	1Δ			5.0p			5.0p	AN	TO92	A
59	59	BF709	625m	350M	5.0m	SJ	30	30	3.0	500m	100n	1.0	2.5m	20	1Δ			5.0p			5.0p	AN	R210b	A
60	60	PN4121	625m	400M	5.0m	SS	40	40	5.0	100m	25n	10	1.0m	50	1Δ			24u	8.0	3.0	4.5p	AN	TO92	A
61	61	PN4122	625m	400M	5.0m	SS	40	40	5.0	100m	25n	10	1.0m	150	1Δ			40u	12	4.0	4.5p	AN	TO92	A
62	62	PN5140	625m	400M	5.0m	SS	5.0	5.0	4.0	50m	50n	1.0	1.0m	140	1#			40u	12	4.0	5.0p	AN	TO92	A
63	63	BF739	625m	600M	5.0m	SJ	30	30	3.0	500m	100n	1.0	2.5m	20	1Δ			5.0p			5.0p	AN	R190	A
64	64	2N5771	625m	850M	5.0m	SJ	15	15	4.5	50m	10n	5.0	1.0m	35	1Δ									

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W°C	T M E A M P X	ABS MAX RATINGS @ 25°C					MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# C O D E	
					BV _{cb0} (V)	BV _{ceo} (V)	BV _{ebo} (V)	I _c (A)	BIAS		COMMON EMITTER										
									V _{cb} (V)		I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} X.0001						
1#	BFR79T	800m	150M	6.4m	\$S	90	80	5.0	1.0	100n	10	1.0	20	Δ	#	6.5p	PE	T092	B		
2#	BFR79TO5T	800m	150M	6.4m	\$S	90	80	5.0	1.0	100n	10	1.0	25	Δ	#	6.5p	PE	R188	B		
3#	BFR80T	800m	150M	6.4m	\$S	70	60	5.0	1.0	100n	10	1.0	25	Δ	#	6.5p	PE	T092	B		
4#	BFR80TO5T	800m	150M	6.4m	\$S	70	60	5.0	1.0	100n	10	1.0	25	Δ	#	6.5p	PE	R188	B		
5#	BFR81T	800m	150M	6.4m	\$S	60	50	5.0	1.0	100n	10	1.0	25	Δ	#	6.5p	PE	T092	B		
6#	BFR81TO5T	800m	150M	6.4m	\$S	60	50	5.0	1.0	100n	10	1.0	25	Δ	#	6.5p	PE	R188	B		
7	BFX38ZT	800m	150M	4.5m	\$J	55	55	5.0	1.0	50n	5.0	100u	90	↑		15p	AN	T039	A		
8	BFX39ZT	800m	150M	4.5m	\$J	55	55	5.0	1.0	50n	5.0	100u	45	↑		15p	AN	T039	A		
9	BFX40ZT	800m	150M	4.5m	\$J	75	75	5.0	1.0	50n	5.0	100u	90	↑		15p	AN	T039	A		
10	BFX41ZT	800m	150M	4.5m	\$J	75	75	5.0	1.0	50n	5.0	100u	45	↑		15p	AN	T039	A		
11#	BFX74A	800m	150M	4.5m	\$J	60	60	5.0	500m	05u	10	50	50	#		15p	PE	T05	A		
12#	BSX41	800m	150M	4.5m	\$J	30	30	5.0	500m	25n	10	10	100	Δ		10p	PE	T039	A		
13#	2SA571T	800m	200M	5.6m	\$J	60	45	5.0	1.0	100n	10	50m	40	Δ		25p	PE	T05	A		
14#	BC116A	800m	200M	8.0m	\$J	45	40	5.0	1.0	50n	10	10m	70	Δ		6.0p	PE	T0105	A		
15#	BC287	800m	200M	4.5m	\$J	60	60	5.0	1.0	500n	2.0	500m	20	Δ		13p	DPE	T05	A		
16#	BCW45	800m	200M	4.5m	\$	70	55	5.0	1.0	100n	1.0	200m	40	↑		3.0p	PE	T039	A		
17	HSE175-RT	800m	200M	6.4m	\$J	120	80	5.0	1.0	500n	1.0	150m	150	Δ		10p	PL	T05	A		
18	PBM6004	800m	200M	4.5m	\$J	60	60	4.0	800m	500n	5.0	50m	40	Δ		20p	PE	R216g	A		
19	PTC127-RT	800m	200M	5.0m	\$J	90	90	5.5	500m	50n	10	10m	230	↑		15p	PE	T05	A		
20#	V745	800m	240M	8.0m	\$J	50	40	5.0	1.0	100u	10	50m	95	↑		6.0p	PE	T039	A		
21#	BC231M	800m	250M	5.3m	\$J	40	30	5.0	400m	100n	5.0	50m	100	Δ	*	6.0p	PE	T039	A		
22#	BF323	800m	250M	5.3m	\$J	30	25	3.0	600m	10	10	300	Δ	*	6.0p	PE	T039	A			
23	HSE152-RT	800m	250M	6.4m	\$J	40	20	3.5	1.0	100n	1.0	300m	15	Δ		10p	PL	T05	A		
24	SE8541	800m	250M	4.5m	\$J	30	30	5.0	1.0	50n	1.0	150m	70	#		20p	DPL	T039	A		
25	BC313T	800m	300M	5.3m	\$J	60	40	5.0	1.0	100n	2.0	500m	20	Δ		10p	PL	T039	A		
26	BC313AT	800m	300M	5.3m	\$J	80	60	5.0	1.0	100n	2.0	500m	20	Δ		10p	PL	T039	A		
27	2N5042	800m	500M	4.5m	\$J	40	40	5.0	1.0	05u	1.0	150m	40	#		35p	PE	T039	A		
28	BF423	830m	60M	6.6m	\$J	250	250	5.0	20m	10n	20	25m	50	Δ		1.6p	PE	R191	B		
29#	BC303-4	850m	40m	85	\$J	85	60	5.0	20n	10	150m	40	Δ					T039	B		
30#	BC303-5	850m	40m	85	\$J	85	60	5.0	20n	10	150m	70	Δ					T039	B		
31#	BC303-6	850m	40m	85	\$J	85	60	5.0	20n	10	150m	120	Δ					T039	B		
32#	BC304-4	850m	40m	60	\$J	60	45	5.0	20n	10	150m	40	Δ					T039	B		
33#	BC304-5	850m	40m	60	\$J	60	45	5.0	20n	10	150m	70	Δ					T039	B		
34#	BC304-6	850m	40m	60	\$J	60	45	5.0	20n	10	150m	120	Δ					T039	B		
35#	BC461-4	850m	550m	75	\$J	75	60	5.0	100n	4.0	500m	40	Δ					T05	B		
36#	BC461-5	850m	550m	75	\$J	75	60	5.0	100n	4.0	500m	60	Δ					T05	B		
37#	BC461-6	850m	550m	75	\$J	75	60	5.0	100n	4.0	500m	115	Δ					T05	B		
38#	BSS441	870m	70M	5.0m	\$J	65	60	6.0	5.0	500n	2.0	500m	30	Δ	#	100p	PE	T039	A		
39#	BSS461	870m	70M	5.0m	\$J	85	80	6.0	5.0	500n	2.0	500m	25	Δ	#	150p	PE	T039	A		
40#	BCW79-10T	870m	100M	5.0m	\$J	32	5.0	800m	1.0	100	100m	160	Δ			18p	PE	T039	A		
41#	BCW79-16T	870m	100M	5.0m	\$J	32	5.0	800m	1.0	100	100m	250	Δ			18p	PE	T039	A		
42#	BCW79-25T	870m	100M	5.0m	\$J	32	5.0	800m	1.0	100	100m	400	Δ			18p	PE	T039	A		
43#	BCW80-10T	870m	100M	5.0m	\$J	45	5.0	800m	1.0	100	100m	160	Δ			18p	PE	T039	A		
44#	BCW80-16T	870m	100M	5.0m	\$J	45	5.0	800m	1.0	100	100m	250	Δ			18p	PE	T039	A		
45#	BCW80-25T	870m	100M	5.0m	\$J	45	5.0	800m	1.0	100	100m	400	Δ			18p	PE	T039	A		
46#	2SB562	900m	7.1m	\$J	25	20	5.0	1.0	1.0u	2.0	500m	60	Δ			38p	E	R195c	B		
47	2SB646	900m	140M	7.2m	\$J	120	80	5.0	50m	10u	5.0	10m	60	Δ	*	4.0p	E	R195c	B		
48	2SB646A	900m	140M	7.2m	\$J	120	100	5.0	50m	10u	5.0	10m	60	Δ	*	4.0p	E	R195c	B		
49	2SB647	900m	140M	7.2m	\$J	120	80	5.0	1.0	10u	5.0	150m	60	Δ	*	20p	E	R195c	B		
50	2SB647A	900m	140M	7.2m	\$J	120	100	5.0	1.0	10u	5.0	150m	60	Δ	*	20p	E	R195c	B		
51#	2SA920	950m	40M	10m	\$J	200	200	8.0	500m	200n	2.0	100m	70	Δ		40p	E	B2	A		
52#	2SA835	950m	45M	10m	\$S	140	140	8.0	500m	200n	2.0	100m	150	↑		40p	E	B2	A		
53#	2SA897	950m	55M	10m	\$J	60	50	6.0	2.0	200n	2.0	100m	98	Δ		30p	E	B2	D		
54#	2SA861	950m	80M	10m	\$S	20	16	6.0	2.0	200n	2.0	100m	250	*		50p	E	B2	D		
55#	2SA706	950m	120M	10m	\$S	60	60	6.0	1.0	10u	2.0	100m	150	*		10p	E	B2	A		
56	MPSA70	1.0	125M	2.8	\$J	40	40	4.0	100m	100n	10	5.0m	40	Δ	*	4.0p	AN	T092	A		
57	2SB648	1.0	140M	8.0m	\$J	180	120	5.0	50m	10u	5.0	10m	60	Δ	*	4.5p	E	B7a	B		
58	2SB648A	1.0	140M	8.0m	\$J	180	160	5.0	50m	10u	5.0	10m	60	Δ	*	4.5p	E	B7a	B		
59	2SB649	1.0	140M	8.0m	\$J	180	120	5.0	1.5	10u	5.0	150m	60	Δ	*	27p	E	B7a	B		
60	2SB649A	1.0	140M	8.0m	\$J	180	160	5.0	1.5	10u	5.0	150m	60	Δ	*	27p	E	B7a	B		
61#	BCV67	1.0	180M	2.2m	\$J	45	5.0	50m	5.0	2.0m	350	↑			30u	4.5k	2.0	7.0p	PE	T018	A
62#	BF416	1.2	70M	10m	\$J	250	250	5.0	200m	50n	15	25m	30	Δ		4.5p	PE	T0126	B		
63#	BF418	1.2	70M	10m	\$J	300	300	5.0	200m	50n	15	25m	30	Δ		4.5p	PE	T0126	B		
64#	2SB434G	1.5	3.0M	13m	\$J	60	50	5.0	3.0	10u	1.0	500m	240	Δ		150p	E	Y220b	B		
65#	2SB435G	1.5	3.0M	13m	\$J	50	40	5.0	3.0	10u	1.0	500m	240	Δ		150p	E	Y220b	B		
66#	2SA940	1.5	4.0M	13m	\$J	150	150	5.0	1.5	10u	1.0	500m	75	↑		55p	D	Y220b	B		
67	HA7516	5.0	1.0M	7.1m	\$J	90	110	60	100n	5.0	1.0m	45			1.2ub	30	4.0	95p	A	R192	A
68	HA7517	5.0	1.0M	7.1m	\$J	110	110	60	100n	5.0	1.0m	45			1.2ub	30	4.0	95p	A	R192	A
69	HA7518	5.0	1.0M	7.1m	\$J	60	60	60	100n	5.0	1.0m	90			1.2ub	30	4.0	95p	A	R192	A
70#	2SA257	5.0	80M		\$J	50	40	5.0	2.0	5.0u	2.0	200m	50	↑		40p	EM	T05	∅		
71#	2SA258	5.0	80M		\$J	50	40	5.0	2.0	5.0u	2.0	100m	70	↑		40p	EM	T05	∅		
72#	2SA527	5.0	80M		\$J	50	40	5.0	2.0	5.0u	2.0	200m	50	↑		40p	EM	T05	∅		
73#	2SA528	5.0	80M		\$J	50	40	5.0	2.0	5.0u	2.0	100m	70	↑		40p	EM	T05	∅		
74	NPC750	300	100M	25m	\$S	50	50	5.0	50m	50n	3.0	100u	400	↑		10p	E	T092	A		

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	f _{ab} (Hz)	DERATE IN FREE AIR W/°C	TEMP. RANGE M A M P	ABS MAX RATINGS @25°C				MAX. l _{cb} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG # s/a TO200 Ser.	# C O A D E
						V _{cb} (V)	V _{ce} (V)	V _{be} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (X.0001)				
1	1T918	120m	900M	685u	SJ	30	15	3.0	30m	10n	1.0	5.0	3.0m	50	1.7p	DPE	S7a	AA		
2#	DC5401*	120m	5.5G	2.0m	SJ	20	15	3.0	10m	300n	5.0	2.0m	70	600f	PL	W14a	AV			
3#	DC5402*	120m	5.5G	2.0m	SJ	15	15	3.0	10m	300n	5.0	2.0m	70	600f	PL	W14a	V			
4#	DC5403*	120m	5.5G	2.0m	SJ	15	15	3.0	10m	300n	5.0	2.0m	70	600f	PL	W14a	V			
5#	DC5404*	120m	5.5G	2.0m	SJ	20	15	3.0	10m	300n	5.0	2.0m	70	600f	PL	W14a	V			
6	2N1586	125m	5.0M	2.0m	S	15	10	1.0	25m	1.0u	5.0	1.0m	9.0	30p		O3f	A			
7	2N1587	125m	5.0M	2.0m	S	30	20	1.0	25m	1.0u	5.0	1.0m	9.0	30p		O3f	A			
8	2N1588	125m	5.0M	2.0m	S	60	40	1.0	25m	1.0u	5.0	1.0m	9.0	30p		O3f	A			
9	2N1589	125m	5.0M	2.0m	S	15	10	1.0	25m	1.0u	5.0	1.0m	25	30p		O3f	A			
10	2N1590	125m	5.0M	2.0m	S	30	20	1.0	25m	1.0u	5.0	1.0m	25	30p		O3f	A			
11	2N1591	125m	5.0M	2.0m	S	60	40	1.0	25m	1.0u	5.0	1.0m	25	30p		O3f	A			
12	2N1592	125m	5.0M	2.0m	S	15	10	1.0	25m	1.0u	5.0	1.0m	70	30p		O3f	A			
13	2N1593	125m	5.0M	2.0m	S	30	20	1.0	25m	1.0u	5.0	1.0m	70	30p		O3f	A			
14	2N1594	125m	5.0M	2.0m	S	60	40	1.0	25m	1.0u	5.0	1.0m	70	30p		O3f	A			
15	2N264	125m	10M	1.0m	S	45	30	1.0	20m	1.0u	5.0	1.0m	20	3.0p		O3	A			
16	JAN2N337†	125m	10M	1.0m	S	45	45	1.0	20m	500n	2.0	1.0m	20	3.0p		T05	A			
17	2N337†	125m	20M	1.0m	S	45	45	1.0	20m	1.0u	5.0	1.0m	55	1.2p	GD	T05	A			
18	JAN2N338†	125m	20M	1.0m	S	45	45	1.0	20m	500n	2.0	1.0m	40	3.0p		T05	A			
19	2N1104	125m	20M	1.0m	S	45	35	1.0	20m	1.0u	2.0	1.0m	40	3.0p		T05	A			
20	T1493	125m	20M	1.2m	J	40	20	1.0	20m	2.0u	5.0	1.0m	15	2.0p	G	T05	A			
21	T1494	125m	20M	1.2m	J	40	20	1.0	20m	2.0u	5.0	1.0m	40	2.0p	G	T05	A			
22	T1495	125m	20M	1.2m	J	40	20	1.0	20m	2.0u	5.0	1.0m	120	2.0p	G	T05	A			
23	2N338†	125m	30M	1.0m	S	45	30	1.0	20m	2.0u	5.0	1.0m	80	2.0p	GD	T05	A			
24	JAN3N35	125m	70M	714u	S	30	20	1.0	20m	200n	2.0	1.3m	10	1.2p	GD	T012	AC			
25	3N34	125m	100M	1.0m	S	30	30	1.0	20m	.40u	2.0	1.3m	25	1.5p	GD	T012	GA			
26#	BSW69	125m	130M	1.6m	J	150	30	1.0	50m	100n	4.0	4.0m	30	4.0p	GD	S4	FA			
27#	3N35	125m	150M	1.0m	S	30	30	1.0	20m	.40u	2.0	1.3m	25	1.5p	GD	T012	GA			
28#	2SC715†	125m	200M	1.0m	S	40	40	5.0	100m	1.0u	6.0	1.0m	80	3.0p	PE	R145	D			
29#	BSW58†	125m	500M	1.6m	J	40	15	5.0	500m	400n	1.0	1.0m	40	4.0p	PE	S4	F			
30#	BSW59†	125m	600M	1.6m	J	30	12	5.0	500m	400n	1.0	1.0m	60	4.0p	PE	S4	F			
31	2N1271	130m	769u	1.0m	S	20	20	2.0	100m	.70u	1.0	2.0m	20	1.5p	PL	T09	A			
32	2SC562	130m	1.0m	1.0m	S	40	30	4.0	25m	1.0u	10	4.0m	40	.22pt	PL	T072	A			
33	BF167	130m	350M	1.0m	S	40	30	4.0	25m	1.0u	10	4.0m	57		PL	T072	A			
34#	SF167	130m	400M	1.0m	S	40	30	4.0	25m	50n	10	4.0m	25		DPL	X149	B			
35#	SF196	130m	400M	1.0m	S	40	30	4.0	25m	50n	10	4.0m	25		DPL	X149	B			
36#	BFX62	130m	675M	1.0m	S	30	20	4.0	12m	50n	10	2.0m	40		P	T072	J			
37#	BFV02	130m	1.6G	2.5m	J	25	15	2.5	25m	50n	1.0	2.0m	20	700f	PE	W15	C			
38#	2SC645	140m	200M	1.0m	S	30	30	5.0	30m	1.0u	1.0	2.0m	100	1.5p	PE	R128	A			
39#	BF480	140m	1.5G	2.0m	J	20	15	2.0	20m	1.0u	1.0	1.0m	10		PE	W15	A			
40	2SC563	145m	2.2m	1.0m	S	40	25	4.0	25m	1.0u	10	7.0m	38	.23pt	PE	T072	A			
41#	2SC477	145m	190M	1.1m	S	32	32	4.0	30m	1.0u	10	1.0m	80		PE	T072	A			
42	2N4435	145m	220M	1.1m	S	30	20	5.0	30m	1.0u	10	1.0m	67		PE	T072	A			
43#	BF185	145m	220M	1.1m	S	30	20	5.0	30m	1.0u	10	1.0m	67		PE	T072	A			
44#	BF115	145m	220M	1.1m	S	30	20	5.0	30m	1.0u	10	1.0m	67	650ft	PE	T072	J			
45#	2N4434	145m	300M	1.1m	S	30	20	5.0	30m	1.0u	10	1.0m	115		PE	T072	J			
46#	BF184	145m	300M	1.0m	S	30	20	5.0	30m	1.0u	10	1.0m	115		PE	T072	J			
47	2N1005	150m	1.0m	1.0m	S	15	15	1.0	25m	.10u	5.0	1.0m	10		PE	T05	A			
48	2N1006	150m	1.0m	1.0m	S	15	15	1.0	25m	.10u	5.0	1.0m	25		PE	T05	A			
49	2N1269	150m	769u	1.0m	S	20	20	2.0	100m	.70u	1.0	2.0m	50	1.5p	D	T09	A			
50	2N1417	150m	1.2m	1.0m	S	15	15	2.0	50m	1.0u	6.0	1.0m	30		D	T05	A			
51	2N1418	150m	1.2m	1.0m	S	30	30	2.0	50m	1.0u	6.0	1.0m	30		D	T05	A			
52	2N2349	150m	1.2m	1.0m	S	40	24	1.5	25m	1.0u	5.0	1.0m	120		G	T05	A			
53	2N2610	150m	1.2m	1.0m	S	45	40	1.0	25m	2.0u	5.0	1.0m	9.0	4.0p	G	O3e	A			
54	2N3247	150m	1.2m	1.0m	S	60	45	1.0	50m	1.0u	6.0	1.0m	200	2.0p	G	X16	D			
55#	2SC1622	150m	1.5m	1.0m	J	30	25	5.0	30m	50n	3.0	500u	400			X156b	A			
56#	2SC1622D6	150m	1.5m	1.0m	J	30	25	5.0	30m	50n	3.0	500u	200			X156b	A			
57#	2SC1622D7	150m	1.5m	1.0m	J	30	25	5.0	30m	50n	3.0	500u	300			X156b	A			
58#	2SC1622D8	150m	1.5m	1.0m	J	30	25	5.0	30m	50n	3.0	500u	450			X156b	A			
59#	2SC1623	150m	1.5m	1.0m	J	50	40	5.0	100m	100n	6.0	1.0m	60			X156b	A			
60#	2SC1623L3	150m	1.5m	1.0m	J	50	40	5.0	100m	100n	6.0	1.0m	60			X156b	A			
61#	2SC1623L4	150m	1.5m	1.0m	J	50	40	5.0	100m	100n	6.0	1.0m	90			X156b	A			
62#	2SC1623L5	150m	1.5m	1.0m	J	50	40	5.0	100m	100n	6.0	1.0m	135			X156b	A			
63#	2SC1623L6	150m	1.5m	1.0m	J	50	40	5.0	100m	100n	6.0	1.0m	200			X156b	A			
64#	2SC1623L7	150m	1.5m	1.0m	J	50	40	5.0	100m	100n	6.0	1.0m	300			X156b	A			
65#	2SC1787	150m	1.5m	1.0m	J	35	35	5.0	50m	100n	5.0	2.0m	260		PE	S9	B			
66#	2SC1980	150m	1.5m	1.0m	J	120	120	5.0	50m	100n	5.0	2.0m	260		PE	T092	B			
67#	BFV16	150m	1.2m	1.0m	S	100	30	2.0	30m	1.0u	3.0	3.0m	20		PL	S5a	A			
68#	BFV511	150m	1.2m	1.0m	S	60	30	2.0	30m	1.0u	3.0	3.0m	50		PL	S5a	P			
69#	BFV53†	150m	1.2m	1.0m	S	60	30	2.0	30m	1.0u	3.0	3.0m	50		PL	S5a	P			
70#	BFV60	150m	1.0m	1.0m	S	30	30	5.0	30m	.05u	5.0	1.0m	100		PE	S5a	P			
71#	BFV61	150m	1.0m	1.0m	S	30	30	5.0	30m	.05u	5.0	1.0m	100		PE	S5a	P			
72#	BFV62	150m	1.2m	1.0m	S	60	50	6.0	50m	.05u	5.0	1.0m	100		PE	S5a	P			
73#	PL1021	150m	1.0m	1.0m	S	40	15	4.5	4.0u	1.0	1.0	1.0m	20		PE	W7	A			
74#	PL1022	150m	1.0m	1.0m	S	40	15	4.5	4.0u	1.0	1.0	1.0m	40		PE	W7	A			
75#	PL1023	150m	1.0m	1.0m	S	40	15	4.5	4.0u	35	1.0	1.0m	40		PE	W7	A			
76#	PL1024	150m	1.0m	1.0m	S	20	12	5.0	1.0u	35	1.0	1.0m	20		PE	W7	A			
77#	PL1025	150m	1.0m	1.0m	S	20	12	5.0	1.0u	35	1.0	1.0m	40		PE	W7	A			
78#	PL1026	150m	1.0m	1.0m	S	30	12	5.0	1.0u	35	1.0	1.0m	30		PE	W7	A			
79#	PL1051	150m	1.0m	1.0m	S	60	30	5.0	10n	1.0	1.0	1.0m	25		PE	W7	A			
80#	PL1052	150m	1.0m	1.0m	S	75	40	6.0	10n	1.0	1.0	1.0m	25		PE	W7	A			
81#	PL1053	150m	1.0m	1.0m	S	60	30	5.0	10n	1.0	1.0	1.0m	50		PE	W7	A			
82#	PL1054	150m	1.0m	1.0m	S	75	40	6.0	10n	1.0	1.0	1.0m	50		PE	W7	A			
83#	PL1055	150m	1.0m	1.0m	S	60	30	5.0	10n	1.0	1.0	1.0m	12		PE	W7	A			
84#	PL1061	150m	1.0m	1.0m	S															

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN AIR W/°C (Hz)	T ABS MAX RATINGS @25°C BVcbo (V) BVceo (V) BVebo (V) Ic (A) lobo @MAX Vcb (A)	TYPICAL 'h' PARAMETERS										Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C O D E	
					BIAS			COMMON EMITTER				Cob							
					Vcb (V)	Ic (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)	hoe (F)	hie (F)	hre (F)						
1#	BFV431	150m	300MΔ	1.2m	SJ	30	12	4.0	200m	.50u	1.0	30m	30	Δ	5p	PE	S5a	P	
2#	BFV441	150m	300MΔ	1.2m	SJ	30	15	4.0	200m	.50u	1.0	30m	30	Δ	5p	PE	S5a	P	
3#	BFV461	150m	300MΔ	1.2m	SJ	35	15	5.0	200m	.08u	1.0	100m	30	Δ	5p	PE	S5a	P	
4#	TC3200	150m	300MΔ	1.2m	SJ	20	30	25	20	20u	10	4.0m	25	Δ	200f	PE	T072	G	
5#	2SC739	150m	350MΔ	1.5m	ΔJ	25	12	4.0	20m	1.0u	6.0	1.0m	60	#	15p	PE	T092	G	
6#	SF335	150m	370MΔ	1.6m	SJ	40	30	4.0	25m	50n	10	1.0m	36	Δ	350ft	DPE	X149	C	
7#	SF335C	150m	370MΔ	1.6m	SJ	40	30	4.0	25m	50n	10	1.0m	72	Δ	350ft	DPE	X149	C	
8#	SF335D	150m	370MΔ	1.6m	SJ	40	30	4.0	25m	50n	10	1.0m	38	Δ	350ft	DPE	X149	C	
9#	2N3493	150m	400MΔ	860u	SS	12	8.0	5.0	25m	5.0n	0.5	10u	25	Δ	700f	PE	R176a	G	
10#	2SC2691	150m	400MΔ	1.2m	SJ	25	20	5.0	150m	1.0u	1.0	10m	90	†	3.5p	PE	W3a	C	
11#	2SC463H	150m	400MΔ	1.2m	SJ	35	35	4.0	20m	100n	10	2.0m	5.5		.6p	PL	R217	G	
12#	2SC738	150m	400MΔ	1.5m	ΔJ	25	12	4.0	20m	1.0u	6.0	1.0m	60	#	1.5p	PE	T092	D	
13#	2SC1621B2†	150m	400MΔ	1.5m	ΔJ	25	20	5.0	200m	100n	.50	1.0m	40	Δ*	6.0p	E	X156b	A	
14#	2SC1621B3†	150m	400MΔ	1.5m	ΔJ	25	20	5.0	200m	100n	.50	1.0m	60	Δ*	6.0p	E	X156b	A	
15#	2SC1621B4†	150m	400MΔ	1.5m	ΔJ	25	20	5.0	200m	100n	.50	1.0m	90	Δ*	6.0p	E	X156b	A	
16#	BF252	150m	400MΔ	1.0m	SJ	40	40	4.0	100n	1.0	10	2.0m	30	Δ	4p	DPL	T072	G	
17#	BFV421	150m	400MΔ	1.2m	SJ	35	15	4.5	200m	.40u	1.0	10m	30	Δ	4p	PE	S5a	P	
18#	BFV47	150m	400MΔ	1.2m	SJ	30	12	5.0	200m	.40u	.35	10m	30	Δ	4p	PE	S5a	P	
19#	PL4021†	150m	400MΔ	1.0m	SS	40	15	4.5	200m	.40u	1.0	10m	20	Δ	4p	PE	S6	P	
20#	SF334	150m	430MΔ	1.6m	SJ	40	30	4.0	30m	5.0n	10	1.0m	67	Δ	350ft	DPE	X149	C	
21#	SF334B	150m	430MΔ	1.6m	SJ	40	30	4.0	30m	5.0n	10	1.0m	110	Δ	350ft	DPE	X149	C	
22#	2SC921	150m	450MΔ	1.5m	ΔJ	25	12	4.0	10m	100n	3.0	500u	65	†	1.5p	PL	u23a	C	
23#	2SC1779	150m	450MΔ	1.5m	ΔJ	30	20	3.0	20m	100u	#	10	2.0m	25	Δ†	500ft	PL	T092	C
24#	2SC605	150m	480MΔ	1.0m	SJ	30	30	4.0	20m	.20u	10	2.0m	60	†	1p	PL	W3a	C	
25#	2SC389	150m	500MΔ	1.2m	SJ	20	15	3.0	20m	10u	5.0	4.0m	50		1p	PL	T072	G	
26#	2SC657	150m	500MΔ	1.0m	SS	18	18	3.0	30m	.20u	10	4.0m	50	†	1.1p	D	X153	J	
27#	2SC927	150m	500MΔ	1.0m	ΔJ	30	15	3.0	20m	1.0u	6.0	1.0m	80	†	1.0p	PL	T0104	G	
28#	BF288	150m	500MΔ	1.0m	SJ	40	40	4.0	20m	50n	7.0	1.0m	65	Δ	DPE	T072	G		
29#	BFV27†	150m	500MΔ	1.2m	SJ	15	6.0	4.0	4.0	.10u	1.0	30m	15	#Δ	3p	PE	S5a	P	
30#	BFV28†	150m	500MΔ	1.7m	SJ	15	6.0	4.0	50m	10u	.40	1.0m	15	#Δ	3p	PE	S5a	P	
31#	BFV80	150m	500MΔ	1.2m	SJ	25	12	3.0	50m	.50u	1.0	3.0m	20	Δ	1.7p	PE	S5a	P	
32#	PL4022†	150m	500MΔ	1.0m	SS	40	15	4.5	200m	.40u	1.0	10m	40	Δ	4p	PE	S6	P	
33#	PL4023†	150m	500MΔ	1.0m	SS	40	15	4.5	200m	.40u	1.0	100m	20	#Δ	4p	PE	S6	P	
34#	2SC606	150m	530MΔ	1.0m	SJ	30	30	4.0	20m	.20u	10	2.0m	60	†	1p	PL	W3a	C	
35#	BF200	150m	550MΔ	1.0m	SJ	30	20	3.0	20m	10	10	3.0m	16	Δ	.90p	PL	T072	G	
36#	2SC762	150m	600MΔ	1.0m	SJ	30	20	3.0	20m	100u	#	2.0m	13	Δ	280ft	PL	T072	G	
37#	2SC997	150m	600MΔ	1.0m	ΔJ	40	30	25m	25n	10	10	4.0m	70	†	1.5p	PL	T072	G	
38#	2SC1778	150m	600MΔ	1.5m	ΔJ	25	20	3.0	15m	100u	#	10	3.0m	50	†	500ft	PL	T092	E
39#	BF181	150m	600MΔ	1.0m	SJ	30	20	3.0	20m	100u	#	10	2.0m	20	†	280ft	PL	T072	G
40#	BF251	150m	600MΔ	1.0m	SJ	30	30	4.0	50n	10	4.0m	30	Δ		DPL	T072	G		
41#	BF270	150m	600MΔ	1.0m	SJ	40	40	4.0	20m	10	4.0m	50	†		PE	T072	J		
42#	BFV59	150m	600MΔ	1.3m	SS	25	13	3.0	50m	.05u	10	4.0m	20	Δ	2.5p	PE	S5a	P	
43#	BFW63	150m	600MΔ	1.0m	SJ	40	30	4.0	4.0	.5u	10	4.0m	70	#	.2p	DPL	T072	J	
44#	PL4112	150m	600MΔ	1.0m	SS	30	15	3.0	200m	1.0	1.0	3.0m	20	Δ	2.0p	PE	S6	P	
45#	SF173	150m	600MΔ	1.2m	ΔA	40	25	4.0	25m	50n	10	7.0m	38	Δ	400ft	DPE	X149	B	
46#	SF197	150m	600MΔ	1.2m	ΔA	40	25	4.0	25m	50n	10	7.0m	38	Δ	300ft	DPE	X149	C	
47#	2SC707	150m	650MΔ	1.0m	SJ	20	20	3.0	20m	100u	10	2.0m	50	†	4.0p	PE	T072	G	
48#	2SC947	150m	650MΔ	1.0m	SJ	25	20	3.0	15m	100u	#	2.0m	20	†	330ft	PL	T072	G	
49#	2SC1047	150m	650MΔ	1.5m	ΔJ	30	20	3.0	15m	10u	6	1.0m	40	Δ	800ft	PE	T092	B	
50	A482	150m	650MΔ	1.0m	SJ	25	20	3.0	15m	50n	10	2.0m	20	†	1.1p	PE	T072	G	
51	A484	150m	650MΔ	1.0m	SJ	30	20	3.0	20m	50n	10	3.0m	30	†	28p	PL	T072	G	
52#	BF182	150m	650MΔ	1.0m	SJ	25	20	3.0	15m	50n	10	3.0m	15	Δ	330ft	PL	T072	G	
53	BF200	150m	650MΔ	1.0m	SJ	30	20	1.0	20m	50n	10	3.0m	15	Δ	280ft	AN	T072	G	
54#	BFW64	150m	650MΔ	1.0m	SJ	40	30	4.0	4.0	.5u	10	4.0m	70	#	.2p	DPL	T072	J	
55#	2SC761	150m	675MΔ	1.0m	SJ	30	20	3.0	20m	100u	#	2.0m	13	Δ	280ft	PL	T072	G	
56#	BF180	150m	675MΔ	1.0m	SJ	30	20	3.0	20m	100u	#	2.0m	13	Δ	280ft	PL	T072	G	
57#	BF261	150m	700MΔ	1.0m	SJ	40	30	4.0	50m	6.0	1.0m	70	†		PE	T072	C		
58#	BF273	150m	750MΔ	1.4m	ΔJ	40	35	4.0	50m	7.0	1.0m	80	†		400ft	PE	T0106	C	
59#	BF274	150m	750MΔ	1.4m	ΔJ	40	35	4.0	50m	7.0	1.0m	40	†		400ft	PE	T0106	C	
60#	2SC618	150m	800MΔ	1.2m	SJ	25	13	4.0	25m	100n	6.0	2.0m	80		60	PE	T072	G	
61#	2SC618A	150m	800MΔ	1.2m	SJ	25	13	4.0	25m	100n	6.0	2.0m	80		60	PE	T072	G	
62#	2SC629	150m	800MΔ	1.0m	SS	18	13	3.0	30m	.20u	3.0	1.0m	30	†	1.3p	D	X153	J	
63#	2SC948	150m	800MΔ	1.0m	SJ	25	20	3.0	15m	100u	#	3.0m	24	†	330ft	PL	T072	G	
64#	2SC1180	150m	800MΔ	1.0m	SJ	30	20	3.0	20m	1.0u	6.0	1.0m	130	†	1.1p	PL	T072	G	
65	A483	150m	800MΔ	1.0m	SJ	25	20	3.0	15m	100n	10	3.0m	23	†	1.1p	PE	T072	G	
66#	BF183	150m	800MΔ	1.0m	SJ	25	20	3.0	15m	100n	10	3.0m	23	†	330ft	PL	T072	G	
67#	BF287	150m	800MΔ	1.0m	SJ	40	40	4.0	20m	50n	10	2.0m	40	Δ	DPE	T072	G		
68#	2SC1117	150m	850MΔ	1.2m	SJ	20	20	3.0	20m	1.0u	10	2.0m	150	†	350ft	PL	R217	G	
69#	BFW41	150m	850MΔ	1.2m	SS	30	15	3.0	30m	1.0u	1.0	3.0m	65		3.0p	PE	T072	G	
70#	2SC1070	150m	900MΔ	1.2m	SJ	30	25	4.0	20m	100n	10	3.0m	40	Δ*	500f	PE	W102	U	
71#	2SC1547	150m	900MΔ	1.2m	SJ	30	20	3.0	20m	1.0u	10	3.0m	20	Δ	800f	PL	T072	G	
72#	BF290	150m	900MΔ	1.0m	SJ	40	40	4.0	20m	50n	10	3.0m	40	Δ	800f	DPE	T072	G	
73#	2SC392	150m	1.0GΔ	1.2m	SJ	30	20	3.0	20m	500n	10	2.0m	80	†	1.5p	PL	T072	G	
74#	2SC787	150m	1.0GΔ	1.2m	SJ	25	20	3.0	20m	25n	10	2.0m	25	Δ	300ft	PL	T072	G	
75#	2SC287A	150m	1.1GΔ	1.2m	SJ	35	15	4.0	20m	1.0u	10	5.0m	80	*	700f	E	W3a	C	
76#	2SC288A1*	150m	1.1GΔ	1.2m	SJ	35	15	4.0	20m	1.0u	10	5.0m	80	*	1.1p	E	W106	E	
77#	2SC288A	150m	1.1GΔ	1.2m	SJ	35	15	4.0	20m	200n	10	5.0m	80	*	700f	E	W106	E	
78#	2SC1780	150m	1.2GΔ	1.5m	ΔJ	25	18	3.0	15m	100u	#	10	2.0m	50	†	1.2p	PE	S9	B
79#	2SC1790	150m	1.2GΔ	1.0m	ΔJ	25	18	3.0	15m	100u	10</								

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	M E A P	T ABS MAX RATINGS @25°C					TYPICAL 'h' PARAMETERS							Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C O D E
					BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	Icbo @MAX Vcb (A)	BIAS			COMMON EMITTER							
										Vcb (V)	Ie (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)					
1	2N3877A	200m	2.6m	SS	85	85	4.0	50m	500m	4.5	2.0m	20	Δ					T098	B	
2	2N3900	200m	2.6m	SS	18	18	5.0	100m	100n	4.5	2.0m	170	Δ					T098	B	
3	2N3900A	200m	2.6m	SS	18	18	5.0	100m	100n	4.5	2.0m	170	Δ					T098	B	
4	2N3901	200m	2.6m	SS	18	18	5.0	100m	100n	10	2.0m	350	Δ					T098	B	
5	2N4086	200m	2.6m	SS	12	12	5.0	100m	100n	10	2.0m	150	Δ					T098	B	
6	2N4087	200m	2.6m	SS	12	12	5.0	100m	100n	10	2.0m	250	Δ					T098	B	
7	2N4087A	200m	2.6m	SS	12	12	5.0	100m	100n	10	2.0m	250	Δ					T098	B	
8	2N4256f	200m	2.6m	SS	30	30	∅	5.0	100m	500n	2.0	10m	60	Δ					T098	B
9	2N5172	200m	2.6m	SS	25	25	5.0	100m	100n	10	10m	100	Δ					T098	B	
10	2N5174	200m	2.6m	SS	90	75	5.0	25m	500n	5.0	10m	40	Δ					T098	B	
11	2N5175	200m	2.6m	SS	130	100	5.0	25m	500n	5.0	10m	55	Δ					T098	B	
12	2N5176	200m	2.6m	SS	130	100	5.0	25m	500n	5.0	10m	140	Δ					T098	B	
13#	2SC803*	200m	1.6m	SJ	7.0	4.5	7.0	50m	1.0m	5.0	100m	100	†					R144a	QY∅	
14#	2SC719†	200m	1.3m	SJ	20	15	4.0	200m	400n	1.0	10m	60	†					T046	A∅	
15#	2SC1349†	200m	1.3m	SJ	20	15	4.0	200m	400n	1.0	10m	60	†					T046	A∅	
16	3N87∅	200m	1.3m	SS	20		10	10m	1.0m	5.0	500m	5.0	Δ					T072	GC∅	
17	3N88∅	200m	1.3m	SS	20		10	10m	1.0m	5.0	500m	5.0	Δ					T072	GC∅	
18	40894	200m	1.1m	SJ	20	12	2.5	50m	20n	6.0	5.0	14						T072	G	
19	40895	200m	1.1m	SJ	20	12	2.5	50m	20n	6.0	5.0	14						T072	G	
20	40896	200m	1.1m	SJ	20	12	2.5	50m	20n	6.0	5.0	14						T072	G	
21	40897	200m	1.1m	SJ	20	12	2.5	50m	20n	6.0	5.0	14						T072	G	
22	BC170	200m	2.0	†J	20	20	5.0	100m	100n	1.0	1.0	35	†Δ					T0106	A	
23	CS4193	200m	2.0m	†J	30	12	2.0	50m	500n	10	8.0m	50						T0106	A	
24	CS4194	200m	2.0m	†J	30	12	2.0	50m	500n	10	8.0m	50						T0106	A	
25#	MD2974*	200m	1.6m	SJ	45	45	6.0	30m	10n	5.0	1.0m	150	†Δ					R148a	A	
26#	MD2975*	200m	1.6m	SJ	45	45	6.0	30m	10n	5.0	1.0m	300	†Δ					R148a	A	
27#	MD2978*	200m	1.6m	SJ	60	60	6.0	30m	2.0n	5.0	1.0m	150	†Δ					R148a	A	
28#	MD2979*	200m	1.6m	SJ	60	60	6.0	30m	2.0n	5.0	1.0m	300	†Δ					R148a	A	
29	MPS2923	200m	2.7m	#J	25	25	5.0	100m	.50u	10	2.0m	90	Δ					R196a	Δ	
30	MPS2924	200m	2.7m	#J	25	25	5.0	100m	.50u	10	2.0m	150	Δ					R196a	Δ	
31	MPS2925	200m	2.7m	#J	25	25	5.0	100m	.50u	10	2.0m	235	Δ					R196a	Δ	
32	SA2253∅	200m		SJ	40				.05u∅	5.0	.10m	25	†					T05	PL	
33	SA2254∅	200m		SJ	60	30			.01u∅	5.0	.10m	45	†					T05	PL	
34#	2SN394	200m	200m	†J	35	30	4.0	100m	500n	1.2	2.0m	25	†Δ*					R67a	A	
35#	2SC466	200m	400m	†J	30	12	2.0	20m	500n	6.0	1.0m	40	Δ					R103a	G	
36#	MPS5127	200m	12k	†J	20	12	3.0	100m	50n	10	2.0m	12	Δ					T092	A	
37#	8F357	200m	1.6m	SS	30	15	3.0	50m	10n	6.0	5.0m	100						R230c	A	
38	2N470	200m	8.0m	SS	15	15	2.0	25m	500n	5.0	1.0m	10	Δ					T05	A	
39	2N471	200m	8.0m	SS	30	30	2.0	25m	500n	5.0	1.0m	10	Δ					T05	A	
40	2N471A	200m	8.0m	SS	30	30	2.0	25m	500n	5.0	1.0m	10	Δ					T05	A	
41	2N472	200m	8.0m	SS	45	45	2.0	25m	500n	5.0	1.0m	10	Δ					T05	A	
42	2N472A	200m	8.0m	SS	45	45	2.0	25m	500n	5.0	1.0m	10	Δ					T05	A	
43	2N473	200m	8.0m	SS	15	15	2.0	25m	500n	5.0	1.0m	10	Δ					T05	A	
44	2N474	200m	8.0m	SS	30	30	2.0	25m	500n	5.0	1.0m	20	Δ					T05	A	
45	2N474A	200m	8.0m	SS	30	30	2.0	25m	500n	5.0	1.0m	20	Δ					T05	A	
46	2N475	200m	8.0m	SS	45	45	2.0	25m	500n	5.0	1.0m	20	Δ					T05	A	
47	2N475A	200m	8.0m	SS	45	45	2.0	25m	500n	5.0	1.0m	20	Δ					T05	A	
48	2N541	200m	10m	SS	15	15	2.0	25m	500n	5.0	1.0m	80	Δ					T05	A	
49	2N542	200m	10m	SS	30	30	2.0	25m	500n	5.0	1.0m	80	Δ					T05	A	
50	2N542A	200m	10m	SS	30	30	2.0	25m	500n	5.0	1.0m	80	Δ					T05	A	
51	2N543	200m	10m	SS	50	50	2.0	25m	500n	5.0	1.0m	80	Δ					T05	A	
52	2N543A	200m	10m	SS	50	50	2.0	25m	500n	5.0	1.0m	80	Δ					T05	A	
53	2N476	200m	12m	SS	15	15	2.0	25m	500n	5.0	1.0m	30	Δ					T05	A	
54	2N477	200m	12m	SS	30	30	2.0	25m	500n	5.0	1.0m	30	Δ					T05	A	
55	2N476A	200m	17.7m	SS	15				1.0m	5.0	1.0m	45						T05	GD	
56	2N478	200m	20m	SS	15	15	2.0	25m	500n	5.0	1.0m	40	Δ					T05	A	
57	2N479	200m	20m	SS	30	30	2.0	25m	500n	5.0	1.0m	40	Δ					T05	A	
58	2N479A	200m	20m	SS	30	30	2.0	25m	500n	5.0	1.0m	40	Δ					T05	A	
59	2N480	200m	20m	SS	45	45	2.0	25m	500n	5.0	1.0m	40	Δ					T05	A	
60	2N480A	200m	20m	SS	45	45	2.0	25m	500n	5.0	1.0m	40	Δ					T05	A	
61	2N1674	200m	20m	SS	45	45	2.0	25m	500n	5.0	1.0m	50	Δ					T05	A	
62#	BC114	200m	20m	†J	30	25	6.0		.05u	10	.05m	200	†					R97a	A	
63	EN930	200m	30m	†J	45	45	5.0	30m	50n	5.0	1.0m	600	†					T0106	A	
64#	PL4061	200m	30m	SS	45	45	5.0	30m	10n	5.0	1.0m	40	†Δ					S6	PL∅	
65#	PL4062	200m	30m	SS	45	45	5.0	30m	10n	5.0	1.0m	100	†Δ					S6	PL∅	
66#	PN929	200m	30m	†J	45	45	5.0	30m	50n	5.0	1.0m	40	Δ					T0106	A	
67#	PN930	200m	30m	†J	45	45	5.0	30m	50n	5.0	1.0m	100	Δ					T0106	A	
68	TD101*	200m	30m	†J	60	30	5.0	500m	10n	5.0	1.0m	120	Δ					R138	PL*	
69	TD102*	200m	30m	†J	60	30	5.0	500m	10n	5.0	1.0m	120	Δ					R138	PL*	
70	TD201*	200m	30m	†J	60	30	5.0	500m	10n	5.0	1.0m	120	Δ					R138	PL*	
71	TD202*	200m	30m	†J	60	30	5.0	500m	10n	5.0	1.0m	120	Δ					R138	PL*	
72	2N3565	200m	40m	†J	30	25	6.0	50m	50n	5.0	1.0m	120	Δ					R110	A	
73	2N4966	200m	40m	†J	50	40	6.0	30m	25n	5.0	1.0m	500	†					T0106	A	
74	2N4967	200m	40m	†J	50	40	6.0	30m	25n	5.0	1.0m	950	†					T0106	A	
75	2N4968	200m	40m	†J	30	25	6.0	30m	50n	5.0	1.0m	500	†					T0106	A	
76	2N5133	200m	40m	†J	20	18	3.0	50m	.05u	5.0	1.0m	50	Δ					T0106	A	
77	3N120∅	200m	40m	SS	30				.01u									T072	GC∅	
78	3N121∅	200m	40m	SS	30				.01u									T072	GC∅	
79	JAN3N127∅	200m	40m	†J	30				10n									T072	GC∅	
80	BC132	200m	40m	†J	30				.05u	5.0	1.0m	280	†					R97a	A	
81	CS4003	200m	40m	†J	30	25	6.0		50n	10	8.0m	150	†					T0106	A	
82	CS4060	200m	40m	†J	40	40	5.0		10n	5.0	1.0m	50	Δ					R124b	A	
83	CS4061	200m	40m	†J	40	40	5.0		10n	5.0	1.0m	250	Δ					R124b	A	
84	SE																			

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @ 25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	T M A M X P	ABS MAX RATINGS @ 25°C				MAX. I _{cb0} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS					Cob (F)	STRUC TURE	Y200 s/a TO200 Ser.	# C O E A D E	
						V _{cb0} (V)	V _{ceo} (V)	V _{be0} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)					hre (X,0001)
1#	2SC458LG	200m	230m	2.0m	↑J	30	30	5.0	100m	500n	120	2.0m	100	11u	16k	700m	1.8p	PE	S8	B
2#	2SC460	200m	230m	2.0m	↑J	30	30	5.0	100m	500n	120	2.0m	100	16k	700m	1.5p	PE			
3#	2SC461	200m	230m	2.0m	↑J	30	30	5.0	100m	500n	120	2.0m	100	16k	700m	1.5p	PE			
4#	2SC536	200m	230m	2.0m	↑J	40	40	5.0	100m	1.0u	6.0	1.0m	120			3.0p	PL	R145	D	
5#	2SC537	200m	230m	2.0m	↑J	20	20	5.0	100m	1.0u	6.0	1.0m	120			3.0p	PL	R145	D	
6#	2SC1335	200m	230m	2.0m	↑J	30	30	5.0	100m	500n	120	2.0m	160			1.8p	ET	X162a	B	
7#	2SC1344	200m	230m	2.0m	↑J	30	30	5.0	100m	500n	120	2.0m	160			1.8p	ET	X162a	B	
8#	2SC1345	200m	230m	2.0m	↑J	55	50	5.0	100m	500n	120	2.0m	250			1.8p	ET	S8	B	
9#	2SC1345K	200m	230m	2.0m	↑J	55	50	5.0	100m	500n	120	2.0m	250			2.3p	ET	S8	B	
10	2N3291	200m	250m	1.1m	↑J	25	25	3.0	50m	10u	100	2.0m	10			2.0p	PE	T072	G	
11	2N3292	200m	250m	1.1m	↑J	25	25	3.0	50m	10u	100	2.0m	10			2.0p	PE	T072	G	
12	2N3293	200m	250m	1.1m	↑J	20	20	3.0	50m	10u	100	2.0m	10			2.0p	PE	T072	G	
13	2N3294	200m	250m	1.1m	↑J	20	20	3.0	50m	10u	100	2.0m	10			2.0p	PE	T072	G	
14	2N4437†	200m	250m	2.0m	↑J	60	30	5.0	500m	0.5u	100	150m	100			8p	PL	R124b	A	
15	2N5134†	200m	250m	2.0m	↑J	20	10	3.5	100m	40u	100	10m	150			4.0p	PL	T0106	A	
16#	2SC380	200m	250m	2.0m	↑J	35	30	4.0	30m	50u	100	2.0m	40			2.0p	PE	R67a	B	
17#	2SC380A	200m	250m	2.0m	↑J	35	30	4.0	30m	100n	100	2.0m	40			2.0p	PE	R67a	B	
18#	2SC398	200m	250m	1.6m	↑J	20	20	3.0	20m	0.5u	5.0	4.0m	20			5p	PE	T072	B	
19#	2SC399	200m	250m	1.6m	↑J	20	20	3.0	20m	0.5u	5.0	4.0m	20			5p	PE	T072	B	
20#	2SC724†	200m	250m	2.0m	↑J	30	20	5.0	200m	50n	6.0	2.0m	70			4.0p	PE	R195d	B	
21#	2SC725†	200m	250m	2.0m	↑J	60	50	5.0	200m	50n	6.0	2.0m	70			4.0p	PE	R195d	B	
22#	2SC980AG†	200m	250m	2.3m	↑J	90	70	5.0	100m	100n	1.0	10m	140			3.0p	PE	R67a	A	
23#	2SC980G†	200m	250m	2.3m	↑J	70	50	5.0	100m	100n	1.0	10m	240			3.0p	PE	R67a	A	
24#	2SN380A	200m	250m	2.0m	↑J	35	30	4.0	30m	100n	120	2.0m	40			2.0p	PE	R67a	A	
25	EN2222	200m	250m	2.0m	↑J	60	30	5.0	800m	0.5u	100	10m	35			8p	DPE	T0106	A	
26#	PN107	200m	250m	2.0m	↑J	50	45	5.0	200m		5.0	2.0	110			4.5p	PL	T0106	A	
27#	PN108	200m	250m	2.0m	↑J	30	20	5.0	200m		5.0	2.0	110			4.5p	PL	T0106	A	
28#	PN109	200m	250m	2.0m	↑J	30	20	5.0	200m		5.0	2.0	200			4.5p	PL	T0106	A	
29	TD2219*	200m	250m	1.6m	↑J	60	30	5.0	500m	10n	100	150m	100			8.0p	PL	R138	PN	
30#	BFS19	200m	260m	1.6m	↑J	30	20	5.0	30m	100n	100	1.0m	65			1.0p	PE	X156	A	
31	SE4021	200m	260m	2.0m	↑J	45	45	8.0	50m	2.0n	100	1.0m	1.0k	74u	28k	23	2.5p	DPE	T0106	A
32	SE4022	200m	280m	5.0m	↑J	30	30	8.0	50m	2.0n	100	1.0m	1.6k	120u	39k	33	2.5p	DPE	T0106	A
33	EN744†	200m	282m	2.0m	↑J	20	12	5.0	200m	1.0u	2.5	1.0m	20			5p	DPE	T0106	A	
34	2N3289	200m	300m	1.1m	↑J	30	15	3.0	50m	0.1u	100	2.0m	10			2.0p	PE	T072	G	
35	2N3290	200m	300m	1.1m	↑J	30	15	3.0	50m	0.1u	100	2.0m	10			2.0p	PE	T072	G	
36	2N3605†	200m	300m	2.6m	↑S	18	14	5.0	200m	500n	1.0	10m	30			6.0p	PE	T098	B	
37	2N3606†	200m	300m	2.6m	↑S	18	14	5.0	200m	500n	1.0	10m	30			6.0p	PE	T098	B	
38	2N3607†	200m	300m	2.6m	↑S	18	14	5.0	200m	500n	1.0	10m	30			6.0p	PE	T098	B	
39	2N3985	200m	300m	2.0m	↑S	30	12	3.0	30m	100n	100	0.0				2.2p	PE	T092	B	
40	2N5126	200m	300m	2.0m	↑J	20	20	3.0	30m	0.5u	10	4.0m	15			1.6p	PE	T0106	A	
41#	BCW31	200m	300m	1.6m	↑J	30	20	5.0	100m	100n	5.0	10u	90			4.0p	PE	X156	A	
42#	BCW31R	200m	300m	1.6m	↑J	30	20	5.0	100m	100n	5.0	10u	90			4.0p	PE	X156	A	
43#	BCW32	200m	300m	1.6m	↑J	30	20	5.0	100m	100n	5.0	10u	150			4.0p	PE	X156	A	
44#	BCW32R	200m	300m	1.6m	↑J	30	20	5.0	100m	100n	5.0	10u	150			4.0p	PE	X156	A	
45#	BCW33	200m	300m	1.6m	↑J	30	20	5.0	100m	100n	5.0	10u	270			4.0p	PE	X156	A	
46#	BCW33R	200m	300m	1.6m	↑J	30	20	5.0	100m	100n	5.0	10u	270			4.0p	PE	X156	A	
47#	BCW46A	200m	300m	2.0m	↑J	80	60	6.0	100m	10u	5.0	2.0m	125	18u	2.7k	1.5	2.5p	PE	S4	F
48#	BCW46B	200m	300m	2.0m	↑J	80	60	6.0	100m	10u	5.0	2.0m	240	30u	4.5k	2.0	2.5p	PE	S4	F
49#	BCW47A	200m	300m	2.0m	↑J	50	45	6.0	100m	10u	5.0	2.0m	125	18u	2.7k	1.5	2.5p	PE	S4	F
50#	BCW47B	200m	300m	2.0m	↑J	50	45	6.0	100m	10u	5.0	2.0m	240	30u	4.5k	2.0	2.5p	PE	S4	F
51#	BCW48A	200m	300m	2.0m	↑J	30	20	5.0	100m	10u	5.0	2.0m	125	18u	2.7k	1.5	2.5p	PE	S4	F
52#	BCW48B	200m	300m	2.0m	↑J	30	20	5.0	100m	10u	5.0	2.0m	240	30u	4.5k	2.0	2.5p	PE	S4	F
53#	BCW48C	200m	300m	2.0m	↑J	30	20	5.0	100m	10u	5.0	2.0m	450	60u	8.7k	3.0	2.5p	PE	S4	F
54#	BCW49B	200m	300m	2.0m	↑J	30	20	5.0	100m	10u	5.0	2.0m	240	30u	4.5k	2.0	2.5p	PE	S4	F
55#	BCW49C	200m	300m	2.0m	↑J	30	20	5.0	100m	10u	5.0	2.0m	450	60u	8.7k	3.0	2.5p	PE	S4	F
56#	BCW71	200m	300m	1.6m	↑J	50	45	5.0	100m	100n	5.0	10u	90			4.0p	PE	X156	A	
57#	BCW71R	200m	300m	1.6m	↑J	50	45	5.0	100m	100n	5.0	10u	90			4.0p	PE	X156	A	
58#	BCW72	200m	300m	1.6m	↑J	50	45	5.0	100m	100n	5.0	10u	150			4.0p	PE	X156	A	
59#	BCW72R	200m	300m	1.6m	↑J	50	45	5.0	100m	100n	5.0	10u	150			4.0p	PE	X156	A	
60#	BF153	200m	300m	2.0m	↑J	30	12	5.0	100m	10u	6.0	3.0m	20			1.7p	PE	R97a	A	
61	EN708†	200m	300m	2.0m	↑J	40	15	5.0	50m	0.5u	1.0	10m	30			6p	DPE	T0106	A	
62	EN914†	200m	300m	2.0m	↑J	40	15	5.0	50m	1.0u	1.0	10m	30			6p	DPE	T0106	A	
63	EN916	200m	300m	2.0m	↑J	45	25	5.0	50m	50n	1.0	10m	50			6.0p	PE	T0106	A	
64	2N3287	200m	350m	1.1m	↑J	40	20	3.0	50m	0.1u	100	2.0m	15			1.0p	PE	T072	G	
65	2N3288	200m	350m	1.1m	↑J	40	20	3.0	50m	0.1u	100	2.0m	15			2.0p	PE	T072	G	
66	2N3646†	200m	350m	2.0m	↑J	40	15													

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1] MAX. COLL. DISS. @25°C (W)	2] DERATE IN FREE AIR W/°C	M A M X P	ABS MAX RATINGS @25°C				MAX. lcb0 @MAX Vcb (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC TURE	Y2000 s/a T0200 Ser.	# C O D E
					BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)		Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)				
1#	ZSC387A	200m	1.2Gs	2.0m	∅	30	15	3.0	50m	500n∅	3.0∅	8.0m∅	20 t Δ*			1.5p∅	PE∅	H87a	B
2#	ZSC809	200m	1.2Gs	1.6m	∅	25	13	3.0	20m	100n∅	6.0∅	2.0m	90			1.4p	PE	T072	G∅
3#	ZSC1215	200m	1.2Gs	2.0m	∅	30	20	3.0	50m	100u	10	2.0m	25 t Δ			1.0p	PE	T092	B
4	40295	200m	1.2Gs	1.1m	∅	35	20	3.0	40m	.01u∅	2.0∅	2.0m∅	200 t Δ			1p\$∅	PE∅	T072	G
5	SCA3021	200m	1.2Gs	1.1m	∅	30	20	2.0	50m	20n∅	6.0∅	1.0m∅	170 t Δ			700f\$∅	PE	T072	G∅
6	SCA3023	200m	1.2Gs	1.1m	∅	35	25	2.0	50m	20n∅	6.0∅	1.0m∅	275 t Δ			700f\$∅	PE	T072	G∅
7	SCA3242	200m	1.2Gs	1.1m	∅	45	45	4.5	50m	20n∅	6.0∅	1.0m∅	40			600f\$	PL	T072	G∅
8	SCA3245	200m	1.2Gs	1.1m	∅	45	45	4.5	50m	20n∅	6.0∅	1.0m∅	275 t Δ			600f\$	PL	T072	G∅
9	2N3953	200m	1.3Gs	1.1m	∅	15	2.5	30m	.10u∅	6.0∅	2.0m∅	40			1.8p∅	∅	T072	G	
10	2N5024	200m	1.3Gs	1.1m	∅	20	10	4.0	15m	.10u∅	6.0∅	1.0m∅	25 t Δ			1.5p\$∅	∅	T072	G
11	2N5053	200m	1.3Gs	1.1m	∅	30	15	3.0	25m	.01u∅	5.0∅	2.0m∅	25 t Δ			1p\$∅	∅	T072	G
12#	ZSC568	200m	1.3Gs	1.1m	∅	30	15	3.0	20m	.50u∅	6.0∅	2.0m	80			65p	PE	T072	G
13#	ZSC583	200m	1.3Gs	1.1m	∅	30	15	2.5	25m	1.0u∅	1.0∅	2.0m∅	25 t Δ			800f	PE	T072	J
14#	ZSC612	200m	1.3Gs	1.3m∅	∅	35	15	2.0	20m	1.0u∅	1.0∅	2.0m	80			2p∅	PE	T072	J
15#	BFS17	200m	1.3Gs	1.6m	∅	25	15	2.5	25m	10n∅	1.0∅	2.5m∅	20 t			1.5p\$∅	PE	X156	B
16	BFS17R	200m	1.3G	1.6m	∅	25	15	2.5	25m	10n∅	1.0∅	2.0m∅	20 t Δ			1.5p\$∅	PE	X156	A
17	K2071	200m	1.3Gs	1.1m	∅	30	12	2.0	25m	300n∅	1.0∅	3.0m∅	30 t Δ			750f\$∅	∅	T072	G
18	2N6304	200m	1.4Gs	1.1m	∅	30	15	3.5	50m	10n∅	5.0∅	2.0m∅	25 t Δ			1.0p\$∅	∅	T072	G
19#	ZSC653	200m	1.4Gs	1.6m	∅	25	13	3.0	20m	100n∅	6.0∅	2.0m	120			600f	PE	T072	G
20	2N3570	200m	1.5Gs	1.1m	∅	30	15	3.0	50m	.01u∅	6.0∅	5.0m	20 t Δ			1p\$∅	∅	T072	G
21	2N5054	200m	1.5Gs	1.1m	∅	30	15	3.0	25m	.01u∅	5.0∅	2.0m∅	25 t Δ			1p\$∅	∅	T072	G
22	K2070	200m	1.5Gs	1.1m	∅	30	12	2.0	25m	300n∅	1.0∅	3.0m∅	30 t Δ			750f\$∅	∅	T072	G
23	TIXS10	200m	1.5Gs	1.1m	∅	25	13	3.0	50m	.01u	6.0∅	5.0m∅	20 t Δ			1.7p∅	∅	W5	F
24	2N4934	200m	1.6Gs	1.1m	∅	40	30	3.0	3.0	.01u∅	8.0∅	2.0m∅	70 t Δ			25p\$	PE	T0104	J
25	2N4935	200m	1.6Gs	1.1m	∅	40	30	3.0	3.0	.01u∅	8.0∅	2.0m∅	200 t Δ			25p\$	PE	T0104	J
26	2N4936	200m	1.6Gs	1.1m	∅	50	40	3.0	3.0	.01u∅	8.0∅	2.0m∅	250 t Δ			25p\$	PE	T0104	J
27#	ZSC1789	200m	1.6Gs	2.0m	∅	25	18	3.0	50m	.01u∅	1.0∅	2.0m∅	20 t Δ			1.0p	PE	T092	J
28#	BF689K	200m	1.8Gs	2.8m	∅	25	15	3.5	25m	50n	5.0∅	2.0m∅	20 t Δ			800f	PE	R191	B
29	K2069	200m	1.8Gs	1.1m	∅	30	12	2.0	25m	300n∅	1.0∅	3.0m∅	30 t Δ			750f\$∅	∅	T072	G
30	2N2857	200m	1.9Gs	1.1m	∅	30	15	2.5	40m	.01u∅	6.0∅	2.0m∅	50 t Δ			1p\$∅	∅	T072	G
31	2N3839	200m	2.0Gs	1.1m	∅	30	15	2.5	40m	.01u∅	1.0∅	3.0m∅	30 t Δ			1p	∅	T072	G
32#	ZSC1733*	200m	2.0Gs	1.1m	∅	30	14	3.0	50m	50n∅	10∅	10m∅	80 t			1.1p	EA	R120	RE
33#	ZSC1926*	200m	2.0Gs	1.1m	∅	30	14	3.0	50m	50n∅	10∅	10m∅	80 t			1.1p	EA	W109	RB
34#	ZSC1927*	200m	2.0Gs	1.1m	∅	30	14	3.0	50m	50n∅	10∅	10m∅	80 t			1.1p	EA	W109	RB
35	40296	200m	2.0Gs	1.1m	∅	30	15	2.5	40m	.01u∅	6.0∅	2.0m∅	220 t Δ			1p\$∅	PE	T072	G
36	MMT8015	200m	2.0Gs	2.0m	∅	15	10	3.0	20m	10n∅	6.0∅	1.0m∅	25 t Δ			500f	∅	W6	C
37	2N5835	200m	2.5Gs	1.1m	∅	15	10	3.5	15m	10n∅	6.0∅	1.0m∅	25 t Δ			800f\$∅	∅	T072	A
38	SD1303	200m	2.5Gs	1.1m	∅	30	15	3.5	15m	10u	6.0∅	5.0m∅	30 t Δ			1.0p	PE	T072	G
39	40915	200m	2.5Gs	1.1m	∅	35	15	3.5	40m	20n	6.0∅	3.0m∅	20 t Δ			1.0p	PE	T072	G
40#	ZSC1731*	200m	3.0Gs	1.1m	∅	20	12	3.5	40m	100n∅	5.0∅	1.0m∅	30 t Δ			1.1p	EA	W109	RE
41#	ZSC1732*	200m	3.0Gs	1.1m	∅	20	12	3.5	40m	100n∅	5.0∅	1.0m∅	30 t Δ			900f	EA	W109	RE
42#	ZSC1924*	200m	3.0Gs	1.1m	∅	20	12	3.5	40m	100n∅	5.0∅	1.0m∅	30 t Δ			1.1p	EA	W109	RB
43#	ZSC1925*	200m	3.0Gs	1.1m	∅	20	12	3.5	40m	100n∅	5.0∅	1.0m∅	30 t Δ			1.1p	EA	W109	RB
44#	BFW99	200m	3.0Gs	1.1m	∅	20	12	3.5	40m	100n∅	5.0∅	1.0m∅	30 t Δ			1.1p	EA	T072	J
45	2N6595	200m	3.5Gs	1.4m	∅	15	12	3.5	20m	50n∅	6.0∅	5.0m∅	25 t Δ			700p\$∅	∅	T072	J
46	2N6597	200m	3.5Gs	1.4m	∅	15	12	2.0	25m	100u	5.0∅	30m∅	25 t Δ			1.1p\$∅	∅	T072	G
47	AT0017	200m	3.5Gs	1.1m	∅	20	12	3.0	100m	10n∅	1.0∅	5.0m∅	75 t			800f\$	PE	R176a	G
48	AT0025	200m	3.5Gs	1.1m	∅	20	15	3.0	100m	20n∅	10∅	10m∅	75 t			500f\$∅	PE	R176a	G
49	AT0025A	200m	3.5Gs	1.1m	∅	20	15	3.0	100m	20n∅	10∅	10m∅	75 t			500f\$∅	PE	R176a	G
50	AT0045	200m	3.5Gs	1.1m	∅	20	15	3.0	100m	20n∅	10∅	10m∅	75 t			500f\$∅	PE	R176a	G
51	2N6596	200m	4.0Gs	1.4m	∅	20	15	2.0	25m	100u	10∅	14m∅	25 t Δ			700p\$∅	∅	T072	G
52	2N6598	200m	4.0Gs	1.4m	∅	15	12	2.0	35m	100u	5.0∅	30m∅	25 t Δ			1.1p\$∅	∅	T072	G
53#	BFQ28	200m	4.0Gs	4.0m∅	∅	20	15	2.5	15m	1.0u	1.0∅	10m∅	20 t Δ			250f	PE	W69b	Y
54#	BFT66	200m	4.0Gs	1.4m	∅	20	15	3.0	30m	50n∅	6.0∅	10m∅	30 t Δ			600f\$	PE	T072	J
55#	BFT67	200m	4.0Gs	1.4m	∅	20	15	3.0	30m	50n∅	6.0∅	10m∅	30 t Δ			600f\$	PE	T072	J
56#	DC5001	200m	4.0Gs	1.6m	∅	20	15	4.0	20m	500n∅	5.0∅	10m∅	40			450f	PL	W75	R
57	MRF904	200m	4.0Gs	1.1m	∅	25	15	3.0	30m	50n∅	5.0∅	5.0m∅	30 t Δ			1.0p\$∅	∅	T072	G
58#	BFR34A	200m	4.2Gs	1.5m	∅	12	12	3.5	30m	50n∅	6.0∅	5.0m∅	70			750f\$	PE	W22	E
59#	BFR35A	200m	4.2Gs	1.2m	∅	12	12	3.5	30m	50n∅	6.0∅	5.0m∅	70			700f\$	PE	X156a	A
60#	BFT75	200m	4.3Gs	2.0m	∅	20	15	2.5	50m	50n∅	5.0∅	50m∅	30 t Δ			800f	PL	X156c	A
61#	BFR15A	200m	4.5Gs	2.5m	∅	12	12	2.5	30m	50n∅	6.0∅	20m∅	25 t Δ			700f\$	PE	T072	C
62	MRF914	200m	4.5Gs	1.6m	∅	20	12	3.0	40m	50n∅	10∅	20m∅	30 t Δ			700f\$	PL	T072	G
63	A400	200m	5.0Gs	1.4m	∅	20	15	2.0	25m	50n∅	10∅	14m∅	50 t #			600f\$	PE	T072	G
64	A401	200m	5.0Gs	1.4m	∅	15	12	2.0	35m	50n∅	5.0∅	30m∅	50 t #			1.0p\$	PE	T072	G
65#	MMBR920	200m	5.0Gs	2.0m	∅	20	15	3.0	50m	50n∅	10∅	14m∅	25 t Δ			500f\$	PE	X156d	A
66#	FT5720R*	200m	5.5Gs	1.3m	∅	15	10	3.0	40m	500n∅	6.0∅	20m∅	80 t			650f\$	PE	W84	QF
67#	FT5726CR*	200m	5.5Gs	1.3m	∅	15	10	3.0	40m	500n∅	6.0∅	20m∅	80 t			650f\$	PE	W85	QH
68#	FT5728CR*	200m	5.5Gs	1.3m	∅	15	10	3.0	40m	500n∅	6.0∅	20m∅	80 t			650f\$	PE	W85	QH
69#	ZSC1236	200m	6.5Gs	1.1m	∅	20	15	2.0	30m	100n∅	10∅	10m∅	70 t			1.0p	PE	T072	J
70#	ZSC1551	200m	6.5Gs	1.1m	∅	20	15	2.0	30m	100n∅	10∅	10m∅	70 t			1.0p	PE	W69	C
71#	FT1717R*	200m	7.0Gs	1.3m	∅	20	13	3.0	20m	500n∅	8.0∅	7.0m∅	80 t			150f\$	PE	W82	V
72#	ZSC1711A*	200m	7.5Gs	1.3m	∅	20	13	3.0	30m	500n∅	8.0∅	10m∅	80 t			250f\$	PE	W82	V
73#	ZSC1712*	200m	8.0Gs	1.3m	∅	16	8.0												

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No	3	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C	T E M A M X P	ABS MAX RATINGS @25°C				MAX. lcb0 @MAX Vcb (V)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	Y200 s/a TO200 Ser.	# DWG	C O D E
						BVcbo (V)	BVceo (V)	Ic (A)	BIAS			COMMON EMITTER									
									Vcb (V)		Ic (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)						
1		2N3052†	250m	200m	1.6m	SS	35	15	5.0	200m	25n	1.0	10m	25	†Δ	8.0p	PL	T089	PB	B	
2		2N3825	250m	200m	2.5m	SS	30	15	4.0	100m	100n	1.0	2.0m	20	†Δ	3.5p	PL	T092		B	
3		2SC123	250m	200m	1.7m	SJ	40	25	1.0	25m	1.0u	1.0	1.0	140		4.0p	PE	T039		B	
4		2SC395A†	250m	200m	2.0m	SJ	20	12	5.0	400m	1.0u	1.0	10m	60	†#	4.0p	PE	T018	A	D	
5		2SC714†	250m	200m	2.5m	†J	70	40	5.0	200m	1.0u	6.0	10m	60	†#	7.0p	PE†	T092		B	
6		2SC815	250m	200m	2.5m	†J	60	45	5.0	200m	100n	1.0	50m	80	†*	5.5p	PE†	R182b		B	
7		2SC815S	250m	200m	2.5m	†J	60	45	5.0	200m	100n	1.0	50m	80	*†#	5.5p	PE†	T092		B	
8		2SC944†	250m	200m	2.5m	†J	60	40	8.0	100m	100n	1.0	2.0m	60	†Δ	3.0p	PE†	T092		B	
9		2SC963	250m	200m	1.6m	SJ	35	25	4.0	50m	2.0u	6.0	1.0m	100		2.0p	PE†	R213		A	
10		PD1001	250m	200m	2.5m	†J	45	45	4.0	200n	200n	5.0	2.0m	30	†Δ	3.5p	PL	R110c		A	
11		PD1002	250m	200m	2.5m	†J	45	45	4.0	200n	200n	5.0	2.0m	135	†Δ	3.5p	PL	R110c		A	
12		PE1003	250m	200m	2.5m	†J	35	35	4.0	200n	200n	5.0	2.0m	30	†Δ	3.0p	PE	R110c		A	
13		PE1007A	250m	200m	2.5m	†J	50	50	4.0	200n	200n	5.0	2.0m	120	†Δ	3.0p	PE	R110c		A	
14		PE1008A	250m	200m	2.5m	†J	35	35	4.0	200n	200n	5.0	2.0m	120	†Δ*	3.0p	PE	R110c		A	
15		PE1008B	250m	200m	2.5m	†J	35	35	4.0	200n	200n	5.0	2.0m	200	†Δ*	3.0p	PE	R110c		A	
16		PE1008C	250m	200m	2.5m	†J	35	35	4.0	200n	200n	5.0	2.0m	200	†Δ*	3.0p	PE	R110c		A	
17		2SC105	250m	250m	1.7m	SJ	30	30	5.0	80m	5n	1.0	10m	60	††	4.0p	PE	T018		B	
18		2SC323	250m	250m	1.7m	SJ	40	20	5.0	100m	1.0u	1.0	10m	90	††	3.0p	PE	T018		B	
19		2SC619†	250m	250m	2.5m	†J	30	25	5.0	200m	1.0u	6.0	10m	110	†#	7.0p	PE†	T092		D	
20		2SC620	250m	250m	2.5m	†J	50	30	5.0	200m	1.0u	6.0	10m	90	†#	7.0p	PE†	T092		D	
21		2SC773	250m	250m	2.5m	†J	50	30	5.0	200m	1.0u	6.0	10m	35	†#Δ	7.0p	PE†	T092		D	
22		2SC838	250m	250m	2.5m	†J	50	25	5.0	30m	200n	3.0	500u	75	†*	1.8p	E	T092		B	
23		2SC839	250m	250m	2.5m	†J	50	25	5.0	50m	100n	3.0	500u	100	†*	2.0p	E	R182b		B	
24		2SC944S†	250m	250m	2.5m	†J	60	40	8.0	100m	100n	10	2.0m	180	*†	2.2p	E	T092		B	
25		2SC945	250m	250m	2.5m	†J	60	50	5.0	100m	100n	6.0	1.0m	200	*†	3.5p	E	R182b		B	
26		2SC945L	250m	250m	2.5m	†J	60	50	5.0	100m	100n	6.0	1.0m	200	*†	3.5p	E	T092		B	
27		2SC1675K	250m	250m	2.5m	†J	50	30	5.0	30m	100n	6.0	1.0m	90	†Δ*	1.9p	E	R182b		B	
28		2SC1675L	250m	250m	2.5m	†J	50	30	5.0	30m	100n	6.0	1.0m	60	†Δ*	1.9p	E	R182b		B	
29		2SC1675M	250m	250m	2.5m	†J	50	30	5.0	30m	100n	6.0	1.0m	40	†Δ*	1.9p	E	R182b		B	
30		BC122	250m	250m	1.0m	SJ	30	20	5.0	75m	10n	5.0	250u	150	††	7.0p	PE	X151		D	
31		BC123	250m	250m	1.0m	SJ	45	30	5.0	75m	10n	5.0	250u	150	††	7.0p	PE	X151		D	
32		BC413	250m	250m	2.5m	†J	45	30	5.0	100m	15n	5.0	2.0m	240	†Δ	2.5p	PE	T0106		A	
33		BC414	250m	250m	2.5m	†J	50	45	5.0	100m	15n	5.0	2.0m	240	†Δ	2.5p	PE	T0106		A	
34		BF594	250m	260m	2.0m	SS	35	25	5.0	30m	30m	1.0	1.0m	65	†Δ	600f	PE	R203c		C	
35		BF595	250m	260m	2.0m	SS	35	25	5.0	30m	30m	1.0	1.0m	35	†Δ	600f	PE	R203c		C	
36		2SC400†	250m	300m	1.7m	SJ	30	18	5.0	100m	50u	10	1.0m	30	†Δ*	4.0p	PE	T018		A	
37		2SC1359	250m	300m	2.5m	†J	30	20	5.0	100m	100n	10	1.0	220	††	900f	PE	T092		B	
38		BC407	250m	300m	2.5m	†J	50	45	6.0	100m	15u	5.0	2.0m	110	††	2.5p	PE	T0106		A	
39		BC407A	250m	300m	2.5m	†J	50	45	6.0	100m	15u	5.0	2.0m	220		2.5p	PE	T0106		A	
40		BC407B	250m	300m	2.5m	†J	50	45	6.0	100m	15u	5.0	2.0m	330		2.5p	PE	T0106		A	
41		BC408	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	110	†Δ	2.5p	PE	T0106		A	
42		BC408A	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	220		2.5p	PE	T0106		A	
43		BC408B	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	330		2.5p	PE	T0106		A	
44		BC408C	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	600		2.5p	PE	T0106		A	
45		BC409	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	200	†Δ	2.5p	PE	T0106		A	
46		BC409B	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	330		2.5p	PE	T0106		A	
47		BC409C	250m	300m	2.5m	†J	30	20	5.0	100m	15u	5.0	2.0m	600		2.5p	PE	T0106		A	
48		ME9021†	250m	300m	2.0m	SJ	40	15	5.0	5.0u	1.0	1.0	10m	30	†Δ	6.0p	PE	R110c		A	
49		ME9022†	250m	300m	2.0m	SJ	25	12	4.0	5.0u	1.0	1.0	10m	30	†Δ	6.0p	PE	R110c		A	
50		PE1004	250m	300m	2.5m	†J	35	35	4.0	200n	200n	5.0	2.0m	135	††	3.0p	PE	R110c		A	
51		PE1007B	250m	300m	2.5m	†J	50	50	4.0	200n	200n	5.0	2.0m	200	††	3.0p	PE	R110c		A	
52		SE5025	250m	300m	2.5m	†J	30	30	3.0	0.5u	10	1.0	10m	35	†#	1p	DPE	R97e		A	
53		TIS64	250m	300m	2.0m	SJ	30	12	3.0	30m	1.0u	1.0	4.0m	20	†Δ	4.5p	PL	R203		A	
54		SC107	250m	330m	2.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	120	†Δ	4.5p	DPE	X149		B	
55		SC107A	250m	330m	2.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	110	†Δ	4.5p	DPE	X149		B	
56		SC107B	250m	330m	2.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	200	†Δ	4.5p	DPE	X149		B	
57		SC108	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	120	†Δ	4.5p	DPE	X149		B	
58		SC108A	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	110	†Δ	4.5p	DPE	X149		B	
59		SC108B	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	200	†Δ	4.5p	DPE	X149		B	
60		SC108C	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	420	†Δ	4.5p	DPE	X149		B	
61		SC109	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	220	†Δ	4.5p	DPE	X149		B	
62		SC109B	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	200	†Δ	4.5p	DPE	X149		B	
63		SC109C	250m	330m	2.0m	SJ	30	20	5.0	100m	15n	5.0	2.0m	420	†Δ	4.5p	DPE	X149		B	
64		SC147	250m	330m	2.0m	SJ	50	45	5.0	100m	15n	5.0	2.0m	120	†Δ	4.5p	DPE	X149		A	
65																					

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) f_{ab} & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	T _M °C	ABS MAX RATINGS @25°C					MAX. I _{co} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			Cob (F)	STRUC-TURE	DWG # Y200 s/a Ser.	# E O D E			
					V _{ce} (V)	V _{ceo} (V)	V _{be} (V)	I _c (A)	BIAS		COMMON EMITTER									
									V _{cb} (V)		I _e (A)	h _{fe}	h _{oe} (mhos)					h _{ie} (Ω)	h _{re} (X.0001)	
1	IT2221	300m	1.7m	SS	60	30	5.0	800m	10n	100	100u	20	Δ	30p	DPL	S7	L			
2	IT2222	300m	1.7m	SS	60	30	5.0	800m	10n	100	100u	35	Δ	30p	DPL	S7	L			
3	ITC918A	300m	1.7m	SS	20	12	3.0	30m	100p	1.0	100n	200	†	1.8p	DPE	TO18	A			
4#	TIS60	300m	3.0m	SS	40	25	5.0	400m	100n	2.0	50m	160	†#		PE	T092	B			
5▼#	uPA15A*	300m	2.4m	SJ	25	12	5.0	50m	100n	1.0	1.0m	100	†		D	R131h	PD			
6#	ZTX341	300m	3.0m	†A	100	100	5.0	100m	500n	1.0	2.0m	30	Δ†		PL	X59	F			
7#	ZTX342	300m	3.0m	†A	120	120	5.0	100m	500n	1.0	2.0m	30	Δ†		PL	X59	F			
8	2N4879*	300m	1.7m	SS	55	55	7.0	10m	.1n	5.0	1.0m	175	Δ	8p	PE	TO71	PA			
9	2N4880*	300m	1.7m	SS	45	45	7.0	10m	.1n	5.0	1.0m	100	Δ	8p	PE	TO71	PA			
10	2N1390	300m	2.0m	SS	20	20	2.0	50m	800n	6.0	1.0m	10	Δ	10p	Δ	TO5	A			
11	2N2432	300m	2.0m	SS	30	30	15	100m	.01u	5.0	1.0m	50	Δ	12p	Δ	TO18	A			
12	2N2432A	300m	2.0m	SS	45	45	18	100m	0.1u	5.0	1.0m	50	Δ	12p	Δ	TO18	A			
13	2N4138	300m	2.0m	SS	30	30	15	100m	.01u	5.0	1.0m	50	Δ	12p	Δ	TO46	A			
14	2N4878*	300m	2.0m	SS	60	60	7.0	10m	.1n	5.0	1.0m	225	Δ	8p	PE	TO71	PA			
15#	2SC1637	300m	2.0m	†J	50	25	25	20m	200n	3.0	1.0m	200	†	7.0p	PE	X153	B			
16#	BFV89	300m	2.0m	SS	30	30	15	100m	.01u	5.0	1.0m	50	Δ	12p	PE	W5A	B			
17#	BFV89A	300m	2.0m	SS	45	45	18	100m	.01u	5.0	1.0m	50	†#	12p	PE	W5A	B			
18	2N1389	300m	2.5m	†A	50	50	1.5	50m	500n	6.0	1.0m	4.0	Δ	6.0p	PE	TO5	A			
19	2N754	300m	3.0m	SS	60	60	3.0	50m	1.0u	10	5.0m	20	Δ	10p	Δ	TO18	A			
20	2N755	300m	3.0m	SS	100	80	3.0	50m	1.0u	10	5.0m	20	Δ	10p	Δ	TO18	A			
21	2N839	300m	3.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	20	Δ	15p	Δ	TO18	A			
22	2N840	300m	3.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	40	Δ	1.2u	80	15p	Δ	TO18	A	
23	2N842	300m	2.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	20	Δ	350nb	40	6.0p	ME	TO18	A	
24	2N929	300m	3.0m	SJ	45	45	5.0	30m	1.0u	5.0	1.0m	60	Δ	1.0u	32	6.0	Δ	TO18	A	
25	2N930	300m	3.0m	SJ	45	45	5.0	30m	1.0u	5.0	1.0m	150	Δ	1.0u	32	6.0	Δ	TO18	A	
26	2N2387	300m	3.0m	SJ	45	45	5.0	30m	1.0u	5.0	1.0m	60	Δ	1.0u	32	6.0	Δ	W4	A	
27	2N2388	300m	3.0m	SJ	45	45	5.0	30m	1.0u	5.0	1.0m	150	Δ	1.0u	32	6.0	Δ	W4	A	
28#	2S501	300m	3.0m	SJ	25	25	5.0	30m	10n	5.0	10u	40	Δ	8.0p	PE	TO18	A			
29#	2S502	300m	3.0m	SJ	25	25	5.0	30m	10n	5.0	10u	100	Δ	8.0p	PE	TO18	A			
30#	2S503†	300m	3.0m	SJ	25	25	5.0	30m	10n	5.0	10u	180	Δ	8.0p	PE	TO18	A			
31#	2SC1636	300m	3.0m	†J	50	25	25	20m	200n	3.0	1.0m	1.0k†	*	4.0p	PE	X153	B			
32	3N74	300m	3.0m	SJ	50	50	18	20m	.01u	5.0	1.0m	20	Δ	8p	Δ	TO72	GC			
33	JAN3N74	300m	3.0m	SJ	50	50	20	20m	10n	5.0	1.0m	20	Δ	8.0p	Δ	TO72	GC			
34	3N75	300m	3.0m	SJ	50	50	18	20m	.01u	5.0	1.0m	20	Δ	8p	Δ	TO72	GC			
35	JAN3N75	300m	3.0m	SJ	50	50	20	20m	10n	5.0	1.0m	20	Δ	8.0p	Δ	TO72	GC			
36	3N76	300m	3.0m	SJ	50	50	18	20m	.01u	5.0	1.0m	20	Δ	8p	Δ	TO72	GC			
37	JAN3N76	300m	3.0m	SJ	50	50	20	20m	10n	5.0	1.0m	20	Δ	8.0p	Δ	TO72	GC			
38	3N77	300m	3.0m	SJ	40	40	12	20m	.01u	5.0	1.0m	20	Δ	8p	Δ	TO72	GC			
39	3N78	300m	3.0m	SJ	40	40	12	20m	.01u	5.0	1.0m	20	Δ	8p	Δ	TO72	GC			
40	3N79	300m	3.0m	SJ	40	40	12	20m	.02u	5.0	1.0m	20	Δ	10p	Δ	TO72	GC			
41#	BFV85D	300m	3.0m	SJ	45	45	5.0	30m	10n	5.0	1.0m	60	Δ	1.0u	32	6.0	Δ	W5A	B	
42#	BFV85E	300m	3.0m	SJ	45	45	5.0	30m	10n	5.0	1.0m	150	Δ	1.0u	32	6.0	Δ	W5A	B	
43	2N2639*	300m	3.1m	SJ	45	45	5.0	30m	10n	5.0	1.0m	65	Δ	1.0u	32	6.0	Δ	R131c	PA	
44	2N2640*	300m	3.1m	SJ	45	45	5.0	30m	10n	5.0	1.0m	65	Δ	1.0u	32	6.0	Δ	R131c	PA	
45	2N2641*	300m	3.1m	SJ	45	45	5.0	30m	10n	5.0	1.0m	65	Δ	1.0u	32	6.0	Δ	R131c	PA	
46	2N2642*	300m	3.1m	SJ	45	45	5.0	30m	10n	5.0	1.0m	130	Δ	1.0u	32	6.0	Δ	R131c	PA	
47	2N2643*	300m	3.1m	SJ	45	45	5.0	30m	10n	5.0	1.0m	130	Δ	1.0u	32	6.0	Δ	R131c	PA	
48	2N2644*	300m	3.1m	SJ	45	45	5.0	30m	10n	5.0	1.0m	130	Δ	1.0u	32	6.0	Δ	R131c	PA	
49	JAN2N2639*	300m	3.2m	SJ	45	45	5.0	30m	10n	5.0	1.0m	65	Δ	1.0u	32	6.0	Δ	TO77	PA	
50	JAN2N2642*	300m	3.2m	SJ	45	45	5.0	30m	10n	5.0	1.0m	130	Δ	1.0u	32	6.0	Δ	TO77	PA	
51	2N841	300m	4.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	80	Δ	1.2u	80	15p	Δ	TO18	A	
52	2N843	300m	4.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	40	Δ	350nb	40	2.0	6.0p	ME	TO18	A
53	JAN2N2432	300m	4.0m	SJ	30	30	100m	10n	5.0	1.0m	80	Δ	12p	Δ	TO18	A				
54	JAN2N2432A	300m	4.0m	SJ	45	45	100m	10n	5.0	1.0m	80	Δ	12p	Δ	TO18	A				
55	2N3566	300m	4.0m	SJ	40	30	5.0	200m	50n	10	2.0m	80	Δ	25p	PE	R110a	A			
56	2N5135	300m	4.0m	SJ	30	25	4.0	200m	.30u	10	1.0m	50	†#	25p	PE	TO105	A			
57	2N5137	300m	4.0m	SJ	30	20	3.0	500m	1.0u	1.0	150m	20	†#	35p	PE	TO106	A			
58	BC115	300m	4.0m	SJ	40	30	5.0	100m	.10u	10	1.0m	200	†#	12p	DPL	R97	A			
59#	BC117	300m	4.0m	SJ	120	120	5.0	50m	.10u	10	3.0m	30	Δ	6.0p	DPL	R97	A			
60	BC125	300m	4.0m	SJ	50	30	5.0	50m	.05u	10	10m	20	Δ	12p	DPE	R97	A			
61	BC125A	300m	4.0m	SJ	50	40	5.0	500m	50n	10	1.0m	40	Δ	25p	PE	TO105	A			
62#	BC145	300m	4.0m	SJ	120	120	5.0	50m	.10u	30	5.0m	30	Δ	6.0p	PE	R97	A			
63	BC236	300m	4.0m	SJ	120	120	5.0	50m	100n	5.0	1.0m	25	Δ	4.0p	PE	R110	A			
64#	BCY76	300m	4.0m	SJ	45	45	5.0	100m	100n	5.0	1.0m	140	Δ	6.0p	PE	TO18	A			
65#	BSY89	300m	4.0m	SJ	25	18	7.0	100m	.01u	5.0	1.0m	150	Δ	15p	PE	TO18	A			
66	SE6001	300m	4.0m	SJ	40	30	5.0	50m	.50u	10	1.0m	50	†#	25p	PE	TO105	A			
67	SE6002	300m	4.0m	SJ	40	30	5.0	50m	.50u	10	1.0m	150	†#	25p	PE	TO105	A			
68	2N2693†	300m	4.2m	SJ	45	30	10	50m	.01u	1.0	.01m	40	Δ	5p	PE	TO18	A			
69	2N2694†	300m	4.2m	SJ	45	20	10	50m	.01u	1.0	.01m	20	Δ	5p	PE	TO18	A			
70	JAN2N929	300m	4.5m	SJ	60	45	6.0	30m	10n	5.0	1.0m	60	Δ	1.0u	32	6.0	Δ	TO18	A	
71	2N2586	300m	4.5m	SJ	60	45	6.0	30m	2.0n	5.0	1.0m	150	Δ	100u	18k	7.0p	Δ	TO18	A	
72#	BFX92	300m	4.5m	SJ	50	45	6.0	30m	10n	5.0	1.0m	60	Δ	1.0u	32	6.0	Δ	DPL	TO18	A
73#	BFX93	300m	4.5m	SJ	50	45	6.0	30m	10n	5.0	1.0m	150	Δ	1.0u	32	6.0	Δ	DPL	TO18	A
74	2N844	300m	5.0m	SJ	60	60	3.0	50m	50u	10	5.0m	40	Δ	10p	Δ	TO18	A			
75	2N845	300m	5.0m	SJ	100	80	3.0	50m	50u	10	5.0m	40	Δ	10p	Δ	TO18	A			
76	2N1388	300m	5.0m	SJ	45	25	1.5	50m	500n	6.0	1.0m	30	Δ	10p	Δ	TO5	A			
77	2N2480*	300m	5.0m	SJ	75	40	5.0	500m	.05u	5.0	1.0m	30	Δ	20p	Δ	R131c	PA			
78	2N2480A*	300m	5.0m	SJ	80	40	5.0	500m	.02u	5.0	1.0m	50	Δ	18p	Δ	R131c	PA			
79#	2SC1006	300m	5.0m	SJ	50	40	5.0	30m	50n	3.0	1.0m	600	†	22	14k	2.0	10p	Δ	TO18	A
80#	2SC1010	300m	5.0m	SJ	50	40	5.0	30m	50n	3.0	1.0m	550	†	22	14k	2.0	10p	Δ	TO18	A

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	T E M P X P	ABS MAX RATINGS @25°C					MAX. I _{co} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# L O A D E
						V _{cb} (V)	V _{ceo} (V)	V _{veo} (V)	I _c (A)	V _{cb} (V)		I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (X.0001)					
																	h _{FE}				
1#	BC182LT	300m	150MΔ	2.4m	\$\$	60	50	5.0	200m	15n	5.0	2.0m	260	5.0p	PE	T092	B				
2#	BC182LA†	300m	150MΔ	2.4m	\$\$	60	50	5.0	200m	15n	5.0	2.0m	260	5.0p	PE	T092	B				
3#	BC182LB†	300m	150MΔ	2.4m	\$\$	60	50	5.0	200m	15n	5.0	2.0m	500	5.0p	PE	T092	B				
4#	BC183T	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	R203	A				
5#	BC183A†	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	260	5.0p	PE	R203	A				
6#	BC183A‡	300m	150MΔ	2.5m	\$J	45	30	6.0	200m	15n	5.0	2.0m	222	5.0p	PE	T092	A				
7#	BC183BT	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	500	5.0p	PE	R203	A				
8#	BC183B‡	300m	150MΔ	2.5m	\$J	45	30	6.0	200m	15n	5.0	2.0m	330	5.0p	PE	T092	A				
9#	BC183CT	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	R203	A				
10#	BC183LT	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	T092	B				
11#	BC183LA†	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	260	5.0p	PE	T092	B				
12#	BC183LB†	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	500	5.0p	PE	T092	B				
13#	BC183LCT	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	T092	B				
14#	BC184†	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	R203	A				
15#	BC184B†	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	500	5.0p	PE	R203	A				
16#	BC184C	300m	150M	2.4m	\$	45	30	5.0	200m	15n	5.0	2.0m	450	5.0p	PE	R203	A				
17#	BC184LT	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	T092	B				
18#	BC184LB†	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	500	5.0p	PE	T092	B				
19#	BC184LCT	300m	150MΔ	2.4m	\$\$	45	30	5.0	200m	15n	5.0	2.0m	900	5.0p	PE	T092	B				
20#	BC267	300m	150MΔ	10u	#J	50	50	6.0	1	15n	5.0	2.0m	300	20u	3.0k	3.6	T018				
21#	BC268	300m	150MΔ	10u	#J	30	30	6.0	1	15n	5.0	2.0m	400	30u	4.0k	5.6	T018				
22#	BC269	300m	150MΔ	10u	#J	30	30	6.0	1	15n	5.0	2.0m	500	40u	6.0k	7.0	T018				
23#	BC382	300m	150M	2.4m	\$	50	45	6.0	100m	15n	5.0	2.0m	240	5.0p	PE	T018	A				
24#	BC382B	300m	150MΔ	2.4m	\$\$	50	45	6.0	100m	15n	5.0	2.0m	240	5.0p	PE	R203c	A				
25#	BC382C	300m	150MΔ	2.4m	\$\$	50	45	6.0	100m	15n	5.0	2.0m	450	5.0p	PE	R203c	A				
26#	BC383	300m	150M	2.4m	\$	45	30	6.0	100m	15n	5.0	2.0m	240	5.0p	PE	T018	A				
27#	BC383B	300m	150MΔ	2.4m	\$\$	45	30	6.0	100m	15n	5.0	2.0m	240	5.0p	PE	R203c	A				
28#	BC383C	300m	150MΔ	2.4m	\$\$	45	30	6.0	100m	15n	5.0	2.0m	450	5.0p	PE	R203c	A				
29#	BC384	300m	150M	2.4m	\$	45	30	6.0	100m	15n	5.0	2.0m	240	5.0p	PE	T018	A				
30#	BC384B	300m	150MΔ	2.4m	\$\$	45	30	6.0	100m	15n	5.0	2.0m	240	5.0p	PE	R203c	A				
31#	BC384C	300m	150MΔ	2.4m	\$\$	45	30	6.0	100m	15n	5.0	2.0m	450	5.0p	PE	R203c	A				
32#	BC582	300m	150MΔ	2.4m	\$\$	50	45	6.0	200m	15n	5.0	2.0m	125	5.0p	PE	R203c	A				
33#	BC582A	300m	150MΔ	2.4m	\$\$	50	45	6.0	200m	15n	5.0	2.0m	260	5.0p	PE	R203c	A				
34#	BC582B	300m	150MΔ	2.4m	\$\$	50	45	6.0	200m	15n	5.0	2.0m	240	5.0p	PE	R203c	A				
35#	BC583	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	125	5.0p	PE	R203c	A				
36#	BC583A	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	260	5.0p	PE	R203c	A				
37#	BC583B	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	240	5.0p	PE	R203c	A				
38#	BC583C	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	450	5.0p	PE	R203c	A				
39#	BC584	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	240	5.0p	PE	R203c	A				
40#	BC584B	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	500	5.0p	PE	R203c	A				
41#	BC584C	300m	150MΔ	2.4m	\$\$	30	20	5.0	200m	15n	5.0	2.0m	450	5.0p	PE	R203c	A				
42#	BC682	300m	150M	2.4m	\$	75	70	5.0	200m	15n	5.0	2.0m	60	5.0p	PE	T018	A				
43#	BCW36	300m	150M	2.4m	\$	60	45	5.0	600m	10n	5.0	100m	100	5.0p	PE	T018	A				
44#	BCY69	300m	150MΔ	2.0m	\$J	20	20	5.0	100m	150n	5.0	2.0m	750	5.0p	PE	T018	A				
45#	BFS29	300m	150M	2.4m	\$	45	45	5.0	200m	20n	15	100m	100	5.0p	PE	S5a	P				
46#	BFY39	300m	150MΔ	2.0m	\$J	45	25	5.0	100m	50n	10	10m	35	5.0p	PL	T018	A				
47#	BFY39/I	300m	150MΔ	2.0m	\$J	45	25	5.0	100m	.05u	10	10m	35	5.0p	PL	T018	A				
48#	BFY39/II	300m	150MΔ	2.0m	\$J	45	25	5.0	100m	.05u	10	10m	200	5.0p	PL	T018	A				
49#	BFY39/III	300m	150MΔ	2.0m	\$J	45	25	5.0	100m	.05u	10	10m	400	5.0p	PL	R18	A				
50#	HSE317-RT	300m	150MΔ	3.0m	#J	40	50	3.0	1	1.0u	1.0	10m	250	5.0p	PE	R124d	A				
51#	PBC182	300m	150MΔ	3.0m	#J	60	50	5.0	200m	10u	5.0	2.0m	100	5.0p	PE	T098	B				
52#	PBC183	300m	150MΔ	3.0m	#J	45	30	5.0	200m	10u	5.0	2.0m	100	5.0p	PE	T098	B				
53#	PBC184	300m	150MΔ	3.0m	#J	45	30	5.0	200m	10u	5.0	2.0m	250	5.0p	PE	T098	B				
54#	SA2719*	300m	150MΔ	2.0m	\$J	60	50	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
55#	SA2720*	300m	150MΔ	2.0m	\$J	60	50	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
56#	SA2721*	300m	150MΔ	2.0m	\$J	60	50	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
57#	SA2722*	300m	150MΔ	2.0m	\$J	50	30	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
58#	SA2723*	300m	150MΔ	2.0m	\$J	50	30	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
59#	SA2724*	300m	150MΔ	2.0m	\$J	50	30	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
60#	SA2726*	300m	150MΔ	2.0m	\$J	50	25	6.0	2	2n	5.0	.01m	100	3p	PE	R131c	A				
61#	SA2738*	300m	150MΔ	2.0m	\$J	50	30	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
62#	SA2739*	300m	150MΔ	2.0m	\$J	50	30	6.0	2	2n	5.0	.01m	75	3p	PE	R131c	A				
63#	ZDT10	300m	150MΔ	2.4m	\$J	10	10	5.0	50m	.01u	6.0	.20m	20	8p	PL	R102a	PD				
64#	ZDT11	300m	150MΔ	2.4m	\$J	10	10	5.0	50m	.01u	6.0	.20m	20	8p	PL	R102a	PD				
65#	ZDT20	300m	150MΔ	2.4m	\$J	35	35	5.0	50m	.01u	6.0	.20m	20	8p	PL	R102a	PD				
66#	ZDT21	300m	150MΔ	2.4m	\$J	35	35	5.0	50m	.01u	6.0	.20m	20	8p	PL	R102a	PD				
67#	ZTX300	300m	150MΔ	3.0m	#A	25	25	5.0	500m	200n	6.0	10m	50	6.0p	PL	X59	F				
68#	ZTX301	300m	150MΔ	3.0m	#A	35	35	5.0	500m	200n	6.0	10m	50	6.0p	PL	X59	F				
69#	ZTX302	300m	150MΔ	3.0m	#A	35	35	5.0	500m	200n	6.0	10m	100	6.0p	PL	X59	F				
70#	ZTX303	300m	150MΔ	3.0m	#A	45	45	5.0	500m	200n	6.0	10m	50	6.0p	PL	X59	F				
71#	ZTX304	300m	150MΔ	3.0m	#A	70	70	5.0	500m	200n	6.0	10m	50	6.0p	PL	X59	F				
72#	BSX21	300m	180MΔ	2.0m	\$J	120	80	5.0	100m	200n	1.0	1.0m	90	3.4p	PE	T018	A				
73#	ZSC318A	300m	170MΔ	2.0m	\$J	50	30	5.0	100m	.20u	3.0	1.0m	90	4.5p	PE	T018	A				
74#	ZSC1175	300m	170MΔ	3.0m	#J	50	50	4.0	200m	10u	6.0	50m	100	6.0p	PL	R198a	B				
75#	BSY72	300m	170MΔ	2.0m	\$J	25	18	5.0	30m	10u	1.0	1.0m	80	6.0p	PE	T018	A				
76#	BSY74	300m	170MΔ	2.0m	\$J	25	18	5.0	100m	10u	1.0	1.0m	80	6.0p	PE	T018	A				
77#	BSY76	300m	170MΔ	2.0m	\$J	40	32	7.0	250m	.05u	1.0	1.0m	80	5.0p	PE	T018	A				
78#	BSY78	300m	170MΔ	2.0m	\$J	80	64	7.0	250m	.05u	1.0	1.0m	80	4.0p	PE	T018	A				
79#	SK3038-RT	300m	175MΔ	2.0m	\$J	30	25	7.5	300m	1.0n	5.0	1.0m	175	2.0p	PE	T05	A				
80#	IT1211TO71*	300m	180MΔ	1.7m	\$J	45	45	7.0	50m	1.0n	5.0	1.0m	100</								

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C	T E M P	ABS MAX RATINGS @25°C			MAX. lcco @MAX Vcb (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG #200 s/a TO200 Ser	# E O A D E	
					Vcbo (V)	Vcvo (V)	VVebo (V)		lc (A)	Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)					hre (X.0001)
1	MPS3394	310m	2.9m	TJ	25		5.0				170 TΔ					3.5pF	AN	T092	A
2	MPS3395	310m	2.9m	TJ	25		5.0				150 TΔ					3.5pF	AN	T092	A
3	MPS3396	310m	2.9m	TJ	25		5.0				90 TΔ					3.5pF	AN	T092	A
4	MPS3397	310m	2.9m	TJ	25		5.0				500 TΔ					3.5pF	AN	T092	A
5	MPS3398	310m	2.9m	TJ	25		5.0				800 TΔ					3.5pF	AN	T092	A
6	MPS3707	310m	2.9m	TJ	30		6.0				400 TΔ					3.5pF	AN	T092	A
7	MPS3708	310m	2.9m	TJ	30		6.0				660 TΔ						AN	T092	A
8	MPS3709	310m	2.9m	TJ	30		6.0				165 TΔ						AN	T092	A
9	MPS3710	310m	2.9m	TJ	30		6.0				330 TΔ						AN	T092	A
10	MPS3711	310m	2.9m	TJ	30		6.0				180 TΔ						AN	T092	A
11	MPS6541	310m	2.9m	TJ	30		4.0								1.7p		AN	T092	A
12	MPS6544	310m	2.9m	TJ	30		4.0										AN	T092	A
13	MPS6545	310m	2.9m	TJ	30		4.0										AN	T092	A
14	MPS6564	310m	2.8m	TJ	60	45	5.0	50m	500nφ	5.0φ	10mφ	25 TΔ#			4.0p	PE	AN	T092	A
15	MPS6567	310m	2.9m	TJ	40		5.0					25 TΔ			.7p	AN	PE	T092	A
16	HEP54-RT	310m	30M	TJ	20	20	5.0	200m\$	200n\$	20		350 T						T092	A
17	HEP731-RT	310m	30M	TJ	20	20	4.0	25m\$	500n\$	5.0		130 T						T092	A
18	HSE419-RT	310m	40MΔ	TJ	140	120	5.0			5.0φ	10mφ	100 TΔ						T092	A
19	HSE412-RT	310m	50MΔ	TJ	70	70	4.0		100nφ	1.0φ	10mφ	60 TΔ						T092	A
20	HSE415-RT	310m	50MΔ	TJ	25	25	4.0		100nφ	5.0φ	10mφ	250 TΔ						T092	A
21	HSE416-RT	310m	50MΔ	TJ	30	25	4.5		100nφ	5.0φ	10mφ	400 TΔ						T092	A
22	HSE411-RT	310m	60MΔ	TJ	60	50	5.0		100nφ	1.0φ	10mφ	60 TΔ						T092	A
23	HSE417-RT	310m	60MΔ	TJ	45	40	4.0		50nφ	5.0φ	10mφ	120 TΔ						T092	A
24	HSE418-RT	310m	60MΔ	TJ	25	25	4.0		100nφ	5.0φ	10mφ	200 TΔ						T092	A
25	MPS6591	310m	60MΔ	TJ	60	50	4.0	250m	100nφ	1.0φ	10mφ	40 TΔ	75u	1.4k	800m	12p\$	AN	R210	A
26	MPSA09	310m	80M	TJ	50	50	4.0	50m	100nφ	5.0φ	100uφ	100 TΔ			5.0pF	AN	AN	T092	A
27	HEP733-RT	310m	100M	TJ	30	20	4.0	100m\$	500n\$	5.0		95 T						T092	A
28	HEP737-RT	310m	100M	TJ	30	25	6.0	100m\$	100n\$	5.0		600 T						T092	A
29	HEP738-RT	310m	100M	TJ	45	40	7.0	100m\$	100n\$	5.0		250 T						T092	A
30	HSE420-RT	310m	100MΔ	TJ	160	160	5.0		100nφ	5.0φ	10mφ	100 TΔ						T092	A
31	MPS3704	310m	100MΔ	TJ	50	30	5.0	600m	100nφ	2.0φ	50mφ	100 TΔ#			12pF	AN	T092	A	
32	MPS3705	310m	100MΔ	TJ	40	20	5.0	600m	100nφ	2.0φ	50mφ	50 TΔ#			12pF	AN	T092	A	
33	MPS3706	310m	100MΔ	TJ	40	20	5.0	600m	100nφ	2.0φ	50mφ	30 TΔ#			12pF	AN	T092	A	
34	MPC330	310m	100M	TJ	40	35	5.0	100m	50nφ	5.0φ	2.0 φ	1.1kTΔ			5.0pF	E	T092	A	
35	HEP735-RT	310m	150M	TJ	45	40	6.0	600m\$	100n\$	2.0		300 T						T092	A
36	HEP736-RT	310m	150M	TJ	55	50	6.0	600m\$	100n\$	2.0		140 T						T092	A
37	HSE408-RT	310m	150MΔ	TJ	50	40	5.0		100nφ	1.0φ	150mφ	100 TΔ						T092	A
38	PTC138-RT	310m	150MΔ	TJ	33	30	7.0	100m	100uφ	8.0φ	5.0mφ	700 T						T092	A
39	HEP730-RT	310m	175M	TJ	30	25	4.5	50m\$	100n\$	15		600 T						T092	A
40	MPS6571	310m	175M	TJ	20	20	3.0	50m	50n	5.0φ	100uφ	250 TΔ			4.5pF	ANT	R196b	A	
41#	BCX19	310m	200M	TJ	50	45	5.0	500m	100nφ	1.0φ	100mφ	100 TΔ			5.0p\$	PET	X156	A	
42#	BCX19R	310m	200M	TJ	45	45	5.0	500m	100nφ	1.0φ	100mφ	100 TΔ			5.0p\$	PET	X156	C	
43#	BCX20	310m	200M	TJ	30	25	5.0	500m	100nφ	1.0φ	100mφ	100 TΔ			5.0p\$	PET	X156	A	
44#	BCX20R	310m	200M	TJ	30	25	5.0	500m	100nφ	1.0φ	100mφ	100 TΔ			5.0p\$	PET	X156	C	
45	HEP55-RT	310m	200M	TJ	30	25	5.0	200m\$	100n\$	20		350 T						T092	A
46	HEP722-RT	310m	200M	TJ	25	25	4.0	100m\$	100n\$	15		60 T						T092	A
47	HEP723-RT	310m	200M	TJ	25	25	4.0	100m\$	100n\$	15		90 T						T092	A
48	HEP724-RT	310m	200M	TJ	25	25	4.0	100m\$	100n\$	15		160 T						T092	A
49	HEP725-RT	310m	200M	TJ	25	25	4.0	100m\$	100n\$	15		250 T						T092	A
50	HEP726-RT	310m	200M	TJ	25	25	4.0	100m\$	100n\$	15		350 T						T092	A
51	HEP727-RT	310m	200M	TJ	25	20	4.0	100m\$	500n\$	5.0		50 T						T092	A
52	HEP728-RT	310m	200M	TJ	45	45	4.0	100m\$	50n\$	2.0		180 T						T092	A
53	HEP729-RT	310m	200M	TJ	45	45	4.0	100m\$	500n\$	3.0		100 T						T092	A
54	HEP732-RT	310m	200M	TJ	20	20	4.0	25m\$	500n\$	5.0		45 T						T092	A
55	HEP734-RT	310m	200M	TJ	40	20	4.0	25m\$	500n\$	5.0		75 T						T092	A
56	HEPS0005-RT	310m	200M	TJ	180	160	6.0	600m\$	50n\$	5.0		180 T						T092	A
57	HEPS0007-RT	310m	200M	TJ	70	70	4.0	50m\$	100n\$	5.0		125 T						T092	A
58	HSE401-RT	310m	200MΔ	TJ	45	40	4.0		100nφ	1.0φ	10mφ	80 TΔ						T092	A
59	HSE423-RT	310m	200MΔ	TJ	50	30	5.0		100nφ	1.0φ	10mφ	50 TΔ						T092	A
60	MPS706A1	310m	200MΔ	TJ	25	15	5.0		500nφ	1.0φ	10mφ	20 TΔ#			6.0pF	ANT	R196b	A	
61	MPS706A1	310m	200MΔ	TJ	25	15	5.0		500nφ	1.0φ	10mφ	20 TΔ#			6.0pF	ANT	R196b	A	
62	MPS3693	310m	200MΔ	TJ	45	45	4.0		50nφ	1.0φ	10mφ	40 TΔ			3.5pF	EA	T092	A	
63	MPS3694	310m	200MΔ	TJ	45	45	4.0		05uφ	1.0φ	10mφ	100 TΔ			3.5pF	EA	T092	A	
64	MPS3826	310m	200MΔ	TJ	60	45	4.0	50m	100nφ	1.0φ	10mφ	40 TΔ#			3.5pF	PE	T092	A	
65	MPS3827	310m	200MΔ	TJ	60	45	4.0	30m	100nφ	1.0φ	10mφ	40 TΔ#			3.5pF	PE	T092	A	
66	MPS6565	310m	200MΔ	TJ	60		4.0					40 TΔ			3.5pF	AN	T092	A	
67	MPS6566	310m	200MΔ	TJ	60		4.0					100 TΔ			3.5pF	AN	T092	A	
68	MPS6573	310m	200MΔ	TJ	35	35	4.0	100m	100nφ	5.0φ	100uφ	100 TΔ			12pF	Aφ	R210	A	
69	MPS6574	310m	200MΔ	TJ	35	35	4.0	100m	100nφ	5.0φ	100uφ	100 TΔ			12pF	Aφ	R210	A	
70	MPS6575	310m	200MΔ	TJ	45	45	4.0	100m	100nφ	5.0φ	100uφ	100 TΔ			12pF	Aφ	R210	A	
71	MPS6576	310m	200MΔ	TJ	45	45	4.0	100m	100nφ	5.0φ	100uφ	100 TΔ			12pF	Aφ	R210	A	
72#	2SC1766	310m	230M	TJ	30	30	5.0	100m	500nφ	12φ	2.0mφ	150 T			3.5pF	E	T092	A	
73	AST41231	310m	250MΔ	TJ	40	30	5.0	200m	50nφ	1.0φ	2.0mφ	50 TΔ			4.0pF	PEφ	R203	A	
74	BF368	310m	250MΔ	TJ	25	15	4.0	50m	100nφ	1.0φ	1.0mφ	35 TΔ			1.7pF	AN	R210b	A	
75	EN39031	310m	250MΔ	TJ	60	40	5.5	200m	50nφ	1.0φ	1.0mφ	50 TΔ	40uφ	8.0kφ	5.0 φ	4.0pF	DPEφ	TO106	A
76	GET3903	310m	250MΔ	TJ	60	40	6.0	200m	50nφ	1.0φ	1.0mφ	50 TΔ	40uφ	8.0kφ	5.0 φ	4.0pF	φ	R203a	B
77	MPS27131	310m	250M	TJ	18	18	5.0	200m	50u	4.5φ	2.0mφ	120 TΔ			2.5p	EA	T092	A	
78	MPS27141	310m	250M	TJ	18	18	5.0	200m	50u	4.5φ	2.0mφ	300 TΔ			2.5p	EA	T092	A	
79	MPS3642	310m	250MΔ	TJ	60	45	5.0	500m	50n\$	1.0φ	150mφ	40 TΔ#			8.0p	PE	T092	A	
80	HEP721-RT	310m	260M	TJ	30	30	5.0	500m\$	100n\$	20		350 T						T092	A
81	BC317	310m	280M	TJ	50	45	6.0	150m	30n	5.0φ	2.0 φ	110 TΔ#			4.0p	PEφ	T092	A	
82	BC317A	310m	280M	TJ	50	45	6.0	150m	30n	5.0φ	2.0 φ	220 TΔ#			4.0p	PEφ	T092	A	
83	BC317B	310m	280M	TJ	50	45	6.0	150m											

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	TEMP. MAX. °C	ABS. MAX. RATINGS @25°C					TYPICAL 'h' PARAMETERS					Cob (F)	STRUC. TURE	DWG # Y200 s/a TO200 Ser.	CODE	
						BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	MAX. Icbo @MAX Vcb (A)	BIAS			COMMON EMITTER						
											Vcb (V)	Ic (A)	hfe	hoe (mhos)	hie (Ω)					hre (X.0001)
1	MPSA17	350m	80MΔ	2.7m	\$J	65	40	15	100m	100n	1.0	5.0m	200	1Δ		AN	T092	A		
2	HSE454-RT	350m	90MΔ	3.5m	\$J	65	50	5.0	100m	1.0u	1.0	10m	100	1Δ		AN	T098	A		
3	2N5220	350m	100MΔ	2.8m	\$S	15	15	3.0	500m	100n	1.0	5.0m	30	Δ		AN	T092	A		
4	2N5550	350m	100MΔ	2.8m	\$J	160	140	6.0	600m	100n	1.0	1.0m	50	Δ		PE	T092	A		
5	2N5551	350m	100MΔ	2.8m	\$J	180	160	6.0	600m	50n	1.0	1.0m	50	Δ		PE	T092	A		
6	BCW65EAT	350m	100MΔ	2.8m	\$J		32	5.0	800m		1.0	100m	100	Δ		PE	X156	A		
7	BCW65EBT	350m	100MΔ	2.8m	\$J		32	5.0	800m		1.0	100m	160	Δ		PE	X156	A		
8	BCW65ECT	350m	100MΔ	2.8m	\$J		32	5.0	800m		1.0	100m	250	Δ		PE	X156	A		
9	BCW66EFT	350m	100MΔ	2.8m	\$J		45	5.0	800m		1.0	100m	100	Δ		PE	X156	A		
10	BCW66EGT	350m	100MΔ	2.8m	\$J		45	5.0	800m		1.0	100m	160	Δ		PE	X156	A		
11	BCW66EHT	350m	100MΔ	2.8m	\$J		45	5.0	800m		1.0	100m	250	Δ		PE	X156	A		
12	BCX41	350m	100MΔ	2.7m	\$J		125	5.0	800m	100ns						PL	X156c	A		
13	MMBT-A06	350m	100MΔ	2.8m	\$S	80	40	4.0	100m	100n	1.0	10m	50	Δ		AN	X156d	A		
14	MPS8001	350m	100MΔ	2.8m	\$J	25	25	3.0	100m	1.0u	1.0	10m	40	Δ		AN	R210	A		
15	MPSA16	350m	100MΔ	2.7m	\$J	40	40	12	100m	100n	1.0	5.0m	200	Δ		AN	T092	A		
16	MPSD05	350m	100MΔ	2.8m	\$J	25	25	25	500m	1.0u	5.0	5.0m	50	Δ		ANT	T092	A		
17	MPSD06	350m	100MΔ	2.8m	\$J	25	25	4.0	50m	1.0	5.0	1.0m	40	Δ		ANT	T092	A		
18	ZT201	350m	110MΔ	2.7m	\$J	20	20	6.0	50m	500n	6.0	1.0m	30		2.5u	1.3k	1.1	5.0p	T05	∅
19	ZT211	350m	110MΔ	2.7m	\$J	20	20	6.0	50m	500n	6.0	1.0m	30		2.5u	1.3k	1.1	5.0p	T05	∅
20	ZT221	350m	110MΔ	2.7m	\$J	45	45	6.0	50m	500n	6.0	1.0m	50		2.5u	1.6k	1.1	5.0p	T05	∅
21	ZT231	350m	110MΔ	2.7m	\$J	45	45	6.0	50m	500n	6.0	1.0m	50		2.5u	1.6k	1.1	5.0p	T05	∅
22	ZT241	350m	110MΔ	2.7m	\$J	45	45	6.0	50m	500n	6.0	1.0	50		2.5u	2.0k	1.1	5.0p	T05	∅
23	MPS5172	350m	120MΔ	2.8m	\$J	25	25	5.0	100m	100n	1.0	10m	100	Δ		AN	T092	A		
24	ZT601	350m	120MΔ	2.7m	\$J	25	25	4.0	500m	500n	6.0	1.0	55		8.0p	∅	∅	∅	T05	∅
25	ZT611	350m	120MΔ	2.7m	\$J	45	35	4.0	500m	500n	6.0	1.0	55		8.0p	∅	∅	∅	T05	∅
26	ZT621	350m	120MΔ	2.7m	\$J	45	35	4.0	500m	500n	6.0	1.0	55		8.0p	∅	∅	∅	T05	∅
27	ZT631	350m	120MΔ	2.0m	\$J	60	45	5.0	500m	50n	6.0	1.0	55		8.0p	∅	∅	∅	T05	∅
28	ZT641	350m	120MΔ	2.0m	\$J	60	45	5.0	500m	50n	6.0	1.0	90		8.0p	∅	∅	∅	T05	∅
29	ZT661	350m	120MΔ	2.0m	\$J	100	80	5.0	500m	50n	6.0	1.0	55		8.0p	∅	∅	∅	T05	∅
30	MMBT-A20	350m	125MΔ	2.8m	\$S	80	40	4.0	100m	100n	1.0	5.0m	40	Δ		AN	X156d	A		
31	BFW601	350m	130MΔ	3.5m	\$J	40	35	6.0	500m	500n	10	10m	75		7.0p	∅	∅	∅	S1	A
32	2N3641	350m	150MΔ	3.5m	\$J	60	30	5.0	500m	50n	10	150m	40	Δ		AN	R110a	A		
33	2N3642	350m	150MΔ	3.5m	\$J	60	45	5.0	500m	50n	10	150m	40	Δ		AN	R110a	A		
34	2N5219	350m	150MΔ	2.8m	\$S	20	15	3.0	100m	100n	10	2.0m	35	Δ		AN	T092	A		
35	2N5223	350m	150MΔ	2.8m	\$S	25	20	3.0	100m	100n	10	2.0m	50	Δ		AN	T092	A		
36	2SC1781HT	350m	150MΔ	2.3m	\$J	70	50	5.0	500m	500n	3.0	1.0m	80	Δ		PE	T018	A		
37	2SC1849	350m	150MΔ	3.2m	TJ	30	25	5.0	200m	1.0u	10	2.0m	150	Δ		PE	T092	A		
38	2SC1850	350m	150MΔ	3.2m	TJ	60	50	5.0	200m	1.0u	10	2.0m	150	Δ		PE	T092	A		
39	BF538	350m	150MΔ	2.3m	\$J	45	35	5.0	500m	50n	6.0	100u	20	Δ		AN	X155	F		
40	BF538A	350m	150MΔ	2.3m	\$J	25	25	5.0	500m	500n	6.0	10m	50	Δ		AN	X155	F		
41	BF539	350m	150MΔ	2.3m	\$J	60	45	5.0	500m	50n	6.0	10m	40	Δ		AN	X155	F		
42	BFX501	350m	150MΔ	2.0m	\$J	80	35	6.0	1.0	100n	10	150m	30	Δ		PE	T018	A		
43	MD2060F*	350m	150MΔ	2.0m	\$J	100	60	7.0	500m	2.0n	5.0	10u	25	Δ		AN	X22	PB		
44	MPS8098	350m	150MΔ	2.8m	\$J	60	60	6.0	200m	100n	5.0	1.0	100	Δ		AN	T092	A		
45	MPS8099	350m	150MΔ	2.8m	\$J	80	80	6.0	200m	100n	5.0	1.0	100	Δ		AN	T092	A		
46	MPSA18	350m	180MΔ	2.8m	\$J	45	45	6.5	200m	50n	5.0	10m	1.1k	#		AN	T092	A		
47	BF394	350m	180MΔ	2.8m	\$J	30	30	5.0	100m	100n	10	1.0m	65	Δ		AN	R210a	A		
48	BF394B	350m	180MΔ	2.8m	\$J	30	30	5.0	100m	100n	10	1.0m	160	Δ		AN	R210a	C		
49	BF395	350m	180MΔ	2.8m	\$J	30	30	5.0	100m	100n	10	1.0m	35	Δ		AN	R210a	A		
50	BF395C	350m	180MΔ	2.8m	\$J	30	30	5.0	100m	100n	10	1.0m	95	Δ		AN	R210a	C		
51	BF395D	350m	180MΔ	2.8m	\$J	30	30	5.0	100m	100n	10	1.0m	65	Δ		AN	R210a	C		
52	2N44001	350m	200MΔ	2.8m	\$J	60	40	6.0	600m	100n	10	1.0m	20	Δ	30u	7.5k	8.0	6.5p	T092	A
53	BC237	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	120	Δ		AN	R210a	F		
54	BC237.5	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	120	Δ		AN	W50	F		
55	BC237.18	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	120	Δ		AN	R204e	A		
56	BC237A5	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	220		8.0u	2.2k	1.5	4.5p	R207	A
57	BC237A.18	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	220		8.0u	2.2k	1.5	4.5p	R204e	A
58	BC237A	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	220		8.0u	2.2k	1.5	4.5p	R210a	A
59	BC237B5	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	330		10u	6.0k	2.0	4.5p	R207	A
60	BC237B.18	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	330		10u	6.0k	2.0	4.5p	R204e	A
61	BC237B	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	330		10u	6.0k	2.0	4.5p	R210a	F
62	BC237C5	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	600		12u	8.7k	3.0	4.5p	R207	A
63	BC237C.18	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	600		12u	8.7k	3.0	4.5p	R204e	A
64	BC237C	350m	200MΔ	2.8m	\$J	45	45	5.0	100m	15n	5.0	2.0m	600		12u	8.7k	3.0	4.5p	R210a	F
65	MMBT3904	350m	200MΔ	2.8m	\$S	60	40	6.0	200m	10u	1.0	100u	40	Δ		AN	X156d	A		
66	MPS8097	350m	200MΔ	2.8m	\$J	60	40	6.0	200m	10u	1.0	100u	250	Δ		AN	T092	A		
67	2SC282HT	350m	220MΔ	2.3m	\$J	30	20	5.0	100m	100n	6.0	10m	5.0	Δ		AN	T01	A		
68	2SC284HT																			

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	TEMPERATURE RANGE (°C)	ABS MAX RATINGS @25°C				MAX. lcco @Vcb (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG #	E C O A D E
						VVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)		Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)				
1	2N5826	360m		3.6m	50	40	5.0	100m	5.0m	5.0	2.0m	150	Δ			4.0p	R203a	A		
2	2N5827	360m		3.6m	50	40	5.0	100m	5.0m	5.0	2.0m	250	Δ		4.0p	R203a	A			
3	2N5827A	360m		3.6m	50	40	5.0	100m	5.0m	5.0	2.0m	250	Δ		4.0p	R203a	A			
4	2N5828	360m		3.6m	50	40	5.0	100m	5.0m	5.0	2.0m	400	Δ		4.0p	R203a	A			
5	2N5828A	360m		3.6m	50	40	5.0	100m	5.0m	5.0	2.0m	400	Δ		4.0p	R203a	A			
6	2N6222	360m		2.8m	60	60	5.0	100m	5.0m	5.0	2.0m	75	Δ		4.0p	R203a	A			
7	2N6224	360m		2.8m	60	60	5.0	100m	5.0m	5.0	2.0m	150	Δ		4.0p	R207b	A			
8	A5T3707	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	100	Δ		4.0p	R203	A			
9	A5T3708	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	45	Δ		4.0p	R203	A			
10	A5T3709	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	45	Δ		4.0p	R203	A			
11	A5T3710	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	90	Δ		4.0p	R203	A			
12	A5T3711	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	180	Δ		4.0p	R203	A			
13#	BC223A	360m		2.9m	50	30	5.0	400m	100m	2.0	50m	100	Δ#		2.5p	R203c	A			
14#	BC223B	360m		2.9m	50	30	5.0	400m	100m	2.0	50m	200	Δ#		2.5p	R203c	A			
15#	BF237	360m		2.9m	45	30	4.0	30m	100m	1.0	100m	30	Δ		2.5p	R203	A			
16	BF238	360m		2.9m	45	30	4.0	30m	100m	1.0	100m	70	Δ		2.5p	R203	A			
17	LDS2070	360m		2.9m	20	10	5.0	30m	100m	5.0	100m	75	Δ		12p	TO122	P			
18	TP3704	360m		2.9m	50	30	5.0	30m	100m	2.0	50m	100	Δ		12p	TO98	B			
19	TP3705	360m		2.9m	50	30	5.0	30m	100m	2.0	50m	50	Δ		12p	TO98	B			
20	TP3706	360m		2.9m	40	20	5.0	30m	100m	2.0	50m	30	Δ		12p	TO98	B			
21	TP3707	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	100	Δ		12p	TO98	B			
22	TP3708	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	45	Δ		12p	TO98	B			
23	TP3709	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	45	Δ		12p	TO98	B			
24	TP3710	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	90	Δ		12p	TO98	B			
25	TP3711	360m		2.9m	30	30	6.0	30m	100m	5.0	100m	180	Δ		12p	TO98	B			
26#	BF597	360m	550	2.4m	40	25	4.0	25m	100m	1.0	70m	37	Δ		6p	R196	B			
27	2N2484A	360m	15MS	2.0m	60	60	6.0	50m	0.1u	5.0	1.0m	150	Δ		40u	TO18	A			
28	PET8001	360m	40MS	3.6m	50	35	8.0	100m	0.1u	100	1.0m	260	Δ		40u	R110	A			
29	PET8002	360m	40MS	3.6m	50	35	8.0	100m	0.1u	100	1.0m	400	Δ		40u	R110	A			
30	PET8003	360m	40MS	3.6m	50	35	8.0	100m	0.1u	100	1.0m	260	Δ		40u	R110	A			
31	PET8004	360m	40MS	3.6m	50	35	8.0	100m	0.1u	100	1.0m	400	Δ		40u	R110	A			
32	2N2509	360m	45MS	2.8m	125	80	7.0	200m	5.0n	5.0	10u	25	Δ		6.0p	TO18	A			
33	2N2510	360m	45MS	2.8m	100	65	7.0	200m	5.0n	5.0	10u	75	Δ		6.0p	TO18	A			
34	2N2511	360m	45MS	2.8m	80	50	7.0	200m	5.0n	5.0	10u	80	Δ		6.0p	TO18	A			
35	2N30371	360m	50MS	2.4m	120	70	7.0	500m	0.1u	100	1.0m	30	Δ		100u	TO50	A			
36	2N30381	360m	50MS	2.4m	100	60	7.0	500m	0.1u	100	1.0m	60	Δ		200u	TO50	A			
37#	BF1541	360m	50MS	2.0m	60	30	6.0	1.0	50n	6.0	1.0m	30	Δ		8.0p	TO18	A			
38#	BF1551	360m	50MS	2.0m	40	20	6.0	1.0	50n	6.0	1.0m	30	Δ		8.0p	TO18	A			
39#	BSX25	360m	50MS	2.1m	40	25	5.0	300m	100u	5.0	5.0m	30	Δ		25p	TO18	A			
40#	BSY93	360m	50MS	2.1m	60	40	5.0	100m	100u	2.0	1.0m	60	Δ		25p	TO18	A			
41	TZ81	360m	50MS	2.8m	60	30	5.0	500m	10n	5.0	1.0m	350	Δ		90nb	TO98	B			
42	TZ82	360m	50MS	2.8m	60	30	5.0	500m	10n	5.0	1.0m	250	Δ		90nb	TO98	B			
43#	BFY76	360m	55MS	2.0m	45	45	6.0	50m	20n	5.0	1.0m	300	Δ		11u	TO18	A			
44	2N2483	360m	60MS	2.0m	60	60	6.0	50m	10n	5.0	1.0m	80	Δ		30u	TO18	A			
45	2N2484	360m	60MS	2.0m	60	60	6.0	50m	10n	5.0	1.0m	150	Δ		40u	TO18	A			
46	JAN2N2484	360m	60MS	2.0m	60	60	6.0	50m	10n	5.0	1.0m	250	Δ		40u	TO18	A			
47	2N3077	360m	60MS	2.0m	80	60	7.0	50m	0.1u	5.0	0.1m	80	Δ		40u	TO18	A			
48	2N3078	360m	60MS	2.0m	80	60	7.0	50m	0.1u	5.0	0.1m	25	Δ		40u	TO18	A			
49	2N3117	360m	60MS	2.0m	60	60	6.0	50m	0.1u	5.0	1.0m	400	Δ		40u	TO18	A			
50#	BF1531	360m	60MS	2.0m	80	35	6.0	1.0	50n	6.0	1.0m	10	Δ		8.0p	TO18	A			
51#	BFY77	360m	60MS	2.1m	45	45	6.0	50m	0.2u	5.0	1.0m	450	Δ		15u	TO18	A			
52	PET4001	360m	60MS	3.6m	30	25	8.0	100m	0.1u	100	1.0m	160	Δ		40u	R110	A			
53	PET4002	360m	60MS	3.6m	30	25	8.0	100m	0.1u	100	1.0m	260	Δ		40u	R110	A			
54	PET4003	360m	60MS	3.6m	30	25	8.0	100m	0.1u	100	1.0m	400	Δ		40u	R110	A			
55#	BFX92A	360m	69MS	2.0m	60	60	6.0	50m	0.1u	5.0	1.0m	280	Δ		11u	TO18	A			
56#	BFX93A	360m	78MS	2.0m	60	60	6.0	50m	10n	5.0	1.0m	400	Δ		15u	TO18	A			
57#	BC285	360m	80MS	2.0m	120	120	5.0	100m	100n	30	5.0m	30	Δ		5.0m	TO18	A			
58	HEPS0002-RT	360m	80MS	2.0m	25	25	5.0	500m	100n	160	100m	160	Δ		380	TO92	A			
59	HEPS0003-RT	360m	80MS	2.0m	25	25	5.0	500m	100n	380	100m	160	Δ		380	TO92	A			
60	GET929	360m	90MS	3.6m	70	50	5.0	100m	10n	5.0	100m	60	Δ		1.0p	TO18	A			
61	GET930	360m	90MS	3.6m	70	50	5.0	100m	10n	5.0	100m	100	Δ		1.0p	TO18	A			
62	2N3704	360m	100MS	2.9m	50	30	5.0	800m	10u	2.0	50m	300	Δ		12p	TO92	B			
63	2N3705	360m	100MS	2.9m	50	30	5.0	800m	10u	2.0	50m	150	Δ		12p	TO92	B			
64	2N3706	360m	100MS	2.9m	40	20	5.0	800m	10u	2.0	50m	600	Δ		12p	TO92	B			
65	2N5449	360m	100MS	2.9m	50	30	5.0	800m	10u	2.0	50m	100	Δ		12p	R203	A			
66	2N5450	360m	100MS	2.9m	50	30	5.0	800m	10u	2.0	50m	50	Δ		12p	R203	A			
67	2N5451	360m	100MS	2.9m	40	20	5.0	800m	10u	2.0	50m	30	Δ		12p	R203	A			
68#	BFR16	360m	100MS	6.9m	60	60	8.0	50m	10n	5.0	1.0m	150	Δ		17u	TO18	A			
69#	BFR17	360m	100MS	6.9m	60	60	8.0	50m	20n	5.0	1.0m	450	Δ		20u	TO18	A			
70#	BFT29	360m	100MS	2.0m	90	80	5.0	100m	10n	100m	50	Δ		10p	TO18	A				
71#	BFT30	360m	100MS	2.0m	70	60	5.0	100m	10n	100m	75	Δ		10p	TO18	A				
72#	BFT31	360m	100MS	2.0m	60	50	5.0	100m	10n	100m	100	Δ		10p	TO18	A				
73	PET3704	360m	100MS	3.6m	50	30	5.0	800m	10u	2.0	50m	50	Δ		12p	R110	A			
74	PET3705	360m	100MS	3.6m	50	30	5.0	800m	10u	2.0	50m	50	Δ		12p	R110	A			
75	PET3706	360m	100MS	3.6m	50	30	5.0	800m	10u	2.0	50m	50	Δ		12p	R110	A			
76#	BF157	360m	110MS	2.1m	160	160	5.0	200m	50n	100	30m	25	Δ		5.5p	TO18	A			
77#	BF158	360m	110MS	2.1m	250	250	5.0	200m	50n	100	30m	25	Δ		5.5p	TO18	A			
78#	BF159	360m	110MS	2.1m	300	300	5.0	200m	50n	100	30m	25	Δ		5.5p	TO18	A			
79#	BCW34	360m	150M	2.7m	60	45	5.0	600m	10n	5.0	100m	100	Δ		5.0u	TO18	A			
80#	ME6003	360m	150MS	2.8m	25	25	4.0	100m	5.0	5.0	50m	30	Δ		12p	R110c	A			
81	2N6112	360m	160MS	2.8m	50	30	5.0	100m	10n	5.0	2.0m	185	Δ		10p	X149	B			
82	2N706C1	360m	200MS	2.0m	40	15	5.0	50m	1.0u	1.0	10m	20	Δ		5.0p	TO18	A			
83	2N9191	360m	200MS	2.1m	25	15	5.0	220m	10u	1.0	10m	20	Δ		7.0p	TO18	A			
84	2N9201	360m	200MS	2.1m	25	15	5.0	220m	10u	1.0	10m	4								

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	TEMPERATURE M A X P	ABS MAX RATINGS @25°C			MAX. lcco @MAX Vcb (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# L E A D E	C O D E
						Vbcco (V)	BVceo (V)	BVebo (V)		Ic (A)	Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)					
1#	BFW681	360m	400M	2.0m	SJ	50	40	5.0	0.1u	5.0	5.0m	50 Δ	125u	2k	5	3.0p	DPE	TO18	A	
2#	BSS261	360m	400M	2.0m	SJ					1.0	100m	40 †				4.8p		TO18	A	
3#	BSV921	360m	400M	2.0m	SJ					1.0	10m	40				4.0p		TO18	A	
4#	BSV901	360m	400M	2.0m	SJ					1.0	10m	40				4.0p		TO18	A	
5#	BSV911	360m	400M	2.0m	SJ					1.0	10m	40				4.0p		TO18	A	
6#	BSX881	360m	400M	2.0m	SJ	40	15	5.0	25n	1.0	10m	45 †#				4.0p	DPE	TO18	A	
7#	ZT23681	360m	400M	2.0m	SJ	40		4.5		1.0	10m	20 †Δ				4.0p	PL	TO18	A	
8#	ZT23691	360m	400M	2.0m	SJ	40		4.5		1.0	10m	40 †Δ				4.0p	PL	TO18	A	
9#	ZT2369A1	360m	400M	2.0m	SJ	40		4.5		1.0	10m	40 †Δ				4.0p	PL	TO18	A	
10	2N3511	360m	450M	2.0m	SJ	40	15	6.0	500m	25n#	1.0	150m	30 †Δ	100u	4.5k	25	4p	PL	TO52	A
11	2N708/46†	360m	480M	2.0m	SJ	40	15	5.0		25n	1.0	10m	30 †Δ			6.0p	PL	TO46	A	
12	2N743A1	360m	500M	2.0m	SJ	40	15	5.0		1.0u	3.5	10m	20 †Δ			3.0p	PE	TO18	A	
13	2N744A1	360m	500M	2.0m	SJ	40	15	5.0		1.0u	3.5	10m	40 †Δ			3.0p	PE	TO18	A	
14	2N834A	360m	500M	2.0m	SJ	40	30	5.0	200m	50u	1.0	10m	25 †Δ			4.0p		TO18	A	
15	2N915A	360m	500M	2.1m	SJ	70	50	5.0		2n	5.0	5.0m	50 †Δ	125u	2k	3.0p		TO18	A	
16	2N916B	360m	500M	2.1m	SJ	60	30	5.0		2n	5.0	5.0m	50 †Δ	125u	2k	3.0p		TO18	A	
17	2N23691	360m	500M	2.0m	SJ	40	15	4.5	500m	400n	1.0	10m	40 †#Δ			4.0p		TO18	A	
18	2N2369A1	360m	500M	2.0m	SJ	40	15	4.5	200m	400n	1.0	10m	40 †#Δ			4.0p		TO18	A	
19	JAN2N2369A1	360m	500M	2.0m	SJ	40	15	4.5		30u†	1.0	10m	40 †Δ			4.0p		TO18	A	
20	2N27101	360m	500M	2.0m	SJ	40	20	5.0	500m	0.3u	1.0	10m	40 †Δ			4.0p	PE	TO18	A	
21	2N32271	360m	500M	2.0m	SJ	40	20	6.0	200m	20u	1.0	10m	100 †#			4.0p		TO18	A	
22	2N41371	360m	500M	2.0m	SJ	40	20	4.5	200m	30u†	3.5	10m	40 †#			4.0p	DPE	TO18	A	
23	2N44181	360m	500M	2.9m	S	40	15	4.5	200m	40u	1.0	10m	40 †#Δ			4.0p		R203	A	
24	2N52721	360m	500M	2.1m	S	40	20	5.0	200m	20u	1.0	10m	100 †#			4.0p		TO18	A	
25#	2SC764†	360m	500M	2.0m	SJ	30	15	4.0	125m	100n	1.0	10m	40 †Δ			4.0p	PE	TO18	A	
26#	BFX43	360m	500M	2.0m	SJ	30	15	4.0	125m	100n	1.0	10m	20 †Δ			4.0p	PE	TO18	A	
27#	BFX44	360m	500M	2.0m	SJ	40	15	4.0	125m	100n	1.0	10m	40 †Δ			4.0p	PE	TO18	A	
28#	BSV921	360m	500M	2.0m	SJ	40	15	4.5	500m	400n	1.0	100m	10 †Δ			4.0p	PE	TO18	A	
29#	BSX19	360m	500M	2.0m	SJ	40	15	4.5	500m	400n	2.0	100m	20 †Δ			4.0p	PE	TO18	A	
30#	BSX20†	360m	500M	2.0m	SJ	40	15	4.5	500m	400n	2.0	100m	20 †Δ			4.0p	PE	TO18	A	
31	LDS200†	360m	500M	2.9m	SJ	30	15	4.5	500n	1.0	10m	20 †Δ			4.0p	PE	TO122	P		
32	LDS201†	360m	500M	2.9m	SJ	30	15	4.5	500n	1.0	10m	40 †Δ			4.0p	PE	TO122	P		
33#	BSX26†	360m	550M	2.0m	SJ	40	15	4.0	500n	4.0	30m	60 †#			3.3p	DPE	TO18	A		
34#	BSX92†	360m	550M	2.0m	SJ	40	15	4.0	500n	4.0	30m	60 †#			3.3p	PE	TO18	A		
35	2N3862†	360m	600M	2.0m	SA	50	20	4.5	200m	0.5u	1.0	10m	50 †#Δ			4.0p		TO72	G	
36	2N5082	360m	600M	2.1m	S	60	30	5.0		0.1u	5.0	100 †			3.0p		TO18	A		
37	2N5389†	360m	600M	2.4m	S	25	15	2.0	100m	0.1u	1.0	1.0m	30 †			3.0p		TO46	A	
38#	BSX39†	360m	600M	2.0m	SJ	45	20	5.0		100n	4.0	30m	60 †#			4.0p	DPE	TO18	A	
39#	BSX37A†	360m	600M	2.0m	SJ	40	15	5.0		30u	1.0	10m	55 †#			2.5p	DPE	TO18	A	
40	LDS205†	360m	600M	2.9m	SJ	15	6.0	4.0	100m	500n	1.0	10m	20 †Δ			3.0p	PE	TO122	P	
41#	BSX28†	360m	650M	2.0m	SJ	30	12	4.5		40u	1.0	100m	50 †#			2.3p	PE	TO18	A	
42#	BSX93†	360m	650M	2.0m	SJ	30	12	4.5		40u	1.0	100m	40 †#			2.3p	PE	TO18	A	
43	2N4873†	360m	700M	2.0m	SJ	40	15	4.5	200m	40u	1.0	10m	150 †#			4.0p		TO18	A	
44#	2SC63†	360m	750M	2.0m	SJ	40	40	5.0	200m	40u	1.0	10m	80			1.5p	PE	TO18	A	
45#	MA9001†	360m	750M	2.9m	SJ	40	40	4.5		300n	1.0	10m	40 †Δ			4.0p	PE	TO18	A	
46#	MA9002†	360m	750M	2.9m	SJ	30	30	4.5		300n	1.0	10m	30 †Δ			4.0p	PE	TO18	A	
47#	MA9003†	360m	750M	2.9m	SJ	18	18	4.0		1.0u	5.0	10m	25 †Δ			4.0p	PE	TO18	A	
48	2N5292†	360m	800M	2.1m	SJ	12	12	4.5	100m	1n	1.0	100m	30 †#			4.5p	PE	TO18	A	
49	LDA406	360m	900M	2.9m	SJ	30	15	3.0	25m	30m	3.0	3.0m	20 †Δ			3.0p	PE	TO122	P	
50	LDA412	360m	1.0G	2.9m	SJ	20	10	2.5	50m	50m	5.0	25m	25 †Δ			1.5p	PE	TO122	P	
51	LDA420	360m	1.0G	2.9m	SJ	40	25	2.0	150m	50m	5.0	50m	25 †Δ			4.0p	PE	TO122	P	
52	LDA407	360m	1.5G	2.9m	SJ	30	15	2.5	25m	10m	5.0	15m	25 †Δ			1.0p	PE	TO122	P	
53	MS12H	360m	2.0G	2.0m	S	30	20	1.0	200m	100n	9.0	10m	30 †Δ			1.0p	PE	TO72	G	
54	MS175H	360m	2.5G	2.0m	S	30	20	1.0	100m	100n	9.0	5.0m	50 †Δ			1.2p	PE	TO72	G	
55	LDA496	360m	5.0G	2.9m	SJ	20	15	2.0	75m	100n	1.0	50m	25 †#			800f	E	TO122	A	
56#	BC378	375m	200M	2.5m	SJ	50	15	6.0	1.0	15n	1.0	100m	75 †Δ			7.5p	PE	TO18	A	
57#	BC378	375m	200M	2.5m	SJ	30	25	6.0	1.0	15n	1.0	100m	75 †Δ			7.5p	PE	TO18	A	
58#	2SC918	375m	400M	2.0m	SJ	20	20	3.0	30m	200n	1.0	4.0m	20 †Δ			450ff	DM	TO104	R	
59	2N6802*	375m	3.5G	3.7m	S	20	15	2.0	25m	100u	1.0	14m	25 †Δ			600ff	DM	W29	V	
60	HP35822E*	375m	4.0G	2.5m	S	27	20	1.5	35m	100u	1.0	15m	40 †			400ff	DM	W8a	V	
61	MRF901	375m	4.5G	3.3m	S	25	15	3.0	30m	50n	5.0	5.0m	80 †			400ff	FA	W35	A	
62#	2N622	386m	300M	2.8m	SJ	50	30	7.0	200m	100n	1.5	500u	25 †			70p	FA	TO18	A	
63#	BCY59A	390m	150M	2.2m	SJ	45	45	7.0	200m	0.1u	5.0	2.0m	200				PE	TO18	A	
64#	BCY59B	390m	150M	2.2m	SJ	45	45	7.0	200m	0.1u	5.0	2.0m	260				PE	TO18	A	
65#	BCY59C	390m	150M	2.2m	SJ	45	45	7.0	200m	0.1u	5.0	2.0m	330				PE	TO18	A	
66#	BCY59D	390m	150M	2.2m	SJ	45	45	7.0	200m	0.1u	5.0	2.0m	420				PE	TO18	A	
67	2N4074	400m	3.3m	4.0	40	40	8.0	300m	10n	12	1.0m	40 †Δ						R179d	A	
68	2N5418	400m	4.0m	25	25	25	5.0	500m	100n	2.0	2.0m	25 †Δ								

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. DISS. @25°C (W)	2. fab	DERATE IN FREE AIR W/C	TEMP. RANGE	ABS. MAX. RATINGS @25°C				MAX. lcco @Vcb	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG #/s/a TO200 Ser.	C O A D E	
						VbVco	BVceo	BVcbo	Ic		Vcb	le	hfe	hoe (mhos)	hie (Ω)	hre X.0001					
1	TIS87	400m	500MΔ	3.2m	\$J	45	45	4.0	50m	10uφ	12φ	30	1Δ					R203	C		
2	2N2369/46	400m	600MΔ	2.3m	\$J	45	45	4.0	50m	400nφ	1.0φ	10m	40	1			4.0p	PE	R204	C	
3	TIS105	400m	600MΔ	3.2m	\$S	45	45	4.0	50m	50nφ	15φ	10mφ	30	1Δ#			700fφ	PE1φ	R203	C	
4	TIS126	400m	600MΔ	3.2m	\$	45	40	4.0	50m	50nφ	10mφ	10mφ	25	1Δ			360fφ	PLΔφ	R203	C	
5	UCX2910*	400m	600MΔ	3.2m	\$S	30	15	4.0	50m	1pφ	1.0φ	3.0mφ	40	1Δ					T078	C	
6#	JE9018D	400m	620MΔ	3.2m	\$J	30	20	4.0	25m	100n	5.0φ	1.0mφ	25	1Δ*			1.2p		T092	A	
7#	JE9018E	400m	620MΔ	3.2m	\$J	30	20	4.0	25m	100n	5.0φ	1.0mφ	39	1Δ*			1.2p		T092	A	
8#	JE9018F	400m	620MΔ	3.2m	\$J	30	20	4.0	25m	100n	5.0φ	1.0mφ	54	1Δ*			1.2p		T092	A	
9#	JE9018G	400m	620MΔ	3.2m	\$J	30	20	4.0	25m	100n	5.0φ	1.0mφ	72	1Δ*			1.2p		T092	A	
10#	JE9018H	400m	620MΔ	3.2m	\$J	30	20	4.0	25m	100n	5.0φ	1.0mφ	97	1Δ*			1.2p		T092	A	
11#	JE9018I	400m	620MΔ	3.2m	\$J	30	20	4.0	25m	100n	5.0φ	1.0mφ	132	1Δ*			1.2p		T092	A	
12#	2SC1687	400m	820MΔ	3.6m	TJ	40	25	4.0	30m	10u	10φ	7.0mφ	38	1Δ			500fφ	PE	T092	A	
13#	2SC1688	400m	820MΔ	3.6m	TJ	50	40	4.0	30m	10u	10φ	7.0mφ	38	1Δ			500fφ	PE	T092	A	
14	2N709A/46†	400m	1.0GΔ	2.3m	\$J	15	6.0	4.0	4.0	5.0nφ	5.0φ	10mφ	60	1Δ			3.0pφ	PE	T046	V	
15	2N2784/46†	400m	1.0GΔ	2.3m	\$J	15	6.0	4.0	4.0	5.0nφ	5.0φ	10mφ	120	1Δ			3.0pφ	PE	T046	V	
16	JANZ3959	400m	1.0GΔ	2.2m	\$J	20	12	4.5	30m	1.0u#	1.0φ	10mφ	60	1Δ			2.5pφ		T018	Aφ	
17#	JANZ6603*	400m	1.0GΔ	2.3m	\$J	25	15	2.0	50m	50nφ	1.0φ	15mφ	30	1Δ#			750fφ		W29a	R	
18#	JE9018D	400m	1.1GΔ	3.2m	\$J	30	15	5.0	50m	50n	5.0φ	1.0mφ	28	1Δ*			1.3p		T092	A	
19#	JE9018E	400m	1.1GΔ	3.2m	\$J	30	15	5.0	50m	50n	5.0φ	1.0mφ	39	1Δ*			1.3p		T092	A	
20#	JE9018F	400m	1.1GΔ	3.2m	\$J	30	15	5.0	50m	50n	5.0φ	1.0mφ	54	1Δ*			1.3p		T092	A	
21#	JE9018G	400m	1.1GΔ	3.2m	\$J	30	15	5.0	50m	50n	5.0φ	1.0mφ	72	1Δ*			1.3p		T092	A	
22#	JE9018H	400m	1.1GΔ	3.2m	\$J	30	15	5.0	50m	50n	5.0φ	1.0mφ	97	1Δ*			1.3p		T092	A	
23#	JE9018I	400m	1.1GΔ	3.2m	\$J	30	15	5.0	50m	50n	5.0φ	1.0mφ	132	1Δ*			1.3p		T092	A	
24	2N709/46†	400m	1.2GΔ	2.2m	\$J	15	6.0	4.0	4.0	50nφ	5.0φ	10mφ	75	1Δ			3.0pφ		T018	Aφ	
25	2N3959†	400m	1.3GΔ	2.3m	\$S	20	12	4.5	30m	5n#	1.0φ	10mφ	400	1Δ			2.5pφ	Δ	T018	Aφ	
26	JANZ3960	400m	1.3GΔ	2.2m	\$S	20	12	4.5	30m	1.0u#	1.0φ	10mφ	60	1Δ			2.5pφ	Δ	T018	Aφ	
27	2N6603	400mφ	1.5GΔ	4.0mφ	\$S	25	15	3.0	100m	50nφ	1.0φ	15mφ	30	1Δ			750fφ		W29a	R	
28	2N3960†	400m	1.6GΔ	2.3m	\$S	20	12	4.5	30m	5n#	1.0φ	10mφ	400	1Δ			2.5pφ	Δ	T018	Aφ	
29	MT9001	400mφ	3.5GΔ	3.0mφ	\$J	25	20	3.0	100m	10mφ	10φ	5.0mφ	20	Δ			1.7pφ	1φ	X173	Aφ	
30	HP3524A	400m	4.0GΔ	2.7mφ	\$J	25	20	3.0	35m	20φ	15φ	150uΔ	20	Δ			400fφ		T072	C	
31#	2S1574	400m	4.5GΔ	3.0m	\$J	20	20	2.0	30m	10mφ	10φ	5.0mφ	20	Δ			1.3pφ	EP	T039	V	
32	MRF902	400mφ	4.5GΔ	4.0mφ	\$S	25	15	2.0	30m	50nφ	10φ	5.0mφ	30	1Δ			400fφ		W29a	R	
33#	RTC11L	400m	5.0GΔ	2.2m	\$J	35	22	2.5	60m	10mφ	1.0φ	10mφ	20	1Δ			50fφ		W8	V	
34	AT1425	400m	5.0GΔ	2.2m	\$J	20	12	3.0	50m	20mφ	10φ	15mφ	75	1			500fφ	PEφ	W14	Y	
35	AT2625	400m	5.0GΔ	2.2m	\$J	20	12	3.0	50m	20mφ	10φ	15mφ	75	1			500fφ	PEφ	W33	Y	
36	MRF911	400mφ	5.0GΔ	4.0mφ	\$S	20	12	3.0	40m	50nφ	10φ	30mφ	30	1Δ			600fφ		W8	V	
37	AT1445	400m	5.5GΔ	2.2m	\$J	20	12	3.0	100m	20mφ	10φ	15mφ	75	1			500fφ	PEφ	W8	Y	
38	AT1445A	400m	5.5GΔ	2.2m	\$J	20	12	3.0	100m	20mφ	10φ	15mφ	75	1			500fφ	PEφ	W8	Y	
39	AT2645	400mφ	5.5GΔ	2.2m	\$J	20	12	3.0	50m	20mφ	10φ	15mφ	75	1			500fφ	PEφ	W26	Y	
40	AT2645A	400mφ	5.5GΔ	2.2m	\$J	20	12	3.0	50m	20mφ	10φ	15mφ	75	1			500fφ	PEφ	W26	Y	
41	HXT86105*	400mφ	6.5GΔ	4.4mφ	\$J	25	16	1.0	30m	10mφ	15φ	50mφ	125	1			500fφ	PEφ	W26a	V	
42#	2SC1599	400m	7.0GΔ	3.0m	\$J	15	8.0	3.0	30m	100nφ	3.0φ	50mφ	75	1			1.5pφ	EP	W70	C	
43	PE5025	425m	300MΔ	5.0m	\$J	30	30	3.0	100m#	50nφ	10φ	10mφ	20	1Δ			1.7pφ				
44	PE3100	425m	500MΔ	5.0m	\$J	30	30	3.0	100m#	100nφ	10φ	5.0mφ	30	1Δ			800fφ	DPE			
45	PE5029	425m	500MΔ	5.0m	\$J	35	30	3.0	100m#	200nφ	10φ	5.0mφ	30	1Δ			400fφ				
46	PE5030B	425m	600MΔ	5.0m	\$J	45	40	4.5	100m#	100nφ	15φ	10mφ	45	1Δ			400fφ				
47	PE5031	425m	600MΔ	5.0m	\$J	40	30	4.0	100m#	100nφ	10φ	5.0mφ	30	1Δ			400fφ				
48	BSX75†	430m	100MΔ	3.3m	\$J	40	25	5.0	10u	10φ	10φ	10mφ	40	1Δ#			8.0p	PEΔ	T018	Aφ	
49	K8002	450mφ	3.0mφ	3.0m	\$J	20	20	3.0	125m	10mφ	10φ	5.0mφ	20	Δ			1.7pφ		T072	G	
50	K8003	450mφ	3.0mφ	3.0m	\$J	20	20	3.0	125m	10mφ	10φ	5.0mφ	20	Δ			1.7pφ		T072	G	
51	K8009	450mφ	3.0mφ	3.0m	\$J	20	20	3.0	125m	10mφ	10φ	5.0mφ	20	Δ			1.7pφ		T072	G	
52	K8012	450mφ	3.0mφ	3.0m	\$J	20	20	3.0	125m	10mφ	10φ	5.0mφ	20	Δ			1.7pφ		T072	G	
53	K8022	450mφ	3.0mφ	3.0m	\$J	20	20	3.0	125m	10mφ	10φ	5.0mφ	20	Δ			1.7pφ		T072	G	
54	2N2395	450m	40MΔ	2.6m	\$J	60	40	6.0	300m	0.1uφ	10φ	150mφ	20	#Δ			30pφ	PL	W4	W	
55	2N2396	450m	50MΔ	2.8m	\$J	60	40	6.0	300m	0.1uφ	10φ	150mφ	40	#Δ			30pφ	PL	W4	W	
56	SE7015	450m	50MΔ	4.5m	\$J	100	100	6.0	100m	10φ	10φ	25mφ	50	#Δ			3.5pφ	PL	T0105	A	
57	SE7016	450m	50MΔ	4.5m	\$J	140	140	6.0	100m	10φ	10φ	25mφ	50	#Δ			3.5pφ	PL	T0105	A	
58	SE7017	450m	50MΔ	4.5m	\$J	180	180	6.0	100m	10φ	10φ	25mφ	50	#Δ			3.5pφ	PL	T0105	A	
59	2N2389†	450m	60MΔ	2.5m	\$J	75	50	5.0	500m	10nφ	10φ	5.0mφ	35	1Δ			2.5pφ	PLφ	W4	W	
60	2N2390	450m	70MΔ	2.5m	\$J	75	50	5.0	500m	10nφ	10φ	5.0mφ	70	1Δ			2.5pφ	PLφ	W4	W	
61	2N3728*	450m	80MΔ	2.6m	\$J	60	30	5.0	800m	0.1uφ	10φ	10mφ	50	1Δ			8pφ	Δ	R131c	PA	
62	2N3729*	450m	80MΔ	2.6m	\$J	60	30	5.0	800m	0.1uφ	10φ	10mφ	50	1Δ			8pφ	Δ	R131c	PA	
63#	BCW73-16†	450m	100MΔ	2.6m	\$J	32	32	5.0	800m	20nφ	1.0φ	100mφ	250	1Δ			1.2pφ	PE	T018	A	
64#	BCW73-25†	450m	100MΔ	2.6m	\$J	32	32	5.0	800m	20nφ	1.0φ	100mφ	400	1Δ			1.2pφ	PE	T018	A	
65#	BCW73-40†	450m	100MΔ	2.6m	\$J	32	32	5.0	800m	20nφ	1.0φ	100mφ	630	1Δ			1.2pφ	PE	T018	A	
66#	BCW74-16†	450m	100MΔ	2.6m	\$J	45	45	5.0	800m	20nφ	1.0φ	100mφ	250	1Δ			1.2pφ	PE	T018	A	
67#	BCW74-25†	450m	100MΔ	2.6m	\$J	45	45	5.0	800m	20nφ	1.0φ	100mφ	400	1Δ			1.2pφ	PE	T018	A	
68#	BCW74-40†	450m	100MΔ	2.6m	\$J	45	45	5.0	800m	20nφ	1.0φ	100mφ	630	1Δ			1.2pφ	PE	T018	A	
69#	BCX22	450m	100MΔ	2.5m	\$J	125	125	5.0	800m	1.0φ	1.0φ	100mφ	63	1Δ			1.2p	PE	T018	A	
70#	BCX24	450m	100MΔ	2.5m	\$J	100	100	7.0	800m	30nφ	1.0φ	100mφ	20	1Δ			1.2p	PE	T018	A	
71#	2SC1596	450m	130MΔ	3.0m	\$J	120	50	5.0	50m	1.0uφ	5.0φ	10mφ	60	1			2.0p	PEΔ	R213	Aφ	
72#	BCX58IX†	450m	250MΔ	3.5m	\$J	32	7.0	100m	10nφ	5.0φ	10φ	220	1			30u	4.5k	2.0	4.5pφ	R204c	A
73#	BCX58VIII†	450m	250MΔ	3.5m	\$J																

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	3	TYPE No.	1 MAX.		DERATE IN FREE AIR W/°C	TEMPERATURE °C	ABS MAX RATINGS @ 25°C				MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUCTURE	DWG # s/a TO200 Ser.	L C O A D E
			COLL DISS. @ 25°C (W)	fab (Hz)			BV _{ceo} (V)	BV _{ceo} (V)	BV _{ceo} (V)	I _c (A)		BIAS			COMMON EMITTER						
												V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} X.0001				
1		40080	500m	27M*	2.9m	Δ	45	30	2.5	250m	10u	20	10m	55	13u	2.5k	2.5	6p	DPL	T05	A
2		2N337A	500m	30MΔ	2.8m	Δ	45	35	2.5	20m	50u	20	10m	60	1.0ub	32	6.0	8.0p	Δ	T05	A
3		A51929	500m	30MΔ	2.8m	Δ	45	45	5.0	50m	10n	5.0	1.0m	150	1.0ub	32	6.0	8.0p	Δ	R203	A
4		A51930	500m	30MΔ	2.8m	Δ	45	45	5.0	50m	10n	5.0	1.0m	150	1.0ub	32	6.0	8.0p	Δ	R203	A
5		HSE210-RT	500m	30MΔ	4.0m	Δ	60	40	5.0	50m	10n	5.0	1.0m	150	1.0ub	32	6.0	8.0p	Δ	T018	A
6		2N1140	500m	35MΔ	5.0m	Δ	40	40	5.0	50m	15u	6.0	1.0m	20	1.0ub	32	6.0	8.0p	Δ	R179e	A
7		2N1719A	500m	40MΔ	2.8m	Δ	120	60	7.0	10 #	10n	5.0	1.0m	15	500n	35	2.5	15p	PL	T018	A
8		2N7301	500m	40MΔ	3.3m	Δ	60	40	5.0	1	1.0u	10n	150m	40	500n	35	2.5	15p	PL	T018	A
9		2N8661	500m	40MΔ	3.0m	Δ	60	40	5.0	600m	100u	10n	150m	15	500n	35	2.5	15p	PL	T018	A
10		2N912	500m	40MΔ	2.8m	Δ	100	60	7.0	100	25n	5.0	1.0m	18	25u	600	1.5	15p	Δ	T018	A
11		JAN2N912	500m	40MΔ	2.8m	Δ	100	60	7.0	100	15n	5.0	1.0m	20	25u	500	1.5	15p	Δ	T018	A
12		2N338A	500m	45M	3.3m	Δ	45	35	2.5	20m	50u	20	1.0m	99	15u	3.0k	2.6	2.0p	Δ	T05	A
13		2N929A	500m	45MΔ	2.8m	Δ	60	45	6.0	30m	2.0n	5.0	1.0m	60	1.0ub	32	6.0	6.0p	Δ	T018	A
14		2N930A	500m	45MΔ	2.8m	Δ	60	45	6.0	30m	2.0n	5.0	1.0m	150	1.0ub	32	6.0	6.0p	Δ	T018	A
15		2N930B	500m	45MΔ	2.8m	Δ	60	45	6.0	30m	2.0n	5.0	1.0m	150	1.0ub	32	6.0	6.0p	Δ	T018	A
16		2N5601	500m	50M	4.0m	Δ	60	40	8.0	100m	1.0u	5.0	1.0m	20	500n	30	1.2	8p	Δ	T029	A
17		2N720A	500m	50MΔ	1.0m	Δ	120	80	7.0	100	10n	5.0	1.0m	30	500n	30	1.2	15p	PL	T018	A
18		2N7311	500m	50MΔ	3.3m	Δ	60	40	5.0	1	1.0u	10n	150m	80	500n	30	1.2	15p	PL	T018	A
19		2N756	500m	50MΔ	2.8m	Δ	45	45	6.0	100m	20n	5.0	1.0m	12	1.0ub	80	10	8.0p	Δ	T018	A
20		2N756A	500m	50MΔ	2.8m	Δ	60	60	6.0	100m	100n	5.0	1.0m	12	1.0ub	80	10	8.0p	Δ	T018	A
21		2N757	500m	50MΔ	2.8m	Δ	45	45	6.0	100m	20n	5.0	1.0m	18	1.0ub	80	10	8.0p	Δ	T018	A
22		2N757A	500m	50MΔ	2.8m	Δ	60	60	6.0	100m	100n	5.0	1.0m	18	1.0ub	80	10	8.0p	Δ	T018	A
23		2N758	500m	50MΔ	2.8m	Δ	45	45	8.0	100m	20n	5.0	1.0m	18	1.0ub	80	10	8.0p	Δ	T018	A
24		2N758A	500m	50MΔ	2.8m	Δ	60	60	7.0	100m	100n	5.0	1.0m	18	1.0ub	80	10	8.0p	Δ	T018	A
25		2N758B	500m	50MΔ	2.8m	Δ	60	60	8.0	100m	5.0n	5.0	1.0m	18	1.0ub	35	6.0	8.0p	Δ	T018	A
26		2N759	500m	50MΔ	2.8m	Δ	45	45	8.0	100m	20n	5.0	1.0m	36	1.0ub	80	10	8.0p	Δ	T018	A
27		2N759A	500m	50MΔ	2.8m	Δ	60	60	7.0	100m	100n	5.0	1.0m	36	1.0ub	80	10	8.0p	Δ	T018	A
28		2N759B	500m	50MΔ	2.8m	Δ	60	60	8.0	100m	5.0n	5.0	1.0m	36	1.0ub	35	6.0	8.0p	Δ	T018	A
29		2N760	500m	50MΔ	2.8m	Δ	45	45	8.0	100m	20n	5.0	1.0m	76	1.0ub	80	10	8.0p	Δ	T018	A
30		2N760A	500m	50MΔ	2.8m	Δ	60	60	7.0	100m	100n	5.0	1.0m	76	1.0ub	80	10	8.0p	Δ	T018	A
31		2N760B	500m	50MΔ	2.8m	Δ	60	60	8.0	100m	5.0n	5.0	1.0m	76	1.0ub	35	6.0	8.0p	Δ	T018	A
32		2N761	500m	50MΔ	2.8m	Δ	50	30	6.0	100m	20n	5.0	1.0m	19	1.0ub	80	20	6.0p	Δ	T018	A
33		2N762	500m	50MΔ	2.8m	Δ	50	30	6.0	100m	20n	5.0	1.0m	39	1.0ub	80	20	6.0p	Δ	T018	A
34		2N8671	500m	50MΔ	3.0m	Δ	30	20	5.0	600m	100u	5.0	1.0m	30	500n	30	1.2	45p	Δ	T018	A
35		2N870	500m	50MΔ	2.8m	Δ	100	60	7.0	100	10n	5.0	1.0m	30	500n	30	1.2	15p	Δ	T018	A
36		2N911	500m	50MΔ	2.8m	Δ	100	60	7.0	100	25n	5.0	1.0m	36	500n	1.0k	1.5	15p	Δ	T018	A
37		JAN2N911	500m	50MΔ	2.8m	Δ	100	60	7.0	100	15n	5.0	1.0m	40	500n	1.0k	1.7	15p	Δ	T018	A
38		2N981	500m	50MΔ	2.8m	Δ	80	80	8.0	100m	1.0u	5.0	1.0m	36	1.0ub	80	10	5.0p	Δ	T018	A
39		2N2223*	500m	50MΔ	2.8m	Δ	100	60	7.0	500m	10n	5.0	1.0m	40	500n	30	3.0	15p	Δ	R131c	PA
40		2N2223A*	500m	50MΔ	2.8m	Δ	100	60	7.0	500m	10n	5.0	1.0m	40	500n	30	3.0	15p	Δ	R131c	PA
41		2N2414*	500m	50MΔ	2.8m	Δ	60	28	5.0	500m	25n	5.0	1.0m	50	1.0ub	8.0	5.0	25p	Δ	R131c	PA
42		2N2427	500m	50M	2.8m	Δ	40	40	4.0	500m	5.0u	3.0	0.1m	20	1.0ub	8.0	5.0	25p	Δ	T018	A
43		2N2645	500m	50MΔ	2.8m	Δ	75	50	7.0	100m	10n	5.0	1.0m	75	500n	34	5.0	25p	Δ	T018	A
44		2N3241	500m	50MΔ	3.3m	Δ	30	25	5.0	100m	10n	12	10m	70	350u	1.0k	3.0	30p	Δ	R178a	A
45		2N3241A	500m	50MΔ	3.3m	Δ	30	25	7.5	200m	100n	12	10m	100	350u	1.0k	2.0	20p	Δ	R179d	A
46		2N3242	500m	50MΔ	3.3m	Δ	30	25	5.0	200m	10n	12	10m	100	350u	1.5k	3.0	30p	Δ	R178a	A
47		2N3242A	500m	50MΔ	3.3m	Δ	40	40	8.0	300m	10n	12	10m	125	350u	1.5k	2.0	20p	Δ	R179d	A
48		2N4068	500m	50MΔ	3.3m	Δ	150	150	5.0	200m	0.5u	10n	30m	30	350u	1.5k	3.5	35p	Δ	T0104	A
49		40397	500m	50M	3.3m	Δ	25	7.5	200m	1.0u	12	10m	375	120u	1.2k	2.5	12p	PE	R179d	B	
50		40398	500m	50M	3.3m	Δ	25	7.5	200m	1.0u	12	10m	200	75u	600	1.2	12p	PE	R179d	B	
51		40399	500m	50M	3.3m	Δ	18	7.0	200m	5.0u	12	10m	375	120u	1.2k	2.5	12p	PE	R179d	B	
52		40400	500m	50M	3.3m	Δ	18	7.0	200m	5.0u	12	10m	200	75u	600	1.2	12p	PE	R179d	B	
53 #		BCW25*	500m	50M	2.8m	Δ	60	50	5.0	500m	100n	5.0	1.0m	25	500n	30	1.5	15p	PL	R131	PA
54 #		BCW26	500m	50M	2.8m	Δ	60	50	5.0	500m	100n	5.0	1.0m	25	500n	30	1.5	15p	PL	R131	PA
55		2N1718A	500m	60MΔ	2.8m	Δ	75	32	7.0	100m	10n	5.0	1.0m	30	500n	34	3.0	25p	Δ	T018	A
56		JAN2N1718A	500m	60MΔ	2.8m	Δ	75	30	7.0	500m	10n	5.0	1.0m	100	500n	8.0	3.0	25p	Δ	T018	A
57		JAN2N720A	500m	60MΔ	2.8m	Δ	120	80	7.0	500m	10n	5.0	1.0m	100	500n	8.0	1.5	15p	Δ	T018	A
58		2N1735A	500m	60MΔ	2.8m	Δ	80	80	6.0	50m	5.0n	5.0	5.0m	40	1.5k	1.5k	6.0p	Δ	T018	A	
59		2N1739A	500m	60MΔ	2.8m	Δ	125	80	6.0	50m	5.0n	5.0	5.0m	40	1.5k	1.5k	6.0p	Δ	T018	A	
60		JAN2N757A	500m	60MΔ	2.8m	Δ	75	60	6.0	100m	10u	5.0	1.0m	18	1.0ub	80	10	6.0p	Δ	T018	A
61		JAN2N759A	500m	60MΔ	2.8m	Δ	75	60	8.0	100m	10u	5.0	1.0m	36	1.0ub	80	10	6.0p	Δ	T018	A
62		JAN2N760A	500m	60MΔ	2.8m	Δ	75	60	8.0	100m	10u	5.0	1.0m	76	1.0ub	80	10	6.0p	Δ	T018	A
63		2N87	500m	60MΔ	2.8m	Δ	100	60	7.0	100m	10n	5.0	1.0m	50	300n	30	1.5	15p	Δ	T018	A
64		2N910	500m	60MΔ	2.8m	Δ	100	60	7.0	100m	25n	5.0	1.0m	76	100u	1.8k	3.0	15p	Δ	T018	A
65		JAN2N910	500m	60MΔ	2.8m	Δ	100	60	7.0	100m	15n	5.0	1.0m	80	100u	1.6k	3.0	15p	Δ	T018	A
66		2N2060*	500m	60MΔ	2.9m	Δ	100	60	7.0	500m	2n	5.0	1.0m	50	16u	4k	10	15p	Δ	R131c	PA
67		2N2060A*	500m	60MΔ	2.8m	Δ	100	60	7.0	500m	2.0n	5.0	1.0m	50	16u	4.0k	10	15p	Δ	R131c	PA
68		2N2060B*	500m	60MΔ	2.9m	Δ	100	60	7.0	500m	2n	5.0	1.0m	50							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	T M E X P	ABS MAX RATINGS @25°C				TYPICAL 'h' PARAMETERS				COMMON EMITTER			Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# L O A D E
						BVcbo (V)	BVceo (V)	IC (A)	lcb0 (A)	Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)					
1#	PE107A	500m	200MΔ	4.0m	Δ	5.0	45	4.0	100m	200n	5.0	2.0m	220	10	3.0p	PE	R222	F		
2#	PE108	500m	200MΔ	4.0m	Δ	5.0	25	4.0	100m	200n	5.0	2.0m	130	10	3.0p	PE	R222	F		
3#	PE108A	500m	200MΔ	4.0m	Δ	5.0	25	4.0	100m	200n	5.0	2.0m	220	10	3.0p	PE	R222	F		
4#	PE108B	500m	200MΔ	4.0m	Δ	5.0	25	4.0	100m	200n	5.0	2.0m	450	10	3.0p	PE	R222	F		
5#	PE108C	500m	200MΔ	4.0m	Δ	5.0	25	4.0	100m	200n	5.0	2.0m	800	10	3.0p	PE	R222	F		
6#	PE255D	500m	200MΔ	4.0m	Δ	5.0	30	2.0	5.0	30m	200n	1.0	1.0m	70	10	750ft	PE	R222	E	
7#	SK3122-RT	500m	200MΔ	5.0m	Δ	6.0	60	6.0	800m	50n	1.0	100m	150	10	3.0p	PE	R203a	A		
8#	2SC2051	500m	220MΔ	3.3m	Δ	6.0	40	6.0	250m	500n	1.0	100m	100	10	5.0p	PE	R219	A		
9#	2SC796	500m	230MΔ	3.3m	Δ	6.0	40	2.0	500m	5.0u	2.0	15m	50	10	5.0p	PE	T05	A		
10#	SE8040	500m	230MΔ	5.0m	Δ	6.0	30	6.0	1.0	50n	1.0	150m	70	10	9.0p	DPL	R124c	A		
11#	2N2220	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	12	10	8.0p	Δ	TO18	A		
12#	2N2221	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	25	10	8.0p	Δ	TO18	A		
13#	JAN2N2221t	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	25	10	8.0p	Δ	TO18	A		
14#	2N2221A1	500m	250MΔ	3.3m	Δ	6.0	30	6.0	800m	0.1u	1.0	1.0m	30	10	8.0p	Δ	TO18	A		
15#	JAN2N2221A1	500m	250MΔ	3.3m	Δ	6.0	30	6.0	800m	10n	1.0	1.0m	30	10	8.0p	Δ	TO18	A		
16#	2N2222	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	50	10	8.0p	Δ	TO18	A		
17#	JAN2N2222t	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	50	10	8.0p	Δ	TO18	A		
18#	JAN2N2222A1	500m	250MΔ	3.3m	Δ	6.0	30	6.0	800m	10n	1.0	1.0m	50	10	8.0p	Δ	TO18	A		
19#	2N2539t	500m	250MΔ	2.9m	Δ	6.0	30	5.0	800m	25u	1.0	1.0m	20	10	8.0p	Δ	TO18	A		
20#	2N2540t	500m	250MΔ	2.9m	Δ	6.0	30	5.0	800m	25u	1.0	1.0m	35	10	8.0p	Δ	TO18	A		
21#	2N2790t	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	2.0	2.0m	30	10	8.0p	Δ	TO18	A		
22#	2N2791t	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	2.0	2.0m	75	10	8.0p	Δ	TO18	A		
23#	2N2792t	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	2.0	2.0m	50	10	8.0p	Δ	TO18	A		
24#	2N3409*	500m	250MΔ	2.9m	Δ	6.0	30	5.0	500m	0.1u	1.0	1.0m	40	10	8.0p	*	R131f	PA		
25#	2N3410*	500m	250MΔ	2.9m	Δ	6.0	30	5.0	500m	0.1u	1.0	1.0m	40	10	8.0p	*	R131f	PA		
26#	2N3411*	500m	250MΔ	2.9m	Δ	6.0	30	5.0	500m	0.1u	1.0	1.0m	40	10	8.0p	*	R131f	PA		
27#	2N3737t	500m	250MΔ	2.9m	Δ	6.0	30	5.0	1.5	20u	1.0	1.0m	35	10	9.0p	*	TO46	A		
28#	JAN2N3737t	500m	250MΔ	2.8m	Δ	6.0	30	5.0	1.5	250m	1.0	500m	40	10	9.0p	*	TO46	A		
29#	2N4961t	500m	250MΔ	4.5m	Δ	6.0	80	6.5	1.0	10n	1.0	1.0m	60	10	15p	*	TO39	A		
30#	2N4963t	500m	250MΔ	2.8m	Δ	6.0	80	6.5	1.0	10n	1.0	1.0m	60	10	15p	*	TO18	A		
31#	2N5417s	500m	250MΔ	3.3m	Δ	6.0	35	3.0	500m	0.1u	1.0	1.0m	35	10	8.0p	Δ	TO39	A		
32#	JAN2N5581t	500m	250MΔ	2.2m	Δ	6.0	75	6.0	800m	10n	1.0	1.0	30	10	8.0p	Δ	TO46	A		
33#	JAN2N5582t	500m	250MΔ	2.2m	Δ	6.0	75	6.0	800m	10n	1.0	1.0	30	10	8.0p	Δ	TO46	A		
34#	40577	500m	250MΔ	3.57u	Δ	6.0	40	4.0	500m	0.1u	5.0	100m	50	10	6.0p	*	TO5	A		
35#	BC549C	500m	250MΔ	4.0m	Δ	6.0	30	5.0	100m	5.0u	5.0	2.0m	800	10	2.5p	PE	R189	A		
36#	BC550C	500m	250MΔ	4.0m	Δ	6.0	45	5.0	100m	15n	5.0	2.0m	600	10	2.5p	PE	R183	F		
37#	BCX58	500m	250MΔ	4.0m	Δ	6.0	32	2.0	200m	10n	2.0	2.0m	120	10	8.0p	PE	R221a	F		
38#	BCX59	500m	250MΔ	4.0m	Δ	6.0	45	2.0	200m	10n	2.0	2.0m	120	10	8.0p	PE	R221a	F		
39#	BCX94	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	0.1u	1.0	150m	40	10	8.0p	PE	TO18	A		
40#	BCX95	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	0.1u	1.0	150m	100	10	8.0p	PE	TO18	A		
41#	BSW82	500m	250MΔ	3.3m	Δ	6.0	25	5.0	500m	10n	1.0	150m	40	10	8.0p	PE	TO18	A		
42#	BSW83	500m	250MΔ	3.3m	Δ	6.0	25	5.0	500m	10n	1.0	150m	100	10	8.0p	PE	TO18	A		
43#	BSW84	500m	250MΔ	3.3m	Δ	6.0	25	5.0	500m	10n	1.0	150m	40	10	8.0p	PE	TO18	A		
44#	BSW85	500m	250MΔ	3.3m	Δ	6.0	25	5.0	500m	10n	1.0	150m	100	10	8.0p	PE	TO18	A		
45#	HSE218-RT	500m	250MΔ	4.0m	Δ	6.0	75	6.0	100m	10n	1.0	150m	50	10	8.0p	PE	TO18	A		
46#	HSE220-RT	500m	250MΔ	4.0m	Δ	6.0	75	6.0	100m	10n	1.0	150m	150	10	8.0p	PE	TO18	A		
47#	HSE307-RT	500m	250MΔ	5.0m	Δ	6.0	30	5.0	100m	1.0u	1.0	1.0m	70	10	8.0p	PE	R124d	A		
48#	MM2613t	500m	250MΔ	2.8m	Δ	6.0	40	5.0	50n	10n	1.0	150m	40	10	6.0p	EA	TO18	A		
49#	MM2711t	500m	250MΔ	2.8m	Δ	6.0	30	5.0	800m	10n	1.0	150m	100	10	6.0p	EA	TO18	A		
50#	MPS2222Kt	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	50	10	8.0p	PL	X167	A		
51#	MPS2222Lt	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	50	10	8.0p	PL	X168	A		
52#	MPS2222Mt	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	50	10	8.0p	PL	X169	A		
53#	MPS2713Kt	500m	250MΔ	3.3m	Δ	6.0	18	5.0	200m	500n	4.5	2.0m	30	10	2.5p	PL	X167	A		
54#	MPS2713Lt	500m	250MΔ	3.3m	Δ	6.0	18	5.0	200m	500n	4.5	2.0m	30	10	2.5p	PL	X168	A		
55#	MPS2713Mt	500m	250MΔ	3.3m	Δ	6.0	18	5.0	200m	500n	4.5	2.0m	30	10	2.5p	PL	X169	A		
56#	MPS2714Kt	500m	250MΔ	3.3m	Δ	6.0	18	5.0	200m	500n	4.5	2.0m	80	10	2.5p	PL	X167	A		
57#	MPS2714Lt	500m	250MΔ	3.3m	Δ	6.0	18	5.0	200m	500n	4.5	2.0m	80	10	2.5p	PL	X169	A		
58#	TN3903	500m	250MΔ	4.0m	Δ	6.0	40	6.0	800m	50n	1.0	1.0m	50	10	6.0p	PE	TO18	A		
59#	UPI2222P	500m	250MΔ	3.3m	Δ	6.0	30	5.0	800m	10n	1.0	1.0m	50	10	8.0p	PE	TO106	A		
60#	ZTX360t	500m	250MΔ	3.3m	Δ	6.0	40	5.0	1.0	500n	1.0	500m	25	10	5.7p	PL	X59	F		
61#	2SC30	500m	280MΔ	4.0m	Δ	6.0	30	5.0	80m	10u	1.0	10m	45	10	4.0p	PE	TO5	A		
62#	2SD467	500m	300MΔ	3.3m	Δ	6.0	25	5.0	700m	1.0u	1.0	150m	60	10	12p	PE	TO92	B		
63#	2N2222At	500m	300MΔ	3.3m	Δ	6.0	40	6.0	800m	0.1u	1.0	1.0m	50	10	8.0p	PE	TO18	A		
64#	2N3736t	500m	300MΔ	2.9m	Δ	6.0	30	5.0	1.5	20u	1.0	1.0m	35	10	9.0p	PE	TO46	A		
65#	2SC238	500m	300MΔ	4.0m	Δ	6.0	30	3.5	100m	10u	6.0	1.0m	80	10	5.0p	PL	TO5	A		
66#	2SC1959	500m	300MΔ	4.0m	Δ	6.0	30	5.0	400m	100n	1.0	100m	240	10	7.0p	PE	TO92	B		
67#	BC546	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	125	10	2.5p	PE	R189	A		
68#	BC546A	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	220	10	2.5p	PE	R189a	F		
69#	BC546B	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	330	10	2.5p	PE	R189a	F		
70#	BC547	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	110	10	2.5p	PE	TO92	A		
71#	BC547	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	125	10	2.5p	PE	R189	A		
72#	BC547A	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	220	10	2.5p	PE	R189a	A		
73#	BC547B	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	220	10	2.5p	PE	R189a	A		
74#	BC547C	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15n	5.0	2.0m	600	10	2.5p	PE	R189a	A		
75#	BC547VI	500m	300MΔ	4.0m	Δ	6.0	65	6.0	100m	15u	5.0	2.0m	110	10	2.5p	PE	TO92	A		
76#	BC548	500m	300MΔ	4.0m	Δ	6.0	30	5.0	100m	15n	5.0	2.0m	125							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR W/°C (Hz)	T M E A M P X P	ABS MAX RATINGS @25°C					MAX. I _{cb0} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# E O A D E
					BV _{cb0} (V)	BV _{ceo} (V)	BV _{ebo} (V)	I _c (A)	V _{cb} (V)		I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} X.0001					
					(V)	(V)	(V)	(A)	(V)		(A)									
1#	2SC310	570m	120M	4.5m	\$J	140	100	5.0	500m	10n	100	150m	65	1#	6.0p	PE	T039	A0		
2#	2SC306	570m	240M	4.5m	\$J	50	30	5.0	500m	100n	100	150m	85	1#	10p	PE	T039	A0		
3#	2SC307	570m	250M	4.5m	\$J	80	40	5.0	500m	100n	100	150m	85	1#	10p	PE	T039	A0		
4	MD1129*	575m	250M	3.2m	\$J	60	30	5.0	500m	10n	100	100u	60	1#	8.0p	AN	R131b	PA		
5	MD2218*	575m	250M	3.2m	\$J	60	30	5.0	500m	20n#	100	100n	50	1#	3.5p	AN	R131c	PA		
6	MD2218A*	575m	250M	3.2m	\$J	60	30	5.0	500m	15n#	100	100n	50	1#	3.5p	AN	R131c	PA		
7	MD2219*	575m	250M	3.2m	\$J	60	30	5.0	500m	20n#	100	100n	45	1#	3.5p	AN	R131c	PA		
8	MD2219A*	575m	250M	3.2m	\$J	60	30	5.0	500m	15n#	100	100n	45	1#	3.5p	AN	R131c	PA		
9	MD3409*	575m	250M	3.2m	\$J	60	30	5.0	500m	10n	100	100u	50	1#	3.5p	AN	T099	PA		
10	MD3410*	575m	250M	3.2m	\$J	60	30	5.0	500m	10n	100	100u	50	1#	3.5p	AN	T099	PA		
11	MD7000*	575m	250M	3.2m	\$J	50	30	5.0	500m	100n	100	1.0m	60	1#	3.5p	AN	T099	PA		
12	MD7002	575m	260M	3.2m	\$J	50	40	5.0	30m	100n	100	100u	130	1#	2.6p	AN*	R131c	PA		
13	MD7002A*	575m	260M	3.2m	\$J	50	40	5.0	30m	100n	100	100u	130	1#	2.6p	AN	R131c	PA		
14	MD7002B*	575m	260M	3.2m	\$J	50	40	5.0	30m	100n	100	100u	130	1#	2.6p	AN	R131c	PA		
15	MD8001*	575m	260M	3.2m	\$J	40	*		30m	50n	100	1.0m	200	†	2.6p	AN*	R131f	PA		
16	MD8002*	575m	260M	3.2m	\$J	50	*		30m	50n	100	1.0m	200	†	2.6p	AN*	R131f	PA		
17	MD8003*	575m	260M	3.2m	\$J	60	*		30m	50n	100	1.0m	200	†	2.6p	AN*	R131f	PA		
18	MD7007	575m	600M	3.2m	\$J	50	40	5.0	200m	100n	100	100u	110	1#	4.0p	AN*	R131c	PA		
19	MD7007A*	575m	600M	3.2m	\$J	50	40	5.0	200m	100n	100	100u	110	1#	4.0p	AN	R131c	PA		
20	MD7007B*	575m	600M	3.2m	\$J	50	40	5.0	200m	100n	100	100u	110	1#	4.0p	AN	R131c	PA		
21	2N4270	580m	3.3m	\$S	200	140	15	30m	1.0u	100	100	100u	200	1#	5p	E	T05	A		
22	2N6375†	580m	3.0M	\$Δ	3.3m	\$S	75	40	6.0	1.5	200n	1.0u	10m	60	1#	10p	E	T018	A0	
23	2SC1803*	580m	2.7G	\$S	3.3m	\$J	30	18	3.0	130m	100n	5.0u	50m	100	†	1.0p	E	W116	S	
24	2SC1949*	580m	2.7G	\$S	3.3m	\$J	30	18	3.0	130m	100n	5.0u	50m	100	†	1.0p	E	W116	S	
25	2SC1560	580m	4.5G	\$S	3.3m	\$J	25	12	3.0	70m	1.0u	10	20m	100	†	600f	E	W116	S	
26	VO21	580m	4.5G	\$S	3.3m	\$J	25	12	3.0	70m	1.0u	10	20m	80	†	600f	E	W12	S	
27	2N545	600m	5.5m	\$S	5.5m	\$J	60	60	6.0	800m	15u	6.0u	500m	15	1#	100p	E	T05	A0	
28	JAN2N545†	600m	7.6m	\$S	6.0	\$J	60	60	10	500m	25u	6.0u	500m	15	1#	100p	E	T05	A0	
29	2N546†	600m	5.6m	\$S	6.0	\$J	30	30	6.0	800m	15u	6.0u	500m	15	1#	100p	E	T05	A0	
30	2N1081	600m	5.9m	\$S	4.0	\$J	40	40	10	750m	15u	7.0u	500m	20	1#	100p	E	T05	A0	
31	2N1564	600m	4.0m	\$S	80	\$J	60	60	5.0	50m	1.0u	5.0u	5.0m	20	1#	10p	E	T05	A0	
32	2N1565	600m	4.0m	\$S	80	\$J	60	60	5.0	50m	1.0u	5.0u	5.0m	40	1#	10p	E	T05	A0	
33	2N1566	600m	4.0m	\$S	80	\$J	60	60	5.0	50m	1.0u	5.0u	5.0m	80	1#	10p	E	T05	A0	
34	2N1572	600m	4.0m	\$S	125	\$J	80	80	5.0	50m	1.0u	5.0u	5.0m	20	1#	10p	E	T05	A0	
35	2N1573	600m	4.0m	\$S	125	\$J	80	80	5.0	50m	1.0u	5.0u	5.0m	40	1#	10p	E	T05	A0	
36	2N1574	600m	4.0m	\$S	125	\$J	80	80	5.0	50m	1.0u	5.0u	5.0m	80	1#	10p	E	T05	A0	
37	2N1990	600m	4.8m	\$J	100	\$J	30	30	3.0	1	10u#	3.0m	20	1#	25p	PL	T05	A0		
38	2N1990S	600m	4.7m	\$S	100	\$J	30	30	3.0	5.0	1.0u#	50	20m	25	1#	25p	PL	T05	A0	
39	2N2309	600m	4.0m	\$J	30	30	5.0	500m	5.0u	4.0u	200u	40	1#	2.5p	PL	T05	A0			
40#	2SC906†	600m	4.0m	\$J	50	30	7.0	500m	500n	4.0u	10m	160	†	2.0p	PE	R215	A0			
41#	2SC1068	600m	4.8m	\$J	25	20	3.0	150m	500n	10u	40m	100	†	2.0p	PE	T039	A			
42#	2SC1214	600m	6.0m	\$J	50	50	4.0	500m	500n	3.0u	10m	40	1#	2.0p	PE	S8	B			
43#	2SC1352†	600m	4.0m	\$J	25	15	5.0	800m	400n	1.0u	500m	20	†	2.5p	PE	R216a	A0			
44#	2SC1387	600m	4.8m	\$J	25	20	3.0	150m	500n	10u	40m	100	†	2.5p	PE	T039	A			
45#	2SC1412	600m	4.8m	\$J	45	40	3.0	150	500n	10u	40m	70	†	2.5p	PE	T039	A			
46#	2SD638	600m	5.4m	\$J	30	25	7.0	1.0	100n	10u	10m	60	1#	6.0p	G	B37	D			
47#	2SD639	600m	5.4m	\$J	60	50	7.0	1.0	100n	10u	10m	60	1#	6.0p	G	B37	D			
48	T1480	600m	6.0m	\$J	50	40	6.0m	2.0u	10	5.0m	9.0	1.0ub	12	2.0	G	T011	A			
49	T1481	600m	6.0m	\$J	80	70	6.0m	2.0u	10	5.0m	9.0	1.0ub	12	2.0	G	T011	A			
50	PN2484	600m	4.8m	\$J	60	60	6.0	50m	10n	5.0u	1.0m	150	1#	6.0p	PL	T092	A			
51	PN2222A	600m	300	\$Δ	4.8m	\$J	75	40	6.0	800m	10n	1.0m	50	1#	8.0p	PL	T092	A		
52	PN2369	600m	500	\$Δ	4.8m	\$J	40	15	4.5	500m	400n	1.0u	10m	40	1#	4.0p	PL	T092	AΔ	
53	PN2369A	600m	500	\$Δ	4.8m	\$J	40	15	4.5	500m	400n	1.0u	10m	40	1#	4.0p	PL	T092	AΔ	
54#	DT1610†	600m	.50M	5.0m	\$S	25	15	4.0	250m	8.0u	6.0u	200m	10	1#	4.0p	PL	T05	A		
55	2N2858†	600m	1.0M	\$Δ	5.9m	\$J	100	80	10	3	4.0u	1	20	1#	D	T05	A0			
56	2N2859†	600m	1.0M	\$Δ	5.9m	\$J	120	100	10	3	4.0u	1	20	1#	D	T05	A0			
57#	DT1003†	600m	1.0M	\$Δ	6.2m	\$A	200	200	5.0	300m	50u	6.0u	200m	36	1#	D	T05	A0		
58	T1496	600m	1.0M	\$Δ	5.9m	\$J	70	65	1.0	60m	2.0u	5.0u	3.0m	10	1#	G	T011	A		
59	2N1615	600m	2.0M	\$Δ	5.6m	\$S	100	100	8.0	200m	2.0u	10u	5.0m	25	1#	100p	E	T05	A0	
60	2N2038	600m	2.0M	\$Δ	5.6m	\$S	45	45	4.0	500m	15u	6.0u	200m	12	1#	100p	E	T05	A0	
61	2N2039	600m	2.0M	\$Δ	5.6m	\$S	75	75	4.0	500m	15u	6.0u	200m	12	1#	100p	E	T05	A0	
62	2N2040	600m	2.0M	\$Δ	5.6m	\$S	45	45	4.0	500m	15u	6.0u	200m	30	1#	100p	E	T05	A0	
63	2N2041	600m	2.0M	\$Δ	5.6m	\$S	75	75	4.0	500m	15u	6.0u	200m	30	1#	100p	E	T05	A0	
64	2N551	600m	3.0M	\$Δ	5.6m	\$S	60	60	6.0	200m	15u	6.0u	50m	20	1#	100p	E	T05	A0	
65	2N552	600m	3.0M	\$Δ	5.6m	\$S	30	30	6.0	200m	15u	6.0u	50m	20	1#	100p	E	T05	A0	
66	2N1055	600m	3.0M	\$Δ	5.6m	\$S	100	100	6.0	200m	15u	6.0u	50m	20	1#	100p	E	T05	A0	
67	2N547	600m	4.0M	\$Δ	5.6m	\$S	60	60	6.0	800m	15u	6.0u	500m	20	1#	100p	E	T05	A0	
68	2N548	600m	4.0M	\$Δ	5.6m	\$S	30	30	6.0	800m	15u	6.0u	500m	20	1#	100p	E	T05	A0	
69	2N549	600m	4.0M	\$Δ	5.6m	\$S	60	60	6.0	800m	15u	6.0u	500m	20	1#	100p	E	T05	A0	
70	2N550	600m	4.0M	\$Δ	5.6m	\$S	30	30	6.0	800m	15u	6.0u	200m	20	1#	100p	E	T05	A0	
71	2N1052	600m	4.0M	\$Δ	5.6m	\$J	180	180	6.0	10u	6.0u	200m	35	†	50p	ME	T05	A0		
72	2N1053	600m	4.0M	\$Δ	5.6m	\$J	200	200	6.0	10u	6.0u	200m	35	†	50p	ME	T05	A0		
73	2N1054	600m	4.0M	\$Δ	5.6m	\$J	125	115	6.0	5.0u	20	100m	12	1#	50p	Δ	T05	A0		
74	2N1117	600m	4.0M	\$Δ	5.6m	\$S	60	60	6.0	800m	15u	6.0u	200m	40	1#	100p	E	T05	A0	
75	2N2198	600m	4.0M	\$Δ	5.6m	\$S	80	80	7.0	200m	15u	5.0u	100m	35	1#	120p	E	T05	A0	
76#	N1X	600m	5.0M	4.0m	\$S	80	75	5.0	50m	10u	5.0u	2.0m	20	1#	100p	ME	T05	A0		
77	2N1116	600m	6.0M	\$Δ	5.6m	\$S														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	M A M P	ABS MAX RATINGS @25°C			MAX. I _{cb} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			Cob (F)	STRUC-TURE	DWG #200 s/a TO200 Ser.	# C O D E		
						V _{ce} (V)	V _{be} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}					hoe (mhos)	hie (Ω)
1	BF179C	600m*	150M	4.5m	\$J	30	250	5.0	50m	200n	10	15m	20	1A	T039	A		
2	BF233-2A	600m	150M	4.8m	\$J	30	30	4.0	50m	100n	10	1.0m	40	1A	T092	A		
3	BF233-3A	600m	150M	4.8m	\$J	30	30	4.0	50m	100n	10	1.0m	60	1A	T092	A		
4	PN5127	600m	150M	4.8m	\$J	20	12	3.0	30m	50n	10	2.0m	300	1A	T092	A		
5#	25C461	600m	180M	\$J	60	50	\$	5.0	300m	100n	6.0	1.0m	50	100nB	28	800m	T05	A
6	2N2478†	600m	200M	4.0m	\$A	120	40	5.0	500m	2.0u	1.5	150m	30	1A	T05	A		
7	2N3426†	600m	200M	3.4m	\$J	25	12	4.0	100u	100u	.50	10m	20	#1A	R179j	A		
8#	25C588	600m	200M	\$J	30	20		5.0	100m	100n	10	10m	100		R209	B		
9#	25C1346	600m	200M	6.0m	\$J	30	25	5.0	500m	100n	10	500m	90	1A	R209	B		
10#	25C1347	600m	200M	6.0m	\$J	60	50	5.0	500m	100n	10	500m	90	1A	R209	B		
11#	25D592	600m	200M	5.4m	\$J	30	25	5.0	1.5	100n	10	500m	60	1A	T092	B		
12#	BFY25	600m	200M	4.5m	\$J	60	40	6.0	200m	0.1u	10	10m	30	#1A	T05	A		
13	HEP53-RT	600m*	200M	\$J	35	30	\$	4.0	600m	50n	30	85	1A	T092	A			
14	HSE133-RT	600m	200M	4.8m	\$J	35	30	4.0	30m	50n	10	150m	50	1A	T092	A		
15	PN3691	600m	200M	4.8m	\$J	35	20	4.0	30m	50n	1.0	10m	40	1A	T092	A		
16	PN3692	600m	200M	4.8m	\$J	35	20	4.0	30m	50n	1.0	10m	100	1A	T092	A		
17	PN3694	600m	200M	4.8m	\$J	45	45	4.0	30m	50n	10	10m	100	1A	T092	A		
18	PN5129	600m	200M	4.8m	\$J	15	12	3.0	800m	50n	10	50m	350	1A	T092	A		
19	2N2476†	600m	250M	3.4m	\$J	60	20	5.0	20u	.40	150m	20	1A	T05	A			
20	2N2477†	600m	250M	3.4m	\$J	60	20	5.0	20u	.40	150m	40	1A	T05	A			
21	2N2958†	600m	250M	4.0m	\$S	60	20	5.0	600m	25n	10	150m	40	1A	T05	A		
22	2N2959†	600m	250M	4.0m	\$S	60	20	5.0	600m	25n	10	150m	100	1A	T05	A		
23	2N2960†	600m	250M	4.0m	\$J	60	30	5.0	600m	25n	10	10m	35	1A	T05	A		
24	2N2961†	600m	250M	4.0m	\$J	60	30	5.0	600m	25n	10	50m	30	#1A	T05	A		
25#	2N4432	600m	250M	4.0m	\$S	50	30	6.0	200m	0.1u	15	6.0m	115	1A	T05	A		
26#	2N4432A	600m	250M	4.0m	\$J	50	30	6.0	200m	10u	15	6.0m	160	1A	T05	A		
27	2N6502*	600m	250M	3.4m	\$S	80	40	6.0	1.0	1.7u	1.0	500m	10	1A	T05	A		
28#	BSW49	600m	250M	4.8m	\$S	30	25	5.0	500m	20u	1.0	500m	16	1A	T05	A		
29#	HSE134-RT	600m	250M	4.8m	\$J	40	40	4.0	100n	10	10	150m	50	1A	T05	A		
30#	HSE135-RT	600m	250M	4.8m	\$J	30	35	4.0	50n	10	10	150m	100	1A	T05	A		
31	PN2221	600m	250M	4.8m	\$J	60	30	5.0	800m	10n	10	1.0m	25	1A	T092	A		
32	PN2221A	600m	250M	4.8m	\$J	75	40	6.0	800m	10n	10	1.0m	30	1A	T092	A		
33	PN2222	600m	250M	4.8m	\$J	60	30	5.0	800m	10n	10	1.0m	50	1A	T092	A		
34	PN3641	600m	250M	4.8m	\$J	60	30	5.0	500m	50n	10	150m	40	1A	T092	A		
35	PN3642	600m	250M	4.8m	\$J	60	45	5.0	500m	50n	10	150m	40	1A	T092	A		
36	PN3643	600m	250M	4.8m	\$J	60	30	5.0	500m	50n	10	150m	100	1A	T092	A		
37#	TM1613	600m	250M	2.2m	\$A	60	40	\$	600m	.05u	10	150m	40	#1A	T05	A		
38#	TM1711	600m	250M	2.2m	\$A	60	40	\$	600m	.05u	10	150m	100	#1A	T05	A		
39#	ZT2476†	600m	250M	3.4m	\$J	60	20	5.0	20u	.40	150m	20	1A	T05	A			
40#	ZT2477†	600m	250M	3.4m	\$J	60	20	5.0	20u	.40	150m	40	1A	T05	A			
41	2N2320	600m	300M	3.4m	\$J	70	50	5.0	1.0u	.40	20m	40	1A	T05	A			
42#	MA6101	600m	300M	4.8m	\$J	30	50	6.0	50n	10	10	150m	40	1A	T05	A		
43#	MA6102	600m	300M	4.8m	\$J	60	45	6.0	50n	10	10	150m	100	#1A	T05	A		
44#	25C1303	600m	350M	4.0m	\$S	40	20	4.0	500m	1.0u	13	100m	70	1A	T039	A		
45	PN3646	600m	350M	4.8m	\$J	40	15	5.0	200m	500n	.40	30m	30	1A	T092	A		
46	PN3564	600m	400M	4.8m	\$J	30	12	4.0	100m	50n	10	15m	20	1A	T092	A		
47	PN4274	600m	400M	4.8m	\$J	30	12	4.5	500m	500n	1.0	10m	120	1A	T092	A		
48	PN4275	600m	400M	4.8m	\$J	40	15	4.5	100m	10u	1.0	100m	18	1A	T092	A		
49#	SL301AE*	600m	400M	4.0m	\$A	35	16	4.6	50m	1.0n	5.0	100u	30	1A	S17	QR		
50#	SL301AT*	600m	400M	4.0m	\$A	35	16	4.6	50m	1.0n	5.0	100u	30	1A	S17	PD		
51#	SL301BE*	600m	400M	4.0m	\$A	30	12	4.6	50m	1.0n	5.0	100u	10	1A	S17	QR		
52#	SL301B*	600m	400M	4.0m	\$A	30	12	4.6	50m	1.0n	5.0	100u	10	1A	S17	PD		
53#	SL301CE*	600m	400M	4.0m	\$A	25	10	4.3	50m	1.0n	5.0	1.0m	20	1A	S17	QR		
54#	SL301C*	600m	400M	4.0m	\$A	25	10	4.3	50m	1.0n	5.0	1.0m	20	1A	S17	QR		
55#	SL301EE*	600m	400M	4.0m	\$A	30	12	4.6	50m	1.0n	5.0	100u	20	1A	S17	QR		
56#	SL301ET*	600m	400M	4.0m	\$A	30	12	4.6	50m	1.0n	5.0	100u	20	1A	S17	PD		
57	2N3303†	600m	450M	4.0m	\$J	25	12	4.0	1	.30u	5.0	300m	60	#1A	T05	A		
58#	25C998	600m	450M	4.0m	\$J	40	40	4.0	400m	2.0u	5.0	50m	50	1A	T039	A		
59	2N3137	600m	500M	3.4m	\$J	40	20	4.0	150m	50n	5.0	50m	20	#1A	T039	A		
60	2N5236	600m	500M	3.4m	\$J	40	20	4.0	150m	1.0u	5.0	50m	30	#1A	T039	A		
61#	25C994	600m	500M	5.4m	\$J	35	15	3.0	100m	1.0u	3.0	100m	70	1A	T039	A		
62#	25C2188	600m	500M	5.4m	\$J	45	35	4.0	50m	1.0u	1.0	10m	20	1A	B37	A		
63	PN918	600m	600M	4.8m	\$J	30	15	3.0	50m	10n	1.0	3.0m	20	1A	T092	A		
64	PN3563	600m	600M	4.8m	\$J	30	12	2.0	50m	50n	1.0	8.0m	20	1A	T092	A		
65#	BFY63	600m	750M	3.4m	\$J	30	15	4.0	50m	50n	5.0	50m	70	1A	T05	A		
66	PN5179	600m	900M	4.8m	\$J	20	12	2.5	25m	2.0n	1.0	3.0m	250	1A	T092	A		
67#	25C1638	600m	1.0GS	4.0m	\$J	40	20	3.0	300m	50n	10	20m	100	1A	R176h	G		
68#	25C1164	600m	1.4GS	\$J	40	35	2.0	300m	100n	10	15m	15	1A	T039	G			
69#	25C1199	600m	1.4GS	\$J	50	35		300m	100n	10	20m	80	1A	T039	G			
70#	25C823	600m	1.5G	4.8m	\$J	30	19	3.0	60m	100n	10	15m	30	1A	T033	G		
71	HP35828E	600m	6.0G	4.0m	\$J	27	20	1.5	35m	100u	15	15m	150	1A	W26b	A		
72#	BCW90	610m	80M	4.9m	\$J	50	40	5.0	800m	30n	2.0	150m	100	1A	R203a	A		
73#	BCW91	610m	80M	4.9m	\$J	70	60	5.0	800m	30n	2.0	150m	100	1A	R203a	A		
74	BCW90A	610m	80M	4.8m	\$J	50	40	5.0	800m	30n	2.0	2.0m	60	1A	R203a	A		
75	BCW90B	610m	80M	4.8m	\$J	50	40	5.0	800m	30n	2.0	2.0m	80	1A	R203a	A		
76	BCW90C	610m	80M	4.8m	\$J	50	40	5.0	800m	30n	2.0	2.0m	120	1A	R203a	A		
77	BCW90KA																	

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab	DERATE IN FREE AIR W/°C	T M A X P	ABS MAX RATINGS @25°C				MAX. I _{cb0} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# E O D E	
						V _{ce0} (V)	V _{ce0} (V)	V _{ce0} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)	hre (Ω)					
1	BC487A18	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	160	1#			7.0p	AN	R204e	A	
2	BC487A	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	160	1#			7.0p	AN	R210a	F	
3	BC487B5	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	260	1#			7.0p	AN	R207	A	
4	BC487B18	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	260	1#			7.0p	AN	R204e	A	
5	BC487B	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	260	1#			7.0p	AN	R210a	F	
6	BC487L5	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	120	1#			7.0p	AN	R207	A	
7	BC487L18	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	120	1#			7.0p	AN	R204e	A	
8	BC487L	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	100m	120	1#			7.0p	AN	R210a	F	
9	BC489-18	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	60	1#			7.0p	AN	R204e	A	
10	BC489A5	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	160	1#			7.0p	AN	R207	A	
11	BC489A18	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	160	1#			7.0p	AN	R204e	A	
12	BC489A	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	160	1#			7.0p	AN	R210a	F	
13	BC489B5	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	260	1#			7.0p	AN	R207	A	
14	BC489B18	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	260	1#			7.0p	AN	R204e	A	
15	BC489B	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	260	1#			7.0p	AN	R210a	F	
16	BC489L5	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	120	1#			7.0p	AN	R207	A	
17	BC489L18	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	120	1#			7.0p	AN	R204e	A	
18	BC489L	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	100m	120	1#			7.0p	AN	R210a	F	
19	BCX451	625m	200M	5.0m	\$J	45	45	5.0	1.0	100n	2.0	10m	120		58u	530	1.1	7.0p	AN	R210a	F
20	BCX471	625m	200M	5.0m	\$J	60	60	5.0	1.0	100n	2.0	10m	120		58u	530	1.1	7.0p	AN	R210a	F
21	BCX491	625m	200M	5.0m	\$J	80	80	5.0	1.0	100n	2.0	10m	120		58u	530	1.1	7.0p	AN	R210a	F
22	MPS3904†	625m	200M	5.0m	\$J	60	40	3.0	200m	50n	1.0	10m	100	1Δ	40u	10k	8.0	4.0p	AN	T092 A	
23	MPS5132	625m	200M	5.0m	\$J	20	20	3.0		50n	1.0	10m	20	Δ			3.5p	PE	T092 A	B	
24	PN5132	625m	200M	5.0m	\$S	20	20	3.0	30m	50n	1.0	10m	20	Δ			3.5p	PE	T092 A	B	
25	TIS94	625m	200M	5.0m	\$S	60	40	6.0	200m	10u	5.0	100u	250	Δ			4.0p	PE	T092 B	B	
26	TIS95	625m	200M	5.0m	\$S	80	60	6.0	200m	10u	5.0	1.0m	100	Δ			4.0p	PE	T092 B	B	
27	TIS96	625m	200M	5.0m	\$S	80	65	6.0	200m	10u	5.0	1.0m	60	Δ			4.0p	PE	T092 B	B	
28	BC337	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R210a	F	
29	BC337-5	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R207	A	
30	BC337-16	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R210a	F	
31	BC337-16-18	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R204e	A	
32	BC337-16-5	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R207	A	
33	BC337-18	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R204e	A	
34	BC337-25	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	160	1Δ			4.0p	AN	R210a	F	
35	BC337-25-18	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	160	1Δ			4.0p	AN	R204e	A	
36	BC337-25-5	625m	210M	5.0m	\$J	50	45	5.0	500m	100n	1.0	100m	160	1Δ			4.0p	AN	R207	A	
37	BC338	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R210a	F	
38	BC338-5	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R207	A	
39	BC338-16	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R210a	F	
40	BC338-16-18	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R204e	A	
41	BC338-16-5	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R207	A	
42	BC338-18	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	100	1Δ			4.0p	AN	R204e	A	
43	BC338-25	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	160	1Δ			4.0p	AN	R210a	F	
44	BC338-25-18	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	160	1Δ			4.0p	AN	R204e	A	
45	BC338-25-5	625m	210M	5.0m	\$J	30	25	5.0	500m	100n	1.0	100m	160	1Δ			4.0p	AN	R207	A	
46	2N5845A†	625m	250M	5.0m	\$S	50	40	6.0	600m	500n	1.0	10m	50	1Δ			9.0p	PE	T092 A	B	
47	A5T2221†	625m	250M	5.0m	\$S	60	30	5.0	800m	10n	1.0	100u	35	1Δ			8.0p	PE	R203 A	B	
48	MPS2222†	625m	250M	5.0m	\$J	60	30	5.0	600m	10n	1.0	1.0m	50	1Δ	35u	8.0k	8.0	8.0p	PE	R211 A	B
49	MPS5134†	625m	250M	5.0m	\$J	20	10	3.5	100m	100n	1.0	10m	2.5	1Δ			4.0p	AN	T092 A	B	
50	PN4140	625m	250M	5.0m	\$S	60	30	5.0	200m	50u	1.0	150m	120	1Δ			8.0p	PE	T092 A	B	
51	PN4141	625m	250M	5.0m	\$S	60	30	5.0	200m	50u	1.0	150m	300	1Δ			8.0p	PE	T092 A	B	
52	PN5134	625m	250M	5.0m	\$S	20	10	3.5	100m	400p	1.0	10m	150	1#			4.0p	AN	T092 A	B	
53	JE9014A	625m	270M	5.0m	\$J	50	45	5.0	100m	50n	5.0	1.0m	60	1Δ*	20u	9.0k	7.5	3.7p	PE	T092 A	B
54	JE9014B	625m	270M	5.0m	\$J	50	45	5.0	100m	50n	5.0	1.0m	100	1Δ*	20u	9.0k	7.5	3.7p	PE	T092 A	B
55	JE9014C	625m	270M	5.0m	\$J	50	45	5.0	100m	50n	5.0	1.0m	200	1Δ*	20u	9.0k	7.5	3.7p	PE	T092 A	B
56	JE9014D	625m	270M	5.0m	\$J	50	45	5.0	100m	50n	5.0	1.0m	400	1Δ*	20u	9.0k	7.5	3.7p	PE	T092 A	B
57	A5T2222A†	625m	300M	5.0m	\$S	75	40	6.0	800m	10n	1.0	100u	35	1Δ	35u	8.0k	8.0	8.0p	PE	R203 A	B
58	BC546A	625m	300M	5.0m	\$J	80	60	6.0	100m	100n	5.0	2.0m	220		15u	2.7k	2.7	3.7p	PE	R189b A	B
59	BC546B	625m	300M	5.0m	\$J	80	60	6.0	100m	100n	5.0	2.0m	330		27u	5.0k	4.8	3.7p	PE	R189b A	B
60	BC547A	625m	300M	5.0m	\$J	50	60	6.0	100m	100n	5.0	2.0m	220		15u	2.7k	2.7	3.7p	PE	R189b A	B
61	BC547B	625m	300M	5.0m	\$J	50	60	6.0	100m	100n	5.0	2.0m	330		27u	5.0k	4.8	3.7p	PE	R189b A	B
62	BC547C	625m	300M	5.0m	\$J	50	60	6.0	100m	100n	5.0	2.0m	600		37u	8.0k	7.0	3.7p	PE	R189b A	B
63	BC548A	625m	300M	5.0m	\$J	30	30	5.0	100m	100n	5.0	2.0m	220		15u	2.7k	2.7	3.7p	PE	R189b A	B
64	BC548B	625m	300M	5.0m	\$J	30	30	5.0	100m	100n	5.0	2.0m	330		27u	5.0k	4.8	3.7p	PE	R189b A	B
65	BC548C	625m	300M	5.0m	\$J	30	30	5.0	100m	100n	5.0	2.0m	600		37u	8.0k	7.0	3.7p	PE	R189b A	B
66	BC549B	625m	300M	5.0m	\$J	30	30	5.0	100m	15n	5.0	2.0m	330		28u	4.0k	4.5	3.7p	PE	R189b A	B
67	BC549C	625m	300M	5.0m	\$J	30	30	5.0	100m	15n	5.0	2.0m	600		37u	6.5k	7.0	3.7p	PE	R189b A	B
68	BC550B	625m	300M	5.0m	\$J	50	45	5.0	100m	15n	5.0	2.0m	330		28u	4.0k	4.5	3.7p	PE	R189b A	B
69	BC550C	625m	300M	5.0m	\$J	50	45	5.0	100m	15n	5.0	2.0m	600		37u	6.5k	7.0	3.7p	PE	R189b A	B
70	JE9100A	625m	300M	5.0m	\$J	60	60	7.0	100m	50n	10	2.0m	50	1Δ*			1.6p	AN	T092 A	B	
71	JE9100B	625m	300M	5.0m	\$J	60															

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)		2 DERATE IN FREE AIR W/°C (Hz)		T M A M X P	ABS MAX RATINGS @25°C					MAX. lcbomax @MAX (Vcb)			TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C E O D E
		fab	IN	M	BVcbo		BVceo	VBebo	Ic	Vcb	Icbo	BIAS		COMMON EMITTER										
												le	hfe	hoe (mhos)	hie (Ω)	hre X.0001								
1#	2SC353	750m	170mS	5.0m	5.0	5J	100	60	5.0	100m	200u	3.0u	1.0m	90	†	3.0p	PE	T05						
2#	2SC353A	750m	170mS	8.3m	5.0	5J	100	60	5.0	100m	200u	3.0u	1.0m	90	†	4.5p	PE	T05						
3#	2SC1121	750m	180m	6.3m	5.0	5J	100	60	5.0	100m	200u	2.0u	200m	35	Δ	7.0p	PE	T05						
4#	2SD400	750m	180mS	6.3m	5.0	5J	25	25	5.0	1.0	1.0u	2.0	50m	60	†	25p	PE	R182a	B					
5#	2SC31	750m	200mS	6.3m	5.0	5J	60	25	5.0	200m	1.0u	10u	10m	35	†	4.0p	PE	T05						
6#	2SC456	750m	200mS	6.3m	5.0	5J	50	50	1.5	600m	1.0u	6.0u	80m	20	†	10p	PE	T05						
7#	2SC507	750m	200mS	6.3m	5.0	5J	170	120	5.0	80m	1.0u	5.0u	10m	70	†	5.0p	DPL	T039	A					
8#	2SC589	750m	200mS	6.3m	5.0	5J	165	150	5.0	80m	2.0u	2.0u	3.0m	40	†	4p	D	T05						
9#	2SC594	750m	200mS	6.3m	5.0	5J	60	30	5.0	200m	1.0u	10u	10m	60	†	4.0p	PE	T05						
10#	2SC708	750m	200mS	6.8m	5.0	5J	60	80	4.0	1	4.0u	50m	35	Δ	3.0p	PE	T039							
11#	2SC1885	750m	200mS	6.8m	5.0	5J	150	150	5.0	100m	5.0u	5.0u	10m	150	†	3.5p	PE	R182a	B					
12#	A5T6461	750m	200mS	6.0m	5.0	5S	300	300	7.0	100m	50n	10u	20m	120	†	3.5p	PE	R203	A					
13#	A5T6462	750m	200mS	6.0m	5.0	5S	300	300	7.0	100m	50n	10u	20m	300	†	3.5p	PE	R203	A					
14#	A5T6463	750m	200mS	6.0m	5.0	5S	250	250	6.0	100m	50n	10u	20m	120	†	3.5p	PE	R203	A					
15#	A5T6464	750m	200mS	6.0m	5.0	5S	250	250	6.0	100m	50n	10u	20m	300	†	3.5p	PE	R203	A					
16#	2SC111	750m	240m	5.0m	5.0	5J	50	50	5.0	300m	10u	2.0	20m	50	†	6.0p	PE	T05						
17#	2SC32	750m	250mS	5.0m	5.0	5J	60	25	5.0	200m	1.0u	10u	10m	60	†	4.0p	PE	T05						
18#	2SC526	750m	250mS	5.0m	5.0	5J	165	150	5.0	55m	2.0u	2.0	15m	20	Δ	3.5p	PE	T05						
19#	2SC1217†	750m	250mS	5.0m	5.0	5J	150	150	5.0	300m	100n	10u	50m	70	†	6.0p	EM	T039	A					
20#	2SC1811	750m	250mS	8.0m	5.0	5J	240	150	5.0	100m	200n	5.0u	3.0m	150	†	2.8p	PE	R195	B					
21#	2SC1957	750m	250mS	6.0m	5.0	5J	75	40	4.0	1.0	1.0u	10u	500m	90	†	14p	EM	B16m	B					
22#	2SC1218†	750m	300mS	5.0m	5.0	5J	80	80	5.0	500m	100n	10u	50m	80	†	6.0p	PE	T039	A					
23#	2SC1973	750m	300mS	5.0m	5.0	5J	55	45	5.0	800m	1.0u	5.0u	100m	20	Δ	6.0p	PE	R182a	B					
24#	2SC1976	750m	700mS	6.8m	5.0	5J	36	18	4.0	500m	1.0u	13u	100m	70	†	6.0p	PE	R182a	B					
25#	2SC652	750m	800mS	5.9m	5.0	5J	40	20	3.0	300m	10u	10u	100m	20	†	2.5p	PE	T05						
26#	2SC651	750m	1.1G	5.0m	5.0	5J	45	22	4.0	300m	10u	10u	100m	80	†	3.5p	PE	T05						
27#	MA42007-511*	750m	2.2G	5.0m	5.0	5J	20	3.0	3.0	125m	10n	10u	5.0m	20	Δ	1.7p	PL	W21b	R					
28#	MA42008-511*	750m	2.2G	5.0m	5.0	5J	20	3.0	3.0	125m	10n	10u	5.0m	20	Δ	1.7p	PL	W21b	R					
29	KJ6001	750m	3.5G	4.0m	5.0	5J	20	3.0	3.0	100m	10n	10u	5.0m	20	Δ	1.7p	PL	W21	R					
30	KJ6007	750m	3.5G	4.0m	5.0	5J	20	3.0	3.0	125m	10n	10u	5.0m	20	Δ	1.7p	PL	W21	R					
31#	BSW39-6†	790m	50mS	4.5m	5.0	5J	100	80	7.0	1.0	30n	1.0u	1.0m	20	Δ	20p	PE	T039	A					
32#	BSW39-10†	790m	50mS	4.5m	5.0	5J	100	80	7.0	1.0	30n	1.0u	1.0m	30	Δ	20p	PE	T039	A					
33#	BSW39-16†	790m	50mS	4.5m	5.0	5J	100	80	7.0	1.0	30n	1.0u	1.0m	40	Δ	20p	PE	T039	A					
34	2N1105	800m	4.6m	5.0m	5.0	5J	60	60	8.0	500m	10u	10u	200m	12	Δ	12p	PL	T05						
35	2N1943	800m	4.5m	5.0m	5.0	5J	60	60	8.0	500m	10u	6.0u	1.0m	12	Δ	12p	PL	T05						
36	2N5189	800m	4.5m	5.0m	5.0	5J	60	55	5.0	2.0	100u	1.0u	1.0	15	Δ	15p	PL	R179a	A					
37	2N5262†	800m	5.7m	5.0m	5.0	5J	75	50	5.0	2.0	100u	1.0u	500m	40	Δ	12p	PE	R179a	A					
38#	2SC1069†	800m	5.3m	5.0m	5.0	5J	100	80	6.0	1.0	500n	3.0u	500m	40	†	12p	PE	T039	A					
39#	2SC1072†	800m	5.3m	5.0m	5.0	5J	100	80	6.0	1.0	500n	3.0u	500m	35	Δ	12p	PE	R179a	A					
40#	2SC1072A†	800m	5.3m	5.0m	5.0	5J	100	80	6.0	1.0	500n	3.0u	500m	35	Δ	3.0p	PE	R179a	A					
41#	2SC1150†	800m	5.3m	5.0m	5.0	5J	60	50	5.0	1.0	500n	1.0u	500m	50	†	12p	PE	R216	A					
42#	2SC1351†	800m	5.3m	5.0m	5.0	5J	80	65	6.0	1.0	500n	1.0u	500m	25	Δ	12p	PE	T039	A					
43#	2SC1385H†	800m	5.3m	5.0m	5.0	5J	60	30	5.0	500m	500n	1.1u	300m	35	Δ	12p	PE	T039	A					
44#	2SC1386H†	800m	5.3m	5.0m	5.0	5J	70	52	5.0	1.0	100u	1.0u	60m	30	Δ	12p	PE	T039	A					
45#	2SC1388†	800m	4.5m	5.0m	5.0	5J	100	80	6.0	1.0	500n	3.0u	500m	15	*	12p	PE	T039	A					
46#	2SC1635†	800m	5.3m	5.0m	5.0	5J	70	50	5.0	1.0	300n	1.0u	500m	50	†	12p	PE	R216a	A					
47#	2SD329†	800m	5.3m	5.0m	5.0	5J	70	200	5.0	1.0	20u	4.0u	1.0	40	†	12p	D	T039	A					
48#	BC312	800m	5.3m	5.0m	5.0	5J	100	100	5.0	150m	10u	10u	30m	130	†	6.0p	PL	T05						
49#	BCW90K	800m	6.4m	5.0m	5.0	5J	50	40	5.0	800m	30n	2.0u	150m	100	†	12p	PE	R198	A					
50#	BCW91K	800m	6.4m	5.0m	5.0	5J	70	60	5.0	800m	30n	2.0u	150m	100	†	12p	PE	R198	A					
51#	BF355	800m	4.5m	5.0m	5.0	5J	300	225	5.0	100m	100u	1.0u	10m	100	†	12p	PL	T039	A					
52#	BFR36	800m	5.0m	5.0m	5.0	5J	40	30	4.0	150m	10u	5.0u	150m	40	†	2.1p	PE	T039	A					
53#	BFY41	800m	4.5m	5.0m	5.0	5S	120	120	5.0	600m	10u	10u	50m	35	†	14p	PL	T05						
54#	BSV69†	800m	5.2m	5.0m	5.0	5J	45	40	5.0	1.0	100u	1.0u	500m	50	†	10p	PE	T039	A					
55#	C428	800m	4.5m	5.0m	5.0	5J	40	30	5.0	50u	10u	10u	10m	150	†	14p	PL	T039	A					
56#	C744	800m	8.0m	5.0m	5.0	5J	60	60	5.0	100u	10u	10u	50m	175	†	14p	PE	T039	A					
57	2N1445	800m	75kt	4.5m	5.0m	5J	120	120	8.0	750m	10u	10u	200m	80	†	14p	PE	T05						
58	2N4237	800m	1.0M	4.5m	5.0m	5J	50	40	6.0	1	100u	10u	100m	30	Δ	100p	PL	T05						
59	2N4238	800m	1.0M	4.5m	5.0m	5J	80	60	6.0	1	100u	10u	100m	30	Δ	100p	PL	T05						
60	2N4239	800m	1.0M	4.5m	5.0m	5J	100	80	6.0	1	100u	10u	100m	30	Δ	100p	PL	T05						
61#	DT1510†	800m	1.0M	5.0m	5.0m	5S	30	20	8.0	300m	4.0u	6.0u	300m	25	†	500u	100	5.0						
62#	DT1511†	800m	1.0M	5.0m	5.0m	5S	60	40	8.0	300m	4.0u	6.0u	300m	25	†	500u	100	5.0						
63#	DT1512†	800m	1.0M	5.0m	5.0m	5S	100	70	8.0	300m	4.0u	6.0u	300m	25	†	500u	100	5.0						
64#	2SD149	800m	1.2M	5.3m	5.0m	5J	70	70	5.0	1.0	20u	4.0u	1.0	40	†	500u	100	5.0						
65#	2SD215	800m	1.2M	5.3m	5.0m	5J	40	35	5.0	1.0	20u	4.0u	500m	70	†	500u	100	5.0						
66#	2SD216	800m	1.2M	5.3m	5.0m	5J	60	50	5.0	1.0	20u	4.0u	500m	70	†	500u	100	5.0						
67#	DT1520†	800m	2.0M	5.0m	5.0m	5S	30	20	8.0	300m	4.0u	6.0u	300m	120	†	800u	300	5.0						
68#	DT1521†	800m	2.0M	5.0m	5.0m	5S	60	40	8.0	3														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 fab (Hz)	DERATE IN FREE AIR W/°C	T M A M P	ABS MAX RATINGS @25°C				MAX. I _{cb} @MAX V _{cb} (A)	TYPICAL h _{FE} PARAMETERS					Cob (F)	STRUC-TURE	DWG #L Y200 s/a TO200 Ser.	#L O A D E		
						V _{bc} (V)	V _{ceo} (V)	V _{be} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	COMMON EMITTER							
														hoe (mhos)	hie (Ω)					hre (X.0001)	
1#	BC368	800m	65M	8.0m	SJ	150	150	5.0	1.0	100m	100n	100	5.0m	50	10	30	Δ			R204d	D
2#	BF292A	800m	66M	4.5m	SJ	150	150	5.0	1.0	100m	100n	100	5.0m	50	10	30	Δ				
3#	BF292B	800m	66M	4.5m	SJ	190	190	5.0	1.0	100m	100n	100	5.0m	50	10	30	Δ				
4#	BF292C	800m	66M	4.5m	SJ	220	220	5.0	1.0	100m	100n	100	5.0m	50	10	30	Δ				
5#	2N1335	800m	70M	5.3m	SJ	120	90	4.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
6#	2N1336	800m	70M	5.3m	SJ	120	90	4.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
7#	2N1337	800m	70M	5.3m	SJ	120	90	4.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
8#	2N1338	800m	70M	5.3m	SJ	80	50	3.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
9#	2N1339	800m	70M	5.3m	SJ	120	100	3.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
10#	2N1340	800m	70M	5.3m	SJ	120	100	3.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
11#	2N1341	800m	70M	5.3m	SJ	120	100	3.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
12#	2N1342	800m	70M	5.3m	SJ	150	125	5.0	300m	1.0u	100	100	30m	10	1#	Δ				A	
13#	2N1505	800m	70M	5.3m	SJ	50	20	3.0	500m	50u	50	28	100m	7.0	1#	Δ				A	
14#	2N1711	800m	70M	4.5m	SJ	75	50	7.0	1.0 #	10n	10n	5.0	1.0m	50	Δ					A	
15#	JAN2N1711t	800m	70M	4.5m	SJ	75	30	7.0	500m	10n	10n	10	5.0m	90	Δ					A	
16#	2N1711S	800m	70M	4.5m	SJ	75	50	7.0	1.0 #	10n	10n	5.0	1.0m	50	Δ					A	
17#	JAN2N1890t	800m	70M	4.5m	SJ	100	60	7.0	500m	10n	10n	10	5.0m	90	Δ					A	
18#	2N3107t	800m	70M	4.5m	SJ	100	60	7.0	1.0	10n	10n	10	1.0m	60	Δ					A	
19#	2N3109t	800m	70M	4.5m	SJ	80	40	7.0	1.0	10n	10n	10	1.0m	60	Δ					A	
20#	2SC1008At	800m	70M	6.4m	SJ	100	80	8.0	700m	100n	2.0	2.0	50m	140	1#					R216e	A
21#	BFY46	800m	70M	4.5m	SJ	75	50	7.0	1.0 #	10n	10n	10	10m	75	Δ					A	
22#	C425	800m	70M	4.5m	SA	75	60	7.0	20n	20n	10	5.0m	75	Δ						A	
23#	UP11711	800m	70M	4.5m	SJ	75	50	7.0	1.0 #	10n	10n	5.0	1.0m	50	Δ					A	
24#	ZT11711	800m	70M	4.5m	SJ	75	50	7.0	1.0 #	10n	10n	10	150m	100	Δ					A	
25#	2SC1008t	800m	75M	6.4m	SJ	80	60	8.0	700m	100n	2.0	2.0	50m	160	1#					R216e	A
26#	HSE178-RT	800m	75M	6.4m	SJ	120	100	5.0	500m	50n	1.0	150m	50	Δ						A	
27#	2N3020	800m	80M	4.5m	SJ	140	80	7.0	1.0	0.1u	5.0	1.0m	30	Δ						A	
28#	2N3020S	800m	80M	4.5m	SJ	140	80	7.0	1.0	10n	5.0	1.0m	30	Δ						A	
29#	2N4896t	800m	80M	4.5m	SJ	120	60	6.0	5.0	1.0m	2.0	2.0	100	Δ						A	
30#	BC288	800m	80M	4.5m	SJ	80	40	6.0	5.0	10n	2.0	2.0	30	Δ						A	
31#	BCW44	800m	80M	4.5m	SJ	70	55	5.0	1.0	100n	1.0	200m	40	Δ						A	
32#	BF294	800m	80M	4.5m	SJ	160	160	6.0	100m	100u	50	10m	70	Δ						A	
33#	BFR77	800m	80M	4.5m	SJ	120	80	7.0	1.0	10n	10	150m	40	Δ						A	
34#	BFR78	800m	80M	4.5m	SJ	120	100	7.0	1.0	10n	10	100u	20	Δ						A	
35#	BFX69	800m	80M	4.5m	SJ	75	30	7.0	1.0	10n	5.0	1.0m	55	Δ						A	
36#	BFY56B	800m	80M	4.5m	SJ	80	55	7.0	1.0	50n	1.0	150m	70	Δ						A	
37#	BSW65t	800m	80M	4.5m	SJ	80	80	6.0	1.0	100u	5.0	1.0	15	Δ						A	
38#	BSW66t	800m	80M	4.5m	SJ	80	80	6.0	1.0	100u	5.0	1.0	30	Δ						A	
39#	BSW67t	800m	80M	4.5m	SJ	80	80	6.0	1.0	100u	5.0	1.0	30	Δ						A	
40#	BSW68t	800m	80M	4.5m	SJ	80	80	6.0	1.0	100u	5.0	1.0	30	Δ						A	
41#	C426t	800m	80M	4.5m	SJ	60	30	5.0	7.0	100n	5.0	1.0m	60	Δ						A	
42#	BFX69A	800m	84M	4.5m	SJ	80	40	7.0	1.0	0.1u	5.0	1.0m	70	Δ						A	
43#	BC310	800m	86M	4.5m	SJ	70	70	5.0	1.0	50n	10	10m	110	Δ						A	
44#	BF174	800m	86M	4.5m	SJ	150	150	6.0	5.0	0.1u	25m	20	20	Δ						A	
45#	BFY56t	800m	86M	4.5m	SJ	80	45	5.0	7.0	0.05u	10	10m	40	Δ						A	
46#	BFY56A	800m	86M	4.5m	SJ	80	55	7.0	1.0	0.05u	1.0	150m	70	Δ						A	
47#	SE7010	800m	86M	4.5m	SJ	150	150	6.0	5.0	0.1u	10	25m	20	Δ						A	
48#	2N2440	800m	90M	4.5m	SJ	120	80	7.0	500m	1.0n	5.0	25m	70	Δ						A	
49#	BFR20	800m	90M	2.8m	SJ	35	75	7.0	7.0	10n	1.0	150m	90	Δ						A	
50#	BFR21	800m	90M	2.8m	SJ	70	120	7.0	1.0	10n	1.0	150m	40	Δ						A	
51#	2N1893A	800m	100M	4.5m	SJ	140	80	7.0	500m	10n	5.0	1.0m	30	Δ						A	
52#	2N2330	800m	100M	4.5m	SJ	30	20	5.0	500m	1.0n	1.0	10m	50	Δ						A	
53#	2N3019	800m	100M	4.5m	SJ	140	80	7.0	1.0	0.1u	5.0	1.0m	80	Δ						A	
54#	JAN2N3019	800m	100M	4.6m	SJ	140	80	7.0	1.0	10n	5.0	1.0m	80	Δ						A	
55#	2N3019S	800m	100M	4.5m	SJ	140	80	7.0	1.0	10n	5.0	1.0m	80	Δ						A	
56#	2SC995	800m	100M	4.5m	SJ	300	300	5.0	100m	100n	1.0	50m	80	Δ						A	
57#	2SC1382	800m	100M	4.5m	SJ	80	80	7.0	750m	500n	2.0	150m	120	Δ						A	
58#	2SD355	800m	100M	6.9m	SJ	30	25	4.0	1.0	1.0u	1.0	500m	100	Δ						A	
59#	BC286	800m	100M	4.5m	SJ	70	60	5.0	1.0	20n	2.0	500m	20	Δ						A	
60#	BC323	800m	100M	4.5m	SJ	100	100	5.0	5.0	1.0	1.0	500m	160	Δ						A	
61#	BC324	800m	100M	4.5m	SJ	85	55	5.0	1.0	1.0	1.0	50m	20	Δ						A	
62#	BC340	800m	100M	4.5m	SJ	40	40	5.0	500m	100n	5.0	50m	40	Δ						A	
63#	BC340-10	800m	100M	4.5m	SJ	40	40	5.0	500m	100n	5.0	50m	60	Δ						A	
64#	BC340-16	800m	100M	4.5m	SJ	40	40	5.0	500m	100n	5.0	50m	100	Δ						A	
65#	BC341-6	800m	100M	4.5m	SJ	60	60	5.0	500m	100n	5.0	50m	40	Δ						A	
66#	BC341-10	800m	100M	4.5m	SJ	60	60	5.0	500m	100n	5.0	50m	63	Δ						A	
67#	BFR108	800m	100M	4.5m	SJ	135	135	5.0	3.0	1.0u	1.0	30m	50	Δ						A	
68#	BFR19	800m	100M	2.8m	SJ	35	75	7.0	1.0	10n	1.0	500m	30	Δ						A	
69#	BFT39	800m	100M	4.5m	SA	90	80	5.0	1.0	100n	10	100m	250	Δ						A	
70#	BFT40	800m	100M	4.5m	SA	70	60	5.0	1.0	100n	10	100m	250	Δ						A	
71#	BFT41	800m	100M	4.5m	SA	60	50	5.0	1.0	100n	10	100m	300	Δ						A	
72#	BSY22	800m	100M	4.5m	SJ	40	32	5.0	1.5	2.0	2.0	50m	35	Δ						A	
73#	BSY51	800m	100M	4.5m	SJ	60	25	5.0	500m	100n	5.0	150m	40	Δ						A	
74#	BSY51t	800m	100M	4.5m	SJ	60	25	5.0	500m	100n	5.0	10m	30	Δ						A	
75#	BSY53	800m	100M	4.5m	SJ	75	30	7.0	750m	10n	10	150m	40	Δ						A	
76#	BSY53t	800m	100M	4.5m	SJ	70	30	7.0	750m	10n	5.0	1.0m	30	Δ							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN fab (Hz)	T M A X P	ABS MAX RATINGS @25°C				MAX. I _{cb0} @MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a T0200 Ser.	L C O D E
					V _{cb0} (V)	V _{ce0} (V)	V _{be0} (V)	I _c (A)		BIAS			COMMON EMITTER						
										V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} X.0001				
1#	2SC198A	800m	350M\$	5.3m	SJ	50	20	5.0	500m	1.0u	100	20m	40	50		PE	T012	GØ	
2#	2SC319	800m	350M\$	5.3m	SJ	40	20	4.0	300m	1.0u	100	100m	20	1#Δ		PE	T033		
3#	2SC781	800m	350M\$	5.3m	SJ	75	40	5.0	1	1.0u	100	150m	80	†		PE	T05		
4#	BFR101	800m	350M\$	3.4m	SJ	50	28	5.0	20n	4.0u	150	150m	60	†Δ		PE	T039	A	
5#	BFY72	800m	400M\$Δ	4.5m	SJ	40	20	4.0	300m	50u	100	100m	90	†		PE	T05	Ø	
6#	2N2883	800m	400M\$Δ	4.5m	SJ	40	20	4.0	300m	10n	100	100m	20	1#Δ		PE	T05	Ø	
7	2N2884	800m	400M\$Δ	4.5m	SJ	40	20	4.0	300m	50u	100	100m	20	1#Δ		PE	T05	Ø	
8	2N3123	800m	400M\$Δ	5.2m	SJ	60	30	5.0	800m	10n	100	150m	100	1#Δ		PE	T05	Ø	
9	2N5188†	800m	400M\$Δ	4.5m	SS	60	25	5.0	1	50u	50	150m	25	†Δ		PE	T039	Ø	
10#	2SC138	800m	400M\$	5.3m	SJ	60	30	5.0	500m	1.0u	100	30m	50	†		PE	T033		
11#	2SC138A	800m	400M\$	5.3m	SJ	60	35	5.0	500m	1.0u	100	30m	50	†		PE	T033		
12#	2SC139	800m	400M\$	5.3m	SJ	60	30	5.0	500m	1.0u	100	30m	50	†		PE	T033		
13#	2SC320	800m	400M\$Δ	5.3m	SJ	40	20	4.0	500m	1.0u	100	100m	20	†Δ		PE	T033		
14#	2SC596	800m	400M\$	4.4m	SJ	60	30	5.0	500m	50u	100	30m	50	†		PE	T033		
15#	BSS27†	800m	400M\$	4.4m	SJ	70	45	5.0	1.0	1.0u*	1.00	150m	30	†Δ		PE	T039	Ø	
16#	BSS28†	800m	400M\$	4.4m	SJ	50	30	5.0	1.0	1.0u*	1.00	150m	40	†Δ		PE	T039	Ø	
17#	BSS29†	800m	400M\$	4.4m	SJ	50	30	5.0	1.0	1.0u*	1.00	150m	25	†Δ		PE	T039	Ø	
18#	BSV77†	800m	400M\$	4.4m	SJ	50	30	5.0	1.0	1.0u*	1.00	100m	60	†Δ		PE	T039	Ø	
19#	BSV95†	800m	400M\$	4.5m	SJ	60	40	5.0	600m	70n	1.00	500m	20	†Δ		PE	T039	A	
20#	BSY34†	800m	400M\$	4.5m	SJ	60	40	5.0	600m	70n	1.00	100m	42	†		PE	T039	A	
21#	BSX32†	800m	450M\$	4.5m	SJ	65	40	6.0	1.0	4.0u	1.00	10m	60	†#		DPE	T05	Ø	
22	BSX32Z†	800m	450M\$	4.5m	SJ	65	40	6.0	1.0	4.0u	1.00	10m	60	†#		AN	T039	A	
23#	BSX59†	800m	475M\$	4.5m	SJ	70	45	5.0	1	50u	1.00	500m	25	†Δ		PE	T05	Ø	
24#	BSX60†	800m	475M\$	4.5m	SJ	70	30	5.0	1	50u	1.00	500m	30	†Δ		PE	T05	Ø	
25#	BSX61†	800m	475M\$	4.5m	SJ	70	45	5.0	1	50u	1.00	500m	25	†Δ		PE	T05	Ø	
26#	2SC566	800m	500M\$Δ	5.0m	SJ	50	40	4.0	300m	20u	100	100m	50	†#Δ		PE	T033	Ø	
27#	2SC654	800m	500M\$Δ	5.0m	SJ	40	35	3.0	300m	20u	150	50m	40	†Δ		PE	T033	Ø	
28#	2SC1324	800m	1.7G	5.3m	SJ	35	25	4.0	150m	50u	150	30m	70	†		PE	T039		
29#	2SC1513	800m	1.8G	5.3m	SJ	40	25	3.0	300m	150	150	30m	35	†Δ		EP	T033	G	
30#	2SC1952*	800m	2.0G	4.6m	SJ	45	25	3.0	300m	100n	100	50m	80	†		EP	T039	G	
31#	2SC1457	800m	2.7G	4.5m	SJ	35	18	3.0	150m	100n	100	50m	100	†		E	T033	G	
32#	BF422	830m	60M\$	6.6	SJ	250	150	5.0	20m	10n	200	25m	50	†Δ		PE	R191	B	
33#	BC300-4	850m	40M\$	40m	SJ	120	80	6.0	20n	20n	100	150m	40	†Δ		PE	T039		
34#	BC300-5	850m	40M\$	40m	SJ	120	80	6.0	20n	20n	100	150m	70	†Δ		PE	T039		
35#	BC300-6	850m	40M\$	40m	SJ	120	80	6.0	20n	20n	100	150m	120	†Δ		PE	T039		
36#	BC301-4	850m	40M\$	40m	SJ	90	60	6.0	20n	20n	100	150m	40	†Δ		PE	T039		
37#	BC301-5	850m	40M\$	40m	SJ	90	60	6.0	20n	20n	100	150m	70	†Δ		PE	T039		
38#	BC301-6	850m	40M\$	40m	SJ	90	60	6.0	20n	20n	100	150m	120	†Δ		PE	T039		
39#	BC302-4	850m	40M\$	40m	SJ	60	45	6.0	20n	20n	100	150m	40	†Δ		PE	T039		
40#	BC302-5	850m	40M\$	40m	SJ	60	45	6.0	20n	20n	100	150m	70	†Δ		PE	T039		
41#	BC302-6	850m	40M\$	40m	SJ	60	45	6.0	20n	20n	100	150m	120	†Δ		PE	T039		
42	2N2849-1	850m	30k\$Δ	66m	SS	100	80	5.0	3.0	100n	1.00	1.0	100	†Δ#		PE	T05	A	
43	2N2850-1†	850m	30k\$Δ	66m	SS	100	80	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	T26	Ø	
44	2N2851-1†	850m	30k\$Δ	66m	SS	100	80	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	T05	Ø	
45	2N2852-1†	850m	30k\$Δ	66m	SS	100	80	5.0	3.0	100n	1.00	1.0	20	†Δ#		PE	T05	Ø	
46	2N2853-1†	850m	30k\$Δ	66m	SS	60	40	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	T05	Ø	
47	2N2854-1	850m	30k\$Δ	66m	SS	60	40	5.0	3.0	100n	1.00	1.0	100	†Δ#		PE	T05	Ø	
48	2N2855-1†	850m	30k\$Δ	66m	SS	60	40	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	T05	Ø	
49	2N2856-1†	850m	30k\$Δ	66m	SS	60	40	5.0	3.0	100n	1.00	1.0	20	†Δ#		PE	T05	Ø	
50	2N2849†	850m	30M\$Δ	5.0m	SS	100	80	5.0	3.0	100n	1.00	1.0	100	†Δ#		PE	R61	Ø	
51	2N2850†	850m	30M\$Δ	5.0m	SS	100	80	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	R61	Ø	
52	2N2851†	850m	30M\$Δ	5.0m	SS	100	80	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	R61	Ø	
53	2N2852†	850m	30M\$Δ	5.0m	SS	100	80	5.0	3.0	100n	1.00	1.0	20	†Δ#		PE	R61	Ø	
54	2N2853†	850m	30M\$Δ	5.0m	SS	60	40	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	R61	Ø	
55	2N2854†	850m	30M\$Δ	5.0m	SS	60	40	5.0	3.0	100n	1.00	1.0	100	†Δ#		PE	R61	Ø	
56	2N2855†	850m	30M\$Δ	5.0m	SS	60	40	5.0	3.0	100n	1.00	1.0	40	†Δ#		PE	R61	Ø	
57	2N2856†	850m	30M\$Δ	5.0m	SS	60	40	5.0	3.0	100n	1.00	1.0	20	†Δ#		PE	R61	Ø	
58	UPT011†	850m	40M\$	40m	SJ	200	150	* 5.0	500m	10u*	5.00	100m	30	†Δ#		PL	T05	A	
59	UPT012†	850m	40M\$	40m	SJ	250	200	* 5.0	500m	10u*	5.00	100m	30	†Δ#		PL	T05	A	
60	UPT013†	850m	40M\$	40m	SJ	300	250	* 5.0	500m	10u*	5.00	100m	30	†Δ#		PL	T05	A	
61	UPT014†	850m	40M\$	40m	SJ	350	300	* 5.0	500m	10u*	5.00	100m	30	†Δ#		PL	T05	A	
62	UPT015†	850m	40M\$	40m	SJ	400	350	* 5.0	500m	10u*	5.00	100m	30	†Δ#		PL	T05	A	
63	2849-1	850m	50M\$	5.0m	SA	100	80	5.0	3	10u	1.00	50m	90	†		PL	T05	Ø	
64	2849-2	850m	50M\$	5.0m	SA	100	80	5.0	3	10u	1.00	50m	90	†		PL	T26	Ø	
65	2849-3	850m	50M\$	5.0m	SA	100	80	5.0	3	10u	1.00	50m	90	†		PL	T32	Ø	
66	UPT111†	850m	50M\$	40m	SJ	60	40	* 5.0	1.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
67	UPT112†	850m	50M\$	40m	SJ	80	60	* 5.0	1.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
68	UPT113†	850m	50M\$	40m	SJ	100	80	* 5.0	1.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
69	UPT114†	850m	50M\$	40m	SJ	120	100	* 5.0	1.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
70	UPT115†	850m	50M\$	40m	SJ	150	100	* 5.0	1.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
71	UPT211†	850m	70M\$	40m	SJ	60	40	* 5.0	2.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
72	UPT212†	850m	70M\$	40m	SJ	80	60	* 5.0	2.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
73	UPT213†	850m	70M\$	40m	SJ	100	80	* 5.0	2.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
74	UPT214†	850m	70M\$	40m	SJ	120	100	* 5.0	2.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
75	UPT215†	850m	70M\$	40m	SJ	150	100	* 5.0	2.0	10u*	5.00	500m	30	†Δ#		PL	T05	A	
76#	BFX55	850m	500M\$	4.5m	SJ	60	40	3.5	400m	50n	5.00	50m	160	†Δ		PE	T039	A	
77#	BSS45†	870m	5.0m	5.0m	SJ	85	80	6.0	5.0	500n	2.00	500m	25	†Δ#		PE	T039	A	
78#	SE8001	870m	40M\$Δ	5.0m	SJ	60	30	6.0	100m	1.0u	1.00	150m	20	†#Δ		PE	T05	Ø	
79	SE8002	870m	40M\$Δ	5.0m	SJ	80	40	5.0	100m	0.1u									

6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	1 MAX. DEVICE DISS @25°C (W)	MAX. Vp (V)	ABS MAX BVdss (V)	MAX. RATINGS @25°C		MAX. Id (A)	MAX. Ig (A)	MAX. Idss @ Vgs=0 & Vds>Vp (A)	MAX. Igss @ Vgs>Vp & Vds=0 (A)	PARAMETERS @25°C				DERATE IN		STRUCTURE	DWG #	C O A D E			
					Vds (V)	BVdss (V)					Vgs (V)	Vds (V)	Vgs (V)	Vds (V)	COMMON SOURCE					MAX. Cis (F)	MAX. AIR W/C	MAX TEMP (°C)
															gfs (mhos)	Yos (mhos)						
1	MEM517B	5.0Δ	10	30	25				0.5n		1.2mΔ			200 %		150S	T05	T022	DG	DM		
2	VCR3P	7.0	10	25	15				20n					900 %		150S	T022	DG	DM			
3	VC3P	7.0	10	25	15				20n					900 %		150S	T022	DG	DM			
4	2N3573	6.0m†	2.0†	30	25	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	4.0u%	6.0p#	2.0m	200S	T072	DG	DM			
5	2N3698	7.5m†	1.1	30	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	3.0u%	5.0p#	2.0m	200S	T072	DG	DM			
6	2S117	1.0m	2.5	30	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	3.0u%	9.0p#	2.0m	200S	T072	DG	DM			
7	2N3277	12.0m†	5.0†	25	25	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	2.0u%	4.5p#	2.0m	200S	T033	DG	DM			
8	2N3574	18m†	2.0†	25	25	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	10u%	4.0p#	2.0m	200S	T033	DG	DM			
9	2N3328	20m†	6.0†	20	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	10u%	4.5p#	2.0m	200S	T033	DG	DM			
10	2N3333	20m†	1.6†	20	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	15u	3.0p#	2.0m	200S	T089	PB	PV			
11	2N3334	20m†	1.6†	20	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	15u	3.0p#	2.0m	200S	T089	PB	PV			
12	2N3335	20m†	1.6†	20	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	15u	3.0p#	2.0m	200S	T089	PB	PV			
13	2N3336	20m†	1.6†	20	20	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	15u	3.0p#	2.0m	200S	T089	PB	PV			
14	2N3278	22.0m†	4.0†	25	25	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	10u	4.5p#	2.0m	200S	T033	DG	DM			
15	2N3575	4.0m†	4.0†	25	25	1.0m	1.0m	1.0m	0.0	0.0	1.0m	3.0m	20u%	6.0p#	2.0m	200S	T072	DG	DM			
16	2N3896	4.5m†	3.2	30	1.5m	50m	1.5mΔ	1.0n	0.0	0.0	20m	7.5m	1.2m	15u%	5.0p#	2.0m	200S	T072	DG	DM		
17	2SJ22	75m†	2.5	30	80Δ	1.0m	500u	700u	5.0p	0.0	20m	200m				200S	T018	DF	DG			
18	UC420	75m†	2.5	30	80Δ	1.0m	500u	700u	5.0p	0.0	20m	200m				200S	T018	DF	DG			
19	3N178	100m	5.5Δ	75	75Δ	20m	1.0m	3.0m#						900	3.5p#	666u	200S	T072	DM			
20	3N179	100m	6.0Δ	60	60Δ	20m	1.0m	3.0m#						1.0k	4.5p#	666u	200S	T072	DM			
21	3N180	100m	6.0Δ	40	40Δ	20m	1.0m	3.0m#						1.2k	5.0p#	666u	200S	T072	DM			
22	MEM556	100m	6.0†	50	50	20m	100u	1.0n	1.0n	5.0∅	20	800u	950uΔ	700 Δ	1.0m	125J	T072	DM	DM			
23	MEM556C	100m	6.0†	45	45	20m	100u	1.0n	1.0n	5.0∅	20	700u	950uΔ	700 Δ	1.0m	100J	T072	DM	DM			
24	UPA33A	100m	6.0†	30	30Δ	20m	100u	1.0n	1.0n	5.0∅	20	700u	950uΔ	700 Δ	1.0m	100J	T072	DM	DM			
25	MEM550F	112m	5.0†	30	30	25m	100u	1.0n	1.0n	10	10	500u	2.0mΔ	500 †	2.0p#	1.3m	125J	T072	PV			
26	MEM954	112m	5.0†	35	40	50m	100u	1.0n	1.0n	50∅	10	700u	1.4mΔ	100 †	1.1p†	1.1m	125J	T072	PY			
27	MEM954A	112m	5.0†	35	40	50m	100u	1.0n	1.0n	50∅	10	700u	1.4mΔ	100 †	1.1p†	1.1m	125J	T072	PY			
28	MEM954B	112m	5.0†	35	40	50m	100u	300p	100p	50∅	10	700u	1.4mΔ	100 †	1.1p†	1.1m	125J	T072	PY			
29	MEM955	112m	5.0†	35	40	50m	100u	1.0n	4.0p	50∅	10	700u	1.4mΔ	100 †	1.1p†	1.1m	125J	T072	PY			
30	MEM955A	112m	5.0†	35	40	50m	100u	1.0n	4.0p	50∅	10	700u	1.4mΔ	100 †	1.1p†	1.1m	125J	T072	PY			
31	MEM955B	112m	5.0†	35	40	50m	100u	300p	2.0p	50∅	10	700u	1.4mΔ	100 †	1.1p†	1.1m	125J	T072	PY			
32	2N3385	150m	5.0	30	30	100m	50m	3.0m%	15n	2.0∅	10	7.5m	13m†	.18kt	5.0pΔ	1.0m	200S	W2	DA			
33	3N151	182m	6.0Δ	30	30Δ	25m	100u	3.0m%	15n	2.0∅	10	500u	3.0m%	120u	1.2p#	1.2m	150S	T072	DA			
34	MEM550C	170m	6.0†	25	25	25m	100u	1.0n	4.0p	10	10	500u		400 †	4.0p†	2.2m	100J	T072	PY			
35	MEM551C	170m	6.0†	25	25	25m	100u	1.0n	1.0p	10	10	500u		400 †	4.0p†	2.2m	100J	T072	PY			
36	MEM520C	175m	6.0†	25	25	50m	100u	1.0n	3.0p	10	10	1.0m		150 Δ	4.0p†	2.3m	100J	T072	DM			
37	UC410	180m†	4.0	20	30Δ	6.0mΔ	1.0p	0.0	0.0	20	2.2m			500	8.0p	2.0m	200J	PE	DG			
38	2N3882	200m	3.0Δ	15	30	25m	100p	25m	100p	10∅	15	2.0m	2.5m%	25u%	3.0p#	2.0m	200S	T072	DF			
39	2N4342	200m	5.1†	10Δ	25Δ	5.0m	12mΔ	1.0n	0.0	0.0	10	4.0m	8.0m	75u	700 †	2.0p#	2.0m	125J	R124b	DB		
40	2N4343	200m	5.1†	10Δ	25Δ	5.0m	30mΔ	1.0n	0.0	0.0	10	4.0m	8.0m	100u	350 †	2.0p#	2.0m	125J	R124b	DB		
41	2N4360	200m	1.0†	10Δ	20Δ	5.0m	30mΔ	1.0n	0.0	0.0	10	2.0m	8.0m	100u	700 †	2.0p#	2.0m	125J	R124b	DB		
42	2N5033	200m	2.5†	10Δ	20	5.0m	3.5mΔ	1.0n	0.0	0.0	10	1.0m	5.0m	20u%	1.3kt	2.5p#	2.0m	125J	R124b	DB		
43	2N5265	200m	3.0†	15	60	20m	10m	2.0n	0.0	0.0	15	9.0m	2.7m	75u	7.0p#	1.3m	200S	T072	DH			
44	2N5266	200m	3.0†	15	60	20m	10m	1.8m	2.0n	0.0	15	1.0m	3.0m	75u	7.0p#	1.3m	200S	T072	DH			
45	2N5267	200m	3.0†	15	60	20m	10m	3.0m	2.0n	0.0	15	1.5m	3.5m	75u	7.0p#	1.3m	200S	T072	DH			
46	2N5268	200m	3.0†	15	60	20m	10m	5.0m	2.0n	0.0	15	2.0m	4.5m	75u	7.0p#	1.3m	200S	T072	DH			
47	2N5269	200m	3.0†	15	60	20m	10m	8.0m	2.0n	0.0	15	2.2m	4.5m	75u	7.0p#	1.3m	200S	T072	DH			
48	2N5270	200m	3.0†	15	60	20m	10m	14mΔ	2.0n	0.0	15	2.5m	5.0m	75u%	7.0p#	1.3m	200S	T072	DG			
49	2N5797	200m	4.0†	15	40	10m	100uΔ	3.0n	0.0	0.0	15	60m	225m†	1.0u%	5.0p#	2.0m	150S	T092	DD			
50	2N5798	200m	4.0†	15	40	10m	400uΔ	3.0n	0.0	0.0	15	100m	400m†	2.5u%	5.0p#	2.0m	150S	T092	DD			
51	2N5799	200m	4.0†	15	40	10m	1.0mΔ	3.0n	0.0	0.0	15	160m	500m†	5.0u%	5.0p#	2.0m	150S	T092	DD			
52	2N5800	200m	9.0†	15	40	10m	2.0mΔ	3.0n	0.0	0.0	15	250m	700m†	10u%	5.0p#	2.0m	150S	T092	DA			
53	BF320A	200m	8.0	15	15	10m	1.5m	2.0n	0.0	0.0	10	800u	5.0m	200u%	32p	2.0m	150S	PET	DA			
54	BF320B	200m	8.0	15	15	10m	8.5m	2.0n	0.0	0.0	10	800u	5.0m	200u%	32p	2.0m	150S	PET	DA			
55	BF320C	200m	8.0	15	15	10m	1.5m	2.0n	0.0	0.0	10	800u	5.0m	200u%	32p	2.0m	150S	PET	DA			
56	HEP803-RT	200m	4.0	40	20m	7.0m	2.0n	0.0	0.0	0.0	10	1.0k					175J	T072	DM			
57	MEM560C	200m	3.5Δ	3.5†	30	30	50m	100u	1.0n	5.0∅	10	2.0m	3.0mΔ		175 Δ	11p#	2.6m	100J	T072	DM		
58	MEM816	200m	5.0Δ	10*	30	30	50m	100u	1.0n	5.0∅	10	2.0m	3.0mΔ		300 †	5.0p#	3.3m	85J	W105	DJ		
59	MFE3003	200mΔ	4.0Δ	10*	15	20	30m	100p	1.0n	100p	0.0	1.0m	3.0m	75u%	5.0p#	1.3m	175J	T072	DR			
60	MFE4007	200m	3.0†	15Δ	40	40	20m	10m	2.0n	0.0	15	900u%	2.7m	75u%	7.0p#	1.3m	175J	T072	DR			
61	MFE4008	200m	3.0†	15Δ	40	40	20m	10m	1.8m	2.0n	0.0	15	1.0m	3.0m	75u%	7.0p#	1.3m	175J	T072	DR		
62	MFE4009	200m	6.0†	15Δ	40	40	20m	10m	3.0m	2.0n	0.0											

6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	1 MAX. DEVICE DISS @25°C (W)	MAX. ABS MAX RATINGS @25°C				MAX. TEST COND				PARAMETERS @25°C				DERATE				STRUCTURE	DWG # Y200 s/a TO200 Ser.	# C O A D E	
			MAX. Vp		BVdss BVgss		Id @ Vds > 0 & Vgs = 0		Icss @ Vgs > Vp & Vds = 0		COMMON SOURCE		r(DS) on		MAX. IN FREE AIR W/TEMP							
			Id=0 (V)	& Vds (V)	(V)	(V)	Id (A)	Ig (A)	Vgs > 0 & Vds = 0 (A)	Vgs > Vp & Vds = 0 (A)	Vgs (V)	Vds (V)	MIN gfs (mhos)	MAX gfs (mhos)	Yos (mhos)	on (Ω)	MAX. Cis (F)	FREE AIR W/TEMP (°C)				
1	2N3578	300m	4.0	5.0			50m	50m	4.5m	0.0	5.0	1.2m	3.5m	100u%	65p#	2.0m	200S	#	T018	DA		
2	2N3909	300m	8.0	10Δ	20	20	10m	10m	15m	10n	0.0	1.0m	5.0m	100u%	32p#	2.0m	200S	#	T072	DG		
3	2N3909A	300m	8.0	10	20	20	10m	10m	15m	10n	0.0	2.2m	5.0m	100u	9p#	2.0m	200S	#	T072	DG		
4	2N3993	300m		Δ	25	25	10m	10m	10m	1.2n	0.0	6.0m	12m		16p#	2.0m	200S	#	T072	DG		
5	2N3993A	300m		Δ	25	9.5	10m	10m	10mΔ		0.0	7.0m	12m		12p#	2.0m	200S	#	T072	DG		
6	2N3994	300m		Δ	25	25	10m	10m	2.0m		0.0	4.0m	12m		16p#	2.0m	200S	#	T072	DG		
7	2N3994A	300m		Δ	25	5.5	10m	10m	2.0mΔ	1.2n	0.0	5.0m	10m		12p#	2.0m	200S	#	T072	DG		
8	2N4090	300m	3.0†	10Δ	30	20	10m	10m	2.5m	1.0n	10	.50m	.90m	20u	10p#	1.7m	200C	#	T072	DH		
9	2N4352†	300m	5.0Δ	10*	30	30	30m	10m	1.0n	10p	10			600	5.0p#	1.7m	200S	#	T072	DR		
10	2N4381	300m	5.0†	15Δ	25	25			12m	1.0n	0.0	15	2.0m	6.0m	75u%	.70k%	20p#	2.0m	175J	DG		
11	2N4382	300m	9.0†	15Δ	25	25			30m	1.0n	0.0	15	4.0m	8.0m	100u%	.35k%	20p#	2.0m	175J	DG		
12	2N5020	300m	1.5†	15Δ	25	25	50m	1.2m	1.0n	0.0	15	1.0m	3.5m	20u	1.0k†	25p#	2.0m	175J	#	T018	DA	
13	2N5021	300m	2.5†	15Δ	25	25	50m	3.5m	1.0n	0.0	15	1.5m	5.0m	20u	1.3k†	25p#	2.0m	175J	#	T018	DA	
14	2N5471	300m	4.0†	15	40	40			.06mΔ	.50n	0.0	15	.06m	.18m†	1.0u*	5p#	2.0m	200S	#	T072	DG	
15	2N5472	300m	4.0†	15	40	40			120uΔ	.50p	0.0	15	.90u	225u†	1.0u*	5.0p#	2.0m	200S	#	T072	DG	
16	2N5473	300m	6.0†	15	40	40			.25mΔ	.50n	0.0	15	.12m	.30m†	2.5u*	5p#	2.0m	200S	#	T072	DG	
17	2N5474	300m	7.0†	15	40	40			.5mΔ	.50n	0.0	15	.16m	.40m†	2.5u*	5p#	2.0m	200S	#	T072	DG	
18	2N5475	300m	8.0†	15	40	40			1mΔ	.50n	0.0	15	.20m	.50m†	5.0u*	5p#	2.0m	200S	#	T072	DG	
19	2N5476	300m	9.0†	15	40	40			2mΔ	.50n	0.0	15	.26m	.65m†	10u*	5p#	2.0m	200S	#	T072	DG	
20	3N890	300m	4.0	5.0	30	30	50m	2.5m	5.0n	0.0	5.0	.45m	1.3m		.90p#	2.0m	175J	#	T072	DU		
21	3N155†	300m	3.2Δ	10*	35	50	30m	1.0n	1.0n	0.0				600 †	5.0p#	2.0m	175J	#	T072	DR		
22	3N155A†	300m	3.2Δ	10*	35	50	30m	250p	1.0n	0.0				400 †	5.0p#	2.0m	175J	#	T072	DR		
23	3N156†	300m	5.0Δ	10*	35	50	30m	1.0n	1.0n	0.0				600 †	5.0p#	2.0m	175J	#	T072	DR		
24	3N156A†	300m	5.0Δ	10*	35	50	30m	250p	1.0n	0.0				400 †	5.0p#	2.0m	175J	#	T072	DR		
25	3N157	300m	3.2Δ	15*	35	50	30m	1.0n	10p	2.0	15	1.0m	4.0m	60u%	5.0p#	2.0m	175J	#	T072	DR		
26	3N157A	300m	3.2Δ	15*	35	50	30m	250p	10p	2.0	15	1.0m	4.0m	60u%	5.0p#	2.0m	175J	#	T072	DR		
27	3N158	300m	5.0Δ	15*	35	50	30m	1.0n	10p	2.0	15	1.0m	4.0m	60u%	5.0p#	2.0m	175J	#	T072	DR		
28	3N158A	300m	5.0Δ	15*	35	50	30m	250p	10p	2.0	15	1.0m	4.0m	60u%	5.0p#	2.0m	175J	#	T072	DR		
29	3N165▽	300m	5.0Δ	15*	40	50	50m	30m	10p	10	15	1.5m	3.0m	300u	300	3.0p#	2.4m	200S	#	T099	PJ	
30	3N166†	300m	5.0Δ	15*	40	50	50m	30m	10p	10	15	1.5m	3.0u	300u	300	3.0p#	2.4m	200S	#	T099	PJ	
31	3N181†	300m	4.0Δ	10*	30	30Δ	100m	100u	500p					40	25p#	2.4m	200S	#	T072	DM		
32	3N182†	300m	5.0Δ	10*	30	30Δ	100m	100u	2.5n					60	25p#	2.4m	200S	#	T072	DM		
33	3N183†	300m	6.0Δ	10*	25	25Δ	100m	100u	10n					75	30p#	2.4m	200S	#	T072	DM		
34	3N184†	300m	3.0Δ	10*	35	35Δ	50m	1.0m	20m#					150	9.0p#	2.4m	200S	#	T072	DM		
35	3N185†	300m	3.0Δ	10*	30	30Δ	50m	1.0m	15m#					175	10p#	2.4m	200S	#	T072	DM		
36	3N186†	300m	3.5Δ	10*	25	25Δ	50m	1.0m	10m#					200	11p#	2.4m	200S	#	T072	DM		
37	3N188▽	300m	5.0Δ	15*	40	40Δ	50m	1.0m	200p		10	15	1.5m	4.0m	300u%	300	4.5p#	2.4m	200S	#	T099	PJ
38	3N189▽	300m	5.0Δ	15*	40	40Δ	50m	1.0m	200p		10	15	1.5m	4.0m	300u%	300	4.5p#	2.4m	200S	#	T099	PJ
39	3N190▽	300m	5.0Δ	15*	40	40Δ	50m	1.0m	200p	10p	10	15	1.5m	4.0m	300u%	300	4.5p#	2.4m	200S	#	T099	PJ
40	3N191*	300m	5.0Δ	15*	40	40Δ	50m	1.0m	200p	10p	10	15	1.5m	4.0m	300u%	300	4.5p#	2.4m	200S	#	T099	PJ
41	3N207	300m	6.0Δ	15*	25	25	100m	10m	10n	4.0p	10	15	1.5m	4.0m	400	4.0p#	2.0m	200S	#	T076	PJ	
42	3N208	300m	6.0Δ	15*	25	25Δ	100m	10m	10n		10	15	1.5m	4.0m	400	4.0p#	2.0m	200S	#	T076	PJ	
43	3N218†	300m	3.5Δ	10*	25	25Δ	700m	1.0m	20n					20	50p#	2.4m	175S	#	T072	DM		
44	FT3909	300m	8.0†	10	20	20	10m	10m	15m	10n	0.0	10	1.0m	5.0m	100u	32p#	2.0m	125J	#	T018	DA	
45	MEM560	300m	3.0Δ	3.0*	35	35	50m	100u	5.0n	500p	5.0	10	2.0m	3.5mΔ	100	9.0p#	3.0m	125J	#	T072	DM	
46	MEM575	300m	3.5Δ	*	25	25	300m	1.0m	20n	2.0n	5.0	10	10m	13	50p	2.4m	150J	#	T072	DM		
47	MEM806	300m	5.5†	5.5*	40	40			1.0n	3.0p	10	20	2.0m	300	2.0p†	2.4m	150A	#	T072	DM		
48	MEM806A	300m	5.5†	5.5*	40	40			100p	1.0p	10	20	2.0m	300	2.0p†	2.4m	150A	#	T072	DM		
49	MEM807	300m	5.5†	5.5*	40	40			1.0n	200p	10	20	2.0m	300	2.0p†	2.4m	150A	#	T072	DM		
50	MEM807A	300m	5.5†	5.5*	40	40			100p	50p	10	20	2.0m	300	2.0p†	2.4m	150A	#	T072	DM		
51	MEM814	300m	3.0Δ	3.0*	35	35	50m	100u	5.0n	500p	5.0	10	2.0m	80	7.0p#	3.0m	125J	#	T072	DM		
52	MFE823	300m	6.0†	*	25	10	30m	20n	1.0p	2.0	10	1.0m		60p#	1.7m	200J	#	T018	EP			
53	P1069E	300m	4.0†	10	20	20Δ			5.0m	3.0n	0.0	10	3.0m	8.0m	100u%	600	40p#	2.5m	125J	#	R97b	DB
54	P1086E†	300m	10†	15	30	30	10m	10m	2.0n	0.0	10	3.0m	8.0m	100u%	75	45p#	2.5m	125J	#	R97b	DB	
55	P1087E†	300m	5.0†	15	30	30	10m	10m	5.0m	2.0n	0.0	10	3.0m	8.0m	100u%	150	45p#	2.5m	125J	#	R97b	DB
56	P1117E	300m	4.0†	5.0	25	25	100m	10m	10mΔ	1.0n	0.0	10	3.5m	350	35p	1.7m	200S	#	T0106	DC		
57	P1118E	300m	4.0†	5.0	25	25	100m	10m	5.0mΔ	1.0n	0.0	10	2.5m	700	35p	1.7m	200S	#	T0106	DC		
58	P1119E	300m	4.0†	5.0	15	15	100m	10m	10mΔ	1.0n	0.0	10	1.5m	1.0k	35p	1.7m	200S	#	T0106	DC		
59	TP5114	300m	10†	15	30	30	100m	10m	90mΔ	2.0n	0.0	10	1.4m	75	45p	1.7m	200S	#	T018	DA		
60	TP5115	300m	6.0†	15	30	30	100m	10m	60mΔ	2.0n	0.0	10	1.4m	100	45p	1.7m	200S	#	T018	DA		
61	TP5116	300m	4.0†	15	30	30	100m	10m	25mΔ	2.0n	0.0	10	1.4m	150	45p	1.7m	200S	#	T018	DA		
62	U110	300m	6.0	10	20	20	30m	30m	1.0m	4.0n	0.0	10	110u	60p#	2.0m	150S	#	T018	DA			
63	U112	300m	6.0	10	20	20	30m	30m	9.0m	10n	0.0	10	1.0m	17p#	2.0m	150S	#	T018	DA			
64	U133	300m	4.0	5.0	50	50	50m	1.5m	3.0n	0.0	5.0	.33m	.53mΔ	10p#	2.0m	175A	#	T018	DA			
65	U146	300m	6.0	10	20	20	30m	25p#	10n	0.0	10	60u		60p#	2.0m	150S	#	T018	DA			
66	U147	300m	6.0	10	20	20	30m	65u#	20n	0.0	10	180u		10p#	2.0m	150S	#	T018	DA			
67	U148	300m	6.0	10	20	20	30m	200u#	60n	0.0	10	540u		17p#	2.0m	150S	#	T018	DA			
68	U149	300m	6.0	10	20	20	30m	440u#	200n	0.0	10	1.4m		30p#	2.0m	150S	#	T018	DA			
69	U168	300m	5.0	10	20	20	50m	6.0mΔ	30n	0.0	5.0	80m		65p#	2.0m</							

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX. DEVICE DISS @ 25°C (W)	MAX. Vp (V)	ABS MAX BVdss (V)	MAX. RATINGS @ 25°C		MAX. Id (A)	MAX. Ig (A)	MAX. Vgs=0 (V)	MAX. Vgs>Vp (V)	TEST COND		PARAMETERS			DERATE		STRUC-TURE	DWG #	C O A D E
					Vd	Vgss					Vgs	Vds	COMMON SOURCE		MAX. Cis (F)	FREE AIR W/C	MAX TEMP (°C)			
													MIN	MAX						
1	2N3796	200m	4.0t	10	25	10	20m	3.0m	1.0p	0.0	10	1.5m	1.8m	25u	50k%	7.0p#	1.1m	200S	TO18	DA
2	2N3797	200m	7.0t	10	20	10	20m	6.0m	1.0p	0.0	10	1.5m	3.0m	60u	200%	8.0p#	1.1m	200S	TO18	DA
3	2N5163	200m	8.0t	15	25	25	50m	4.0m	1.0n	0.0	15	2.0m	9.0m	200u	50k%	2.0p#	2.0m	125J	TO106	DB
4	2N5716	200m	3.0t	15	40	40Δ		25.0mΔ	1.0n	0.0	15	2.0m	1.0m	25u		5.0p#	2.0m	150S	TO92	DD
5	2N5717	200m	5.0t	15	40	40Δ		1.0mΔ	1.0n	0.0	15	400u	1.6m	25u		5.0p#	2.0m	150S	TO92	DD
6	2N5718	200m	8.0t	15	40	40Δ		4.0mΔ	1.0n	0.0	15	500u	2.0m	25u		5.0p#	2.0m	150S	TO92	DD
7#	2SK18	200m	3.5	10	4.0	4.0Δ	10m	2.8m	100p	0.0	10	800u	3.0m			6.0p	600u	150J		
8#	2SK18A	200m	3.5	10	4.0	4.0Δ	10m	2.8m	100p	0.0	10	800u	3.0m			6.0p	600u	150J		
9#	2SK19	200m	3.0%	10	18		10m	2.4mΔ	1.0n	0.0	10	7.0mΔ					2.0m	125J		
10#	2SK35	200m	1.6	10	20	20Δ	20m	18m	1.0n	0.0	10	6.3m	15m	200u		15p	3.3m	150S	X153	DA
11#	2SK61	200m	4.0	10	18	18Δ	10m	10m	1.0n	0.0	10	9.0mΔ					1.6m	150J		
12#	2SK72	200m	5.0t	10	20	20Δ	10m	6.5m	100p	0.0	10	1.5	6.5				1.6m	150J	PEΔ	TO71
13#	3SK22	200m	5.5	10	18	18Δ	10m	24m	100n	0.0	10	7.0mΔ	12m			4.5p#	1.8m	150J	Δ	TO72
14#	3SK28	200m	5.0	10	15	15Δ	10m	22m	20n	0.0	10	6.0m				6.0p#	1.6m	150J	Δ	DW
15#	3SK38A	200m	3.0	6.0	12	12	10m	50n	25n	0.0	10							125J		
16#	BF327	200m	3.8	10	20	20	100m	55m	10n	4.0	10	12%	16Δ			5.0p*	2.6m	150J	*	W120
17#	BF961	200m	4.0t	15	20	30Δ	30m	25m	100n	4.0	15	12				3.7p	1.8m	150S	*	
18#	BF929	200m	4.0t	15	20	30Δ	20m	40m	10p	5.0	15	6.0m				5.0p	2.0m	125J	*	TO72
19#	BFR30	200m	5.0t	10	25	25	10m	10m	200p	1.0	10	1.0m	4.0m	40u		4.0p	1.8m	150J	PE#	X156
20#	BFR31	200m	2.5t	10	25	25	10m	5.0m	200p	1.0	10	1.5m	4.5m	25u		4.0p	1.6m	150J	PE#	X156
21#	BFS28	200m	5.0Δ	20	20	8.0	20m		1.0n	4.0	13	8.0m	13mΔ				1.8m	135S	*	TO72
22#	BFV96	200m	4.5	20	30	30	50m	30m			20	1.3m	2.5mΔ			5.0p	2.5m	125J	*	TO72
23#	BSV81	200m					50m		10p								2.0m	125S	Δ	DW
24#	C82A	200m	5.0	50			10m						.03m	.20m	.20u	100†	10p*	150J	Δ	R179
25#	C82B	200m	10	50			10m						.03m	.20m	.40u		10p*	150J	Δ	R179
26#	C83A	200m	10	50			10m						.03m	.20m	.40u		10p*	150J	Δ	R179
27#	C83B	200m	15	50			10m						.03m	.20m	.40u		10p*	150J	Δ	R179
28#	C97E	200m	3.0	10	50	50		11m	50p	0.0	10	3.0m	9.0m			6.0p**	1.3m	150S	#	TO92
29#	C98E	200m	4.0	10	50	50		13m	50p	0.0	10	3.5m	8.5m			6.0p**	1.3m	150S	#	TO92
30	C681	200m	2.5	10	30Δ	30Δ	50m	4.0m	10nΔ	0.0	10	2.0m	5.0m	10u		3p†	1.1m	200J	E#	TO18
31	C681A	200m	2.5	10	30Δ	30Δ	50m	4.0m	1.0nΔ	0.0	10	2.0m	5.0m	10u		3p†	1.1m	200J	E#	TO18
32	C683	200m	5.0	10	30Δ	30Δ	50m	1.6m	1.0nΔ	0.0	10	4.0m	1.0m	20u		3p†	1.1m	200J	E#	TO18
33	C683A	200m	5.0	10	30Δ	30Δ	50m	1.6m	1.0nΔ	0.0	10	4.0m	1.0m	20u		3p†	1.1m	200J	E#	TO18
34	C685	200m	10	10	30Δ	30Δ	50m	6.0m	1.0nΔ	0.0	10	6.0m	1.5m	60u		3p†	1.1m	200J	E#	TO18
35	C685A	200m	10	10	30Δ	30Δ	50m	6.0m	1.0nΔ	0.0	10	6.0m	1.5m	60u		3p†	1.1m	200J	E#	TO18
36	HEP801-RT	200m					15m	9.0m	1.0n	0.0	10	3.0m						125J		TO72
37	HEP802-RT	200m					10m	2.0m	1.0n	0.0	10	2.0m						125J		TO92
38	IT108	200m	6.0	15	25	25	10m	25m	1.0n	0.0	15	4.0m	8.0m	100u		5.0p#	2.0m	125S	PE#	R97a
39	ITE3066	200m	1.0	30	45Δ	45Δ	100m	4.0m	1.0n	0.0	30	300u				10p#	2.0m	125J	PE#	TO106
40	ITE3067	200m	5.0	30	45Δ	45Δ	100m	4.0m	1.0n	0.0	30	250u				10p#	2.0m	125J	PE#	TO106
41	ITE3068	200m	2.5	30	45Δ	45Δ	100m	250u	1.0n	0.0	30	150u				10p#	2.0m	125J	PE#	TO106
42	ITE4117	200m	1.8t	10	40	40	50m	90u	25p	0.0	10	60u				3.0p#	2.0m	125J	PE#	TO106
43	ITE4118	200m	3.0t	10	40	40	50m	240u	25p	0.0	10	70u				3.0p#	2.0m	125J	PE#	TO106
44	ITE4119	200m	6.0t	10	40	40	50m	1.0m	25p	0.0	10	90u				3.0p#	2.0m	125J	PE#	TO106
45	ITE4338	200m	1.5t	15	40	40	50m	600u	500p	0.0	15	500u				7.0p#	2.0m	125J	PE#	TO106
46	ITE4339	200m	2.5t	15	40	40	50m	1.5m	500p	0.0	15	700u				7.0p#	2.0m	125J	PE#	TO106
47	ITE4340	200m	3.5t	15	40	40	50m	3.6m	500p	0.0	15	1.0m†				1.7k†	7.0p#	2.0m	125J	PE#
48	ITE4341	200m	7.0t	15	40	40	50m	9.0m	500p	0.0	15	1.5m†				1.5k†	7.0p#	2.0m	125J	PE#
49	ITE4416	200m	7.0t	15	25	25	10m	2.0m	200p	0.0	15	3.5m	8.0m†	100u		5.0p#	2.0m	125J	PE#	TO106
50	ITE4867	200m	2.0t	20	35	35	10m	1.2m	1.0n	0.0	20	700u	3.0u			25p#	2.0m	125J	PE#	TO106
51	ITE4868	200m	3.0t	20	35	35	10m	3.0m	1.0n	0.0	20	1.0m	6.0u			25p#	2.0m	125J	PE#	TO106
52	ITE4869	200m	5.0t	20	35	35	10m	7.5m	1.0n	0.0	20	1.0m	1.0u			25p#	2.0m	125J	PE#	TO106
53#	KP350A	200m	15t	15	15	15	30m	3.5m	5.0n	6.0	10	6.0m				6.0p	85A	\$	R176g	
54#	KP350B	200m	15t	15	15	15	30m	3.5m	5.0n	6.0	10	6.0m				6.0p	85A	\$	R176g	
55#	KP350V	200m	15t	15	15	15	30m	8.0m	5.0n	6.0	10	6.0m				6.0p	85A	\$	R176g	
56#	MEF103	200m	60t	15	40	40	30m	4.5m	100p	0.0	15		1.5m			8.0p	2.0m	125J	Δ	TO106
57#	MEF104	200m	70t	15	50	50	30m	20m	100p	0.0	15		2.0m			8.0p	2.0m	125J	Δ	TO106
58	MEM712†	200m	2.0Δ	*	25	30		10n	1.0n	2.0	10	2.0m				6.0p	3.3m	85J	*	W105
59	MEM712A†	200m	2.0Δ	*	30	30		10n	1.0n	2.0	10	2.0m				6.0p	3.3m	85J	*	W105
60	MFE3001	200m	8.0t	10	20	20	20m	5.0m	10p	0.0	10	700u	3.5m	100u		5.0p	1.1m	200J	*	TO72
61	MFE3002	200m	3.0Δ	10*	15	20	30m	1.0m	100p	0.0	10					5.0p#	1.4m	175J	Δ	TO72
62	MPF102	200m	8.0t	15	25	25	10m	2.0m	4.2n	0.0	15	2.0m	7.5			7.0p#	2.0m	125J	#	TO92
63	MPF103	200m	6.0t	15	25	25	10m	5.0m	1.0n	0.0	15	1.0m	5.0m	50u		7.0p	2.0m	125J	#	TO92
64	MPF104	200m	7.0t	15	25	25	16m	9.0m	1.0n	0.0	15	1.5m	5.5m	50u		7.0p	2			

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	1 MAX. DEVICE DISS @ 25°C (W)	MAX. Vp (V)	MAX. Vds (V)	ABS MAX BVdss (V)	MAX. RATINGS @ 25°C				MAX. Idss @ Vgs=0 & Vds>Vp (A)	MAX. Iqss @ Vgs>Vp & Vds=0 (A)	PARAMETERS @ 25°C				TEST COND Vgs (V)	COND Vds (V)	COMMON SOURCE		r(DS) on (Ω)	MAX Cis (F)	DERATE IN FREE AIR W/C	MAX TEMP (°C)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG #	C O A D E
						Id (A)	Ig (A)	Ic (A)	Ie (A)			gfs (mhos)	Yos (mhos)	MIN	MAX												
						(A)	(A)	(A)	(A)			(mhos)	(mhos)														
1	2N3824	300m	5.0	20	50	50	10m	10m	10m	10m	100p	0.0	20	1.6m	2.4m	35u	6.0p#	2.0m	200S	∅	TO72	DH					
2	2N3966†	300m	5.0	20	30	30	10m	10m	10m	10m	100p	0.0	20	1.6m	2.4m	35u	6.0p#	1.7m	200S	∅	TO72	DH					
3	2N3967	300m	5.0	20	30	30	10m	10m	10m	10m	100p	0.0	20	1.6m	2.4m	35u	5.0p#	1.7m	200S	∅	TO72	DH					
4	2N3967A	300m	5.0	20	30	30	10m	10m	10m	10m	100p	0.0	20	1.6m	2.4m	35u	5.0p#	1.7m	200S	∅	TO72	DH					
5	2N3968	300m	3.0	20	30	30	10m	10m	10m	10m	100p	0.0	20	1.4m	2.0m	15u	5.0p#	1.7m	200S	∅	TO72	DH					
6	2N3968A	300m	3.0	20	30	30	10m	10m	10m	10m	100p	0.0	20	1.4m	2.0m	15u	5.0p#	1.7m	200S	∅	TO72	DH					
7	2N3969	300m	1.7	20	30	30	10m	10m	10m	10m	100p	0.0	20	95m	1.4m	5.0u	5.0p#	1.7m	200S	∅	TO72	DH					
8	2N3969A	300m	1.7	20	30	30	10m	10m	10m	10m	100p	0.0	20	95m	1.4m	5.0u	5.0p#	1.7m	200S	∅	TO72	DH					
9	2N4117	300m	1.8	20	40	40	50m	50m	50m	50m	0.9m	0.1n	0.0	10	70m	210m	3.0u	3.0p#	2.0m	175S	∅	TO72	DH				
10	2N4117A	300m	1.8	20	40	40	50m	50m	50m	50m	0.9m	0.1n	0.0	10	70m	210m	3.0u	3.0p#	2.0m	175S	∅	TO72	DH				
11	2N4118	300m	3.0	20	40	40	50m	50m	50m	50m	2.4m	0.1n	0.0	10	80m	250m	5.0u	3.0p#	2.0m	175S	∅	TO72	DH				
12	2N4118A	300m	3.0	20	40	40	50m	50m	50m	50m	2.4m	0.1n	0.0	10	80m	250m	5.0u	3.0p#	2.0m	175S	∅	TO72	DH				
13	2N4119	300m	6.0	20	40	40	50m	50m	50m	50m	60m	1.0p	0.0	10	100m	330m	10u	3.0p#	2.0m	175S	∅	TO72	DH				
14	2N4119A	300m	6.0	20	40	40	50m	50m	50m	50m	60m	1.0p	0.0	10	100m	330m	10u	3.0p#	2.0m	175S	∅	TO72	DH				
15	2N4139	300m	8.0	20	40	50	50m	50m	50m	50m	11m	1.0p	0.0	20	3.5m	0.0	35u	6.0p#	2.0m	200S	∅	TO72	DJ				
16	2N4220	300m	4.0	15	30	30	15m	10m	10m	10m	3.0m	100p	0.0	15	1.0m	4.0m	10u	6.0p#	2.0m	200S	∅	TO72	DJ				
17	2N4220A	300m	4.0	15	30	30	15m	10m	10m	10m	3.0m	100p	0.0	15	1.0m	4.0m	10u	6.0p#	2.0m	200S	∅	TO72	DJ				
18	2N4221	300m	6.0	15	30	30	15m	10m	10m	10m	6.0m	100p	0.0	15	2.0m	5.0m	20u	6.0p#	2.0m	200S	∅	TO72	DJ				
19	2N4221A	300m	6.0	15	30	30	15m	10m	10m	10m	6.0m	100p	0.0	15	2.0m	5.0m	20u	6.0p#	2.0m	200S	∅	TO72	DJ				
20	2N4222	300m	8.0	15	30	30	15m	10m	10m	10m	15m	100p	0.0	15	2.5m	6.0m	40u	6.0p#	2.0m	200S	∅	TO72	DJ				
21	2N4222A	300m	8.0	15	30	30	15m	10m	10m	10m	15m	100p	0.0	15	2.5m	6.0m	40u	6.0p#	2.0m	200S	∅	TO72	DJ				
22	2N4223	300m	8.0	15	30	30	20m	10m	10m	10m	18m	25n	0.0	15	3.0m	7.0m	7.5m	6.0p#	2.0m	175J	∅	TO72	DJ				
23	2N4224	300m	8.0	15	30	30	20m	10m	10m	10m	20m	25n	0.0	15	2.0m	7.5m	7.5m	6.0p#	2.0m	175J	∅	TO72	DJ				
24	2N4302	300m	4.0	20	30	20	10m	10m	10m	10m	5.0m	1.0n	0.0	20	2.0m	1.0m	50u	6.0p#	2.5m	125S	∅	R97B	DB				
25	2N4303	300m	6.0	20	30	20	10m	10m	10m	10m	1.0m	1.0n	0.0	20	2.0m	1.0m	50u	6.0p#	2.5m	125S	∅	R97B	DB				
26	2N4304	300m	1.0	20	30	20	10m	10m	10m	10m	1.5m	1.0n	0.0	20	1.0m	1.0m	50u	6.0p#	2.5m	125S	∅	R97B	DB				
27	2N4338	300m	1.0	15	50	50	50m	50m	50m	50m	60m	1.0n	0.0	15	60m	1.8m	50u	7.0p#	1.0m	200S	∅	TO18	DB				
28	2N4339	300m	1.8	15	50	50	50m	50m	50m	50m	1.5m	1.0n	0.0	15	80m	2.4m	15u	7.0p#	2.0m	200S	∅	TO18	DB				
29	2N4340	300m	3.0	15	50	50	50m	50m	50m	50m	3.6m	1.0n	0.0	15	1.3m	3.0m	30u	7.0p#	2.0m	200S	∅	TO18	DB				
30	2N4341	300m	6.0	15	50	50	50m	50m	50m	50m	9.0m	1.0n	0.0	15	2.0m	4.0m	60u	7.0p#	2.0m	200S	∅	TO18	DB				
31	2N4351†	300m	5.0	10	30	30	30m	10m	10m	10m	1.0p	1.0p	0.0	15	4.5m	7.5m	50u	4.0p#	1.7m	200S	∅	TO72	DH				
32	2N4416	300m	6.0	15	30	30	10m	10m	10m	10m	15m	100p	0.0	15	4.5m	7.5m	50u	4.0p#	1.7m	200S	∅	TO72	DH				
33	2N4416A	300m	6.0	15	30	30	10m	10m	10m	10m	15m	100p	0.0	15	4.5m	7.5m	50u	4.0p#	1.7m	200S	∅	TO72	DH				
34	JAN2N4416A	300m	6.0	15	30	30	10m	10m	10m	10m	15m	100p	0.0	15	4.5m	7.5m	50u	4.0p#	1.7m	200S	∅	TO72	DH				
35	2N4867	300m	2.0	20	40	40	50m	50m	50m	50m	1.2m	25n	0.0	20	7.0m	2.0m	1.5u	25p#	1.7m	175S	∅	TO72	DH				
36	2N4867A	300m	2.0	20	40	40	50m	50m	50m	50m	1.2m	25n	0.0	20	7.0m	2.0m	1.5u	25p#	1.7m	175S	∅	TO72	DH				
37	2N4868	300m	3.0	20	40	40	50m	50m	50m	50m	3.0m	25n	0.0	20	1.0m	3.0m	4.0u	25p#	1.7m	175S	∅	TO72	DH				
38	2N4868A	300m	3.0	20	40	40	50m	50m	50m	50m	3.0m	25n	0.0	20	1.0m	3.0m	4.0u	25p#	1.7m	175S	∅	TO72	DH				
39	2N4869	300m	5.0	20	40	40	50m	50m	50m	50m	7.5m	25n	0.0	20	1.3m	4.0m	10u	25p#	1.7m	175S	∅	TO72	DH				
40	2N4869A	300m	5.0	20	40	40	50m	50m	50m	50m	7.5m	25n	0.0	20	1.3m	4.0m	10u	25p#	1.7m	175S	∅	TO72	DH				
41	2N5078	300m	8.0	15	30	30	30m	10m	10m	10m	25m	25n	0.0	15	4.5m	10m	150u	6.0p#	1.7m	200S	∅	TO72	DG				
42	2N5103	300m	4.0	15	25	25	30m	10m	10m	10m	8.0m	100p	0.0	15	2.0m	8.0m	100u	1.0p#	1.7m	200S	∅	TO72	DH				
43	2N5104	300m	4.0	15	25	25	30m	10m	10m	10m	6.0m	100p	0.0	15	3.5m	7.5m	100u	1.0p#	1.7m	200S	∅	TO72	DH				
44	2N5105	300m	4.0	15	25	25	30m	10m	10m	10m	15m	100p	0.0	15	5.0m	10m	100u	1.0p#	1.7m	200S	∅	TO72	DH				
45	2N5358	300m	3.0	15	40	40	1.0m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	1.0m	3.0m	10u	6.0p#	2.0m	175J	∅	TO72	DJ				
46	2N5359	300m	4.0	15	40	40	1.6m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	1.2m	3.6m	10u	6.0p#	2.0m	175J	∅	TO72	DJ				
47	2N5360	300m	4.0	15	40	40	3.0m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	1.4m	4.2m	20u	6.0p#	2.0m	175J	∅	TO72	DJ				
48	2N5361	300m	6.0	15	40	40	5.0m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	1.5m	4.5m	20u	6.0p#	2.0m	175J	∅	TO72	DJ				
49	2N5362	300m	7.0	15	40	40	8.0m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	2.0m	5.5m	40u	6.0p#	2.0m	175J	∅	TO72	DJ				
50	2N5363	300m	8.0	15	40	40	14m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	2.5m	6.0m	40u	6.0p#	2.0m	175J	∅	TO72	DJ				
51	2N5364	300m	8.0	15	40	40	18m	1.0m	1.0m	1.0m	1.0m	1.0n	0.0	15	2.7m	6.5m	60u	6.0p#	2.0m	175J	∅	TO72	DJ				
52	2N5391	300m	2.0	20	70	70	10m	1.5m	2.0m	2.0m	0.0	0.0	20	1.5m	4.5m	4.0u	18p#	1.7m	200S	∅	TO18	DB					
53	2N5392	300m	2.5	20	70	70	10m	3.0m	2.0m	2.0m	0.0	0.0	20	2.0m	6.0m	7.0u	18p#	1.7m	200S	∅	TO18	DB					
54	2N5393	300m	3.0	20	70	70	10m	4.5m	2.0m	2.0m	0.0	0.0	20	3.0m	6.5m	10u	18p#	1.7m	200S	∅	TO18	DB					
55	2N5394	300m	4.0	20	70	70	10m	6.5m	2.0m	2.0m	0.0	0.0	20	4.0m	7.0m	15u	18p#	1.7m	200S	∅	TO18	DB					
56	2N5395	300m	4.0	20	70	70	10m	8.0m	2.0m	2.0m	0.0	0.0	20	4.5m	7.0m	20u	18p#	1.7m	200S	∅	TO18	DB					
57	2N5396	300m	5.0	20	70	70	10m	10m	2.0m	2.0m	0.0	0.0	20	4.5m	7.5m	25u	18p#	1.7m	200S	∅	TO18	DB					
58	2N5397	300m	6.0	10	25	25	10m	30m	1.0m	1.0m	0.0	0.0	10	6.0m	10m	200u	5p#	1.7m	200S	∅	TO72	DH					
59	2N5398	300m	6.0	10	25	25	10m	40m	1.0m	1.0m	0.0	0.0	10	5.5m	10m	400u	5.5p#	1.7m	200S	∅	TO72	DH					
60	2N5432																										

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	1 MAX. DEVICE DISS @25°C (W)	MAX. ABS MAX RATINGS@25°C				MAX. Idss @		MAX. Igss @		PARAMETERS @25°C				DERATE		STRUCTURE	DWG #	L C O A D E		
			MAX. Vp (V)	MAX. BVdss (V)	MAX. BVgss (V)	MAX. Id (A)	MAX. Ig (A)	MAX. Idss @ Vgs=0 & Vds>Vp (A)	MAX. Igss @ Vgs>Vp & Vds=0 (A)	TEST COND		COMMON SOURCE		r(DS) on (Ω)	MAX. Cis (F)	IN FREE AIR W/°C				MAX TEMP (°C)	
										Vgs (V)	Vds (V)	MIN (mhos)	MAX (mhos)								Yos (mhos)
1	MFE2095	300m	5.5t	15	50	50	3.0m	3.0m	100p	0.0	15	400u	800u	10u	1.3k	6.0p#	2.0m	175	Δ	T072	DJ
2	MFE3004	300m	5.0t	15Δ	20	30	10m	10mΔ	50p	2.0t	15	500	500	2.0t	4.5p#	2.0m	175J	*∅	T072	DW	
3	MFE3005	300m	5.0t	15Δ	20	30	10m	10mΔ	50p	2.0t	15	500	500	2.0t	4.5p#	2.0m	175J	*∅	T072	DW	
4#	MFE4302	300m	4.0	20	30	30	20m	10m	5.0m	1.0n	0.0	20	1.0m	50u%	6.0p#	2.5m	125J	#∅	T0106	DB	
5	MMF1v	300m	8.0t	15Δ	30	30	20m	10m	20m%	500u	0.0	15	3.5m†	6.5m†	35u%	6.0p#	2.0m	175J	#∅	R206	DH
6	MMF2v	300m	8.0t	15Δ	30	30	20m	10m	20m%	500u	0.0	15	3.5m†	6.5m†	35u%	6.0p#	2.0m	175J	#∅	R206	DH
7	MMF3v	300m	8.0t	15Δ	30	30	20m	10m	20m%	500u	0.0	15	3.5m†	6.5m†	35u%	6.0p#	2.0m	175J	#∅	R206	DH
8	MMF4v	300m	8.0t	15Δ	30	30	20m	10m	20m%	500u	0.0	15	3.5m†	6.5m†	35u%	6.0p#	2.0m	175J	#∅	R206	DH
9	MMF5v	300m	8.0t	15Δ	30	30	20m	10m	20m%	500u	0.0	15	3.5m†	6.5m†	35u%	6.0p#	2.0m	175J	#∅	R206	DH
10	MMF6v	300m	8.0t	15Δ	30	30	20m	10m	20m%	500u	0.0	15	3.5m†	6.5m†	35u%	6.0p#	2.0m	175J	#∅	R206	DH
11	NF500	300m	8.0t	15	25	25Δ	1.0m	1.0m	30m%	1.0n	0.0	15	4.5mΔ	†	180 †	2.5p#*	2.4m	150J	#∅	T072	DH
12	NF506	300m	5.0t	15	25	25	1.0m	1.0m	15m	1.0n	0.0	15	2.5m	7.0m	50u%	4.0p#	2.4m	150J	#∅	T072	DH
13	NF520	300m	8.0t	15	30	30Δ	1.0m	1.0m	1.0n	0.0	15	500u	2.0mΔ	†	4.0p#*	2.4m	150J	#∅	T072	DH	
14	NF521	300m	8.0t	15	30	30Δ	1.0m	2.0m	1.0n	0.0	15	400u	1.2mΔ	†	4.0p#*	2.4m	150J	#∅	T072	DH	
15	NF530	300m	8.0t	15	30	30Δ	1.0m	1.0n	8.0n	0.0	15	500u	2.0mΔ	†	4.0p#*	2.4m	150J	#∅	T018	DB∅	
16	NF531	300m	8.0t	15	30	30Δ	1.0m	2.0m	8.0n	0.0	15	400u	1.2mΔ	†	4.0p#*	2.4m	150J	#∅	T018	DB∅	
17#	NKT80421	300m	8.0	15	30Δ	30Δ	10m	12mΔ	100p	0.0	15	5.0mΔ	†	†	4.0pΔ	1.7m	200	#∅	T072	DH	
18#	NKT80422	300m	7.0	15	30Δ	30Δ	10m	10mΔ	100p	0.0	15	5.0mΔ	†	†	4.0pΔ	1.7m	200	#∅	T072	DH	
19#	NKT80423	300m	8.0	15	30Δ	30Δ	10m	12mΔ	500p	0.0	15	6.0mΔ	†	†	2.0pΔ	1.7m	200	#∅	T072	DH	
20#	NKT80424	300m	8.0	15	50Δ	50Δ	10m	12mΔ	100p	0.0	15	5.0mΔ	†	†	3.0pΔ	1.7m	200	#∅	T072	DH	
21#	SI241N	300m	1.0t	15	25	25	10m	3.0m	200p	0.0	15	2.0m	7.0m	250 %	18p#	1.7	200S	PE	T018	DB∅	
22#	SI242N	300m	1.5t	15	25	25	10m	6.0m	200p	0.0	15	3.5m	7.5m	†	18p#	1.7	200S	PE	T018	DB∅	
23#	SI243N	300m	2.5t	15	25	25	10m	15m	200p	0.0	15	5.0m	10m	†	18p#	1.7	200S	PE	T018	DB∅	
24	SU2078v	300m	4.0	10	50Δ	†	2.0m	25p	200p	0.0	10†	30m	†	5.0u	7.0p	1.7m	200J	PE	T071	PE	
25	SU2079v	300m	4.0	10	50Δ	†	2.0m	25p	200p	0.0	10†	30m	†	5.0u	7.0p	1.7m	200J	PE	T071	PE	
26	SU2080v	300m	4.0	10	50Δ	†	2.0m	25p	200p	0.0	10†	30m	†	5.0u	7.0p	1.7m	200J	PE	T071	PE	
27	SU2081v	300m	4.0	10	50Δ	†	2.0m	25p	200p	0.0	10†	30m	†	5.0u	7.0p	1.7m	200J	PE	T071	PE	
28	SU2365v	300m	3.5t	15	30	30	50m	10m	10mΔ	100p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
29	SU2366v	300m	3.5t	15	30	30	50m	10m	10mΔ	100p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
30	SU2366Av	300m	3.5t	15	30	30	50m	10m	10mΔ	50p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
31	SU2367v	300m	3.5t	15	30	30	50m	10m	10mΔ	100p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
32	SU2367Av	300m	3.5t	15	30	30	50m	10m	10mΔ	50p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
33	SU2368v	300m	3.5t	15	30	30	50m	10m	10mΔ	100p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
34	SU2368Av	300m	3.5t	15	30	30	50m	10m	10mΔ	50p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
35	SU2369v	300m	3.5t	15	30	30	50m	10m	10mΔ	100p	0.0	10	1.5m	2.0u	16p	1.7m	200S	∅	T071	PJ	
36	SU2410v	300m	3.5t	10	40	40	50m	10m	1.0mΔ	3.0p	10	0.0	250u	1.5m	3.0p	1.7m	200S	∅	T071	PJ	
37	SU2411v	300m	3.5t	10	40	40	50m	10m	1.0m	3.0p	10	0.0	250u	1.5m	3.0p#	1.7m	175S	∅	T071	PJ	
38	SU2412v	300m	3.5t	10	40	40	50m	10m	1.0m	3.0p	10	0.0	250u	1.5m	3.0p#	1.7m	125S	∅	T071	PJ	
39	TD5902v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	5.0p	0.0	10	400u	1.5m	3.0p#	1.7m	175S	∅	T071	PJ	
40	TD5902Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	5.0p	0.0	10	250u	1.0m	3.0p#	1.7m	175S	∅	T071	PJ	
41	TD5903v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	5.0p	0.0	10	400u	1.5m	3.0p#	1.7m	175S	∅	T071	PJ	
42	TD5903Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	5.0p	0.0	10	250u	1.0m	3.0p#	1.7m	175S	∅	T071	PJ	
43	TD5904v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	5.0p	0.0	10	400u	1.5m	3.0p#	1.7m	175S	∅	T071	PJ	
44	TD5904Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	5.0p	0.0	10	400u	1.5m	3.0p#	1.7m	200S	∅	T071	PJ	
45	TD5905v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	5.0p	0.0	10	250u	1.0m	3.0p#	1.7m	200S	∅	T071	PJ	
46	TD5905Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	5.0p	0.0	10	400u	1.5m	3.0p#	1.7m	200S	∅	T071	PJ	
47	TD5906v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	2.0p	0.0	10	250u	1.0m	3.0p#	1.7m	200S	∅	T071	PJ	
48	TD5906Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	2.0p	0.0	10	400u	1.5m	3.0p#	1.7m	200S	∅	T071	PJ	
49	TD5907v	300m	4.5t	10Δ	40	40	50m	10m	500uΔ	2.0p	0.0	10	70u	5.0u	3.0p#	1.7m	200S	∅	T071	PJ	
50	TD5907Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	2.0p	0.0	10	400u	1.5m	3.0p#	1.7m	200S	∅	T071	PJ	
51	TD5908v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	2.0p	0.0	10	250u	1.0m	3.0p#	1.7m	200S	∅	T071	PJ	
52	TD5908Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	2.0p	0.0	10	400u	1.5m	3.0p#	1.7m	200S	∅	T071	PJ	
53	TD5909v	300m	2.5t	10Δ	40	40	50m	10m	500uΔ	2.0p	0.0	10	250u	1.0m	3.0p#	1.7m	200S	∅	T071	PJ	
54	TD5909Av	300m	4.5t	10Δ	40	40	50m	10m	2.0mΔ	2.0p	0.0	10	400u	1.0m	3.0p#	1.7m	200S	∅	T071	PJ	
55	TD5911v	300m	5.0t	10Δ	25	25	50m	10m	40mΔ	100p	5.0t	10	5.0m	10m	5.0p#	1.7m	200S	∅	T071	PJ	
56	TD5911Av	300m	6.0t	10Δ	30	30	50m	10m	40mΔ	100p	5.0t	10	3.5m	10m	4.0p#	1.7m	200S	∅	T071	PJ	
57	TD5912v	300m	5.0t	10Δ	25	25	50m	10m	40mΔ	100p	5.0t	10	5.0m	10m	5.0p#	1.7m	200S	∅	T071	PJ	
58	TD5912Av	300m	6.0t	10Δ	30	30	50m	10m	40mΔ	100p	5.0t	10	3.5m	10m	4.0p#	1.7m	200S	∅	T071	PJ	
59	TIS14	300m	6.0	30	30	30	10m	15m%	1.0n	0.0	15	1.0m	7.5m†	100u%	8.0p#	2.0m	175A	PE	T038	PJ	
60	TIS25	300m	5.0	30	30	30	10m	8.0mΔ	.25n	0.0	15	1.5m	6.0m	25u	8.0p	2.0m	200	PE	T076	PJ	
61	TIS26	300m	5.0	30	30	30	10m	8.0mΔ	.25n	0.0	15	1.5m	6.0m	25u	8.0p	2.0m	200	PE	T076	PJ	
62	TIS27	300m	5.0	30	30	30	10m	8.0mΔ	.25n	0.0	15	1.5m	6.0m	25u	8.0p	2.0m	200	PE	T076	PJ	
63v	TIS148	300m	4.0t	15	20	30	50m	10m	20m	10n	7.0t	15	5.0%	15%	30f#	2.7m	150S	*∅	W37	EN	
64v	TIS152	300m	4.0t	15	20	25	50m	10m	15m	10n	7.0t	15	5.0%	15%	30f#	2.7m	150S	*∅	W37	EN	
65	TIXS80	300m	5.0t	10	30Δ	30Δ	10m	15m%	10n	5.0t	10	5.0m	10m	8.0pΔ	5.0m	175J	PE	T072	DU		
66	TIXS81	300m	10t	10	30Δ	30Δ	10m	15m%	10n	15.0t	10	5.0m	10m	8.0pΔ	5.0m	175J	PE	T072	DU		
67	TN4117	300m	1.8t	10Δ	40	40	50m	50m													

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	1. MAX. DEVICE DISS @25°C (W)	MAX. Vp (V)	ABS BVdss (V)	MAX. RATINGS @25°C				MAX. Id (A)	MAX. Ig (A)	MAX. Idss @ Vgs=0 & Vds>Vp (A)		MAX. Igss @ Vgs>Vp & Vds=0 (A)		PARAMETERS @25°C				DERATE IN		MAX TEMP (°C)	STRUCTURE	DWG #	L C A D E		
					Vdss (V)	Vgss (V)	Vds (V)	Vgs (V)			Vds (V)	Vgs (V)	COMMON SOURCE		r(DS) on (Ω)	MAX CIs (F)	FREE AIR W/°C	Y200 s/a	E O A D E							
													gfs (mhos)							Yos (mhos)					on (Ω)	CIs (F)
													MIN	MAX												
1	E401▼	350m	4.5	20	40	50m	5.0m	200p	0.0	20	1.0m	3.0m	3.0m	4.5p*	3.5m	125A	#1	R165	PC							
2	E402▼	350m	4.5	20	40	50m	5.0m	200p	0.0	20	1.0m	3.0m	3.0m	4.5p*	3.5m	125A	#1	R165	PC							
3	E411▼	350m	3.5	20	40	50m	6.0m	250p	0.0	20	1.4m	4.0m	4.0m	4.5p*	3.5m	125	#5	R170	PC							
4	E412▼	350m	3.5	20	40	50m	6.0m	250p	0.0	20	1.4m	4.0m	4.0m	4.5p*	3.5m	125	#5	R170	PC							
5	E420▼	350m	3.5	20	40	50m	6.0m	250p	0.0	20	1.4m	4.0m	4.0m	4.5p*	3.5m	125A	#5	R165	PC							
6	E421	350m	6.0	10	25	50m	3.0m	500p	5.0	10	4.5m	9.0m	9.0m	3.5p*	3.5m	125A	#5	R165	PC							
7	E430	350m	6.0	10	25	50m	3.0m	150p	10	10	1.0mΔ	2.0m	200u	5.0p†	3.5m	125	#5	TO105	QV							
8	E431	350m	6.0	10	25	50m	3.0m	150p	10	10	1.0mΔ	2.0m	200u	5.0p†	3.5m	125	#5	TO105	QV							
10	J107	350m	4.5	5.0	30	50m	10m	30	0.0	20	1.0m	3.0m	3.0m	8.0p#	3.5m	125A	#Δ	TO92	DE							
11	J111	350m	10	5.0	35	50m	2.0m	1.0n	0.0	20	1.0m	3.0m	3.0m	28p#	3.5m	125A	#Δ	TO92	DE							
12	J112	350m	5.0	5.0	35	50m	5.0m	1.0n	0.0	20	1.0m	3.0m	3.0m	28p#	3.5m	125A	#Δ	TO92	DE							
13	J113	350m	3.0	5.0	35	50m	2.0m	1.0n	0.0	20	1.0m	3.0m	3.0m	28p#	3.5m	125A	#Δ	TO92	DE							
14	J114	350m	1.0	5.0	25	50m	1.5m	1.0n	0.0	20	1.0m	3.0m	3.0m	8.0p#	3.5m	125A	#Δ	TO92	DE							
15	J201	350m	1.5	2.0	40	50m	1.0m	100p	0.0	20	500uf	5.0p#	3.5m	5.0p#	3.5m	125A	#†	TO92	DE							
16	J202	350m	4.0	2.0	40	50m	4.5m	100p	0.0	20	1.0m†	1.2m†	1.2m†	5.0p#	3.5m	125A	#†	TO92	DE							
17	J203	350m	4.0	2.0	40	50m	2.0m	100p	0.0	20	1.0m†	1.2m†	1.2m†	5.0p#	3.5m	125A	#†	TO92	DE							
18	J210	350m	3.0	1.5	25	50m	2.0m	100p	0.0	15	4.0m†	12m†	12m†	5.0p#	3.5m	125A	#†	TO92	DE							
19	J211	350m	4.5	1.5	25	10m	2.0m	100p	0.0	15	7.0m†	12m†	12m†	5.0p#	3.5m	125A	#†	TO92	DE							
20	J212	350m	6.0	1.0	25	10m	4.0m	100p	0.0	15	7.0m†	12m†	12m†	5.0p#	3.5m	125A	#†	TO92	DE							
21	J300	350m	6.0	1.0	25	10m	3.0m	500p	5.0	10	4.5m†	9.0m†	200u	5.5p#	3.5m	125A	#†	TO92	DE							
22	J304	350m	6.0	1.0	30	10m	1.5m	100p	0.0	15	3.0m†	7.5m†	50u	3.0p#	3.5m	125A	#†	TO92	DE							
23	J305	350m	3.0	1.0	30	10m	8.0m	100p	0.0	15	3.0m†	7.5m†	50u	3.0p#	3.5m	125A	#†	TO92	DE							
24	J308	350m	6.5	1.0	25	10m	6.0m	1.0n	10	10	8.0m	20m	50u	5.0p†	3.5m	125A	#†	TO92	DD							
25	J309	350m	6.0	1.0	25	10m	3.0m	1.0n	10	10	1.0m	20m	50u	5.0p†	3.5m	125	#	TO92	DD							
26	J310	350m	6.5	1.0	25	10m	6.0m	1.0n	10	10	8.0m	18m	50u	5.0p†	3.5m	125	#	TO92	DD							
27	J410▼	350m	3.5	20Δ	40	50m	6.0m	250p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16a	QO							
28	J410CN	350m	3.5	20Δ	40	50m	6.0m	250p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16	QO							
29	J411▼	350m	3.5	20Δ	40	50m	6.0m	250p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16a	QO							
30	J411CN	350m	3.5	20Δ	40	50m	6.0m	250p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16	QO							
31	J412▼	350m	3.5	20Δ	40	50m	6.0m	250p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16a	QO							
32	J412CN	350m	3.5	20Δ	40	50m	6.0m	250p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16	QO							
33#	MEF3069	350m	9.5	50Δ	50Δ	10m	1.0m	100p	0.0	30	1.0m	2.5m	200C	1.5p	2.0m	200C	∅	TO106	DB							
34#	MEF3070	350m	4.5	30	50Δ	2.5m	1.0n	0.0	30	750u	2.5m	2.0m	200C	1.5p	2.0m	200C	∅	TO106	DB							
35#	MEF3071	350m	2.2	30	50Δ	600u	1.0n	0.0	30	500u	2.5m	2.0m	200C	1.5p	2.0m	200C	∅	TO106	DB							
36#	MEF3684	350m	4.5	20	50Δ	7.5m	100p	0.0	20	2.0m	3.0m	4.0p	4.0p	2.0m	200S	∅	TO106	DB								
37	MPF130	350m	4.0†	15	25	30m	3.0m	20n	4.0	15	8.0m	2.0m	20m	4.5p#	2.3m	175J	*∅	W13	EE							
38	MPF131	350m	4.0†	15	25	30m	3.0m	20n	4.0	15	8.0m	2.0m	20m	4.5p#	2.3m	175J	*∅	W13	EE							
39	MPF132	350m	4.0†	15	25	30m	3.0m	20n	4.0	15	8.0m	2.0m	20m	4.5p#	2.3m	175J	*∅	W13	EE							
40	MPF256	350m	7.5†	15Δ	30	25	1.8m	5.0n	0.0	15	6.0m	5.0m	20u	3.0p#	2.7m	150J	#∅	TO92	DD							
41	NP8301	350m	3.5†	20	40	40	50m	6.0m	100p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16	QW						
42	NP8302	350m	3.5†	20	40	40	50m	6.0m	100p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16	QW						
43	NP8303	350m	3.5†	20	40	40	50m	6.0m	100p	0.0	20	1.0m	4.0m	20u	4.5p*	3.5m	125A	#5	S16	QW						
44	PTC152-RT	350m	6.0	20	30	50	1.5m	1.0n	0.0	20	3.0m	7.5m	6.0m	1.5k	7.0p	200J	#E	TO92	DH							
45	UC200	350m	8.0	20	50	15m	100p	0.0	20	4.5m	7.0p	7.0p	7.0p	200	200J	E∅	TO92	DH								
46	UC201	350m	4.0	20	50	12mΔ	1.0n	0.0	20	3.0m	7.0p	7.0p	7.0p	200	200J	E∅	TO92	DH								
47	UC210	350m	2.5	20	50	5.0mΔ	1.0n	0.0	20	3.0m	7.0p	7.0p	7.0p	200	200J	E∅	TO92	DH								
48	UC220	350m	8.0†	15Δ	25	25	10m	2.0m	2.0n	0.0	15	2.0m	6.5m	50u*	8.0p#	2.9m	150S	†	TO92	DA						
49	2N3819	360m	10†	20	40	40	10m	3.0m	100p	0.0	15	1.0m	3.0m	30	1.6p#	2.4m	175A	#†	TO18	DB∅						
50	JAN2N40911	360m	7.0†	20	40	40	10m	15m	100p	0.0	15	1.0m	3.0m	50	1.6p#	2.4m	175A	#†	TO18	DB∅						
51	JAN2N40921	360m	5.0†	20	40	40	10m	8.0m	100p	0.0	15	1.0m	3.0m	80	1.6p#	2.4m	175A	#†	TO18	DB∅						
52	JAN2N40931	360m	10†	20	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	25	1.8p#	2.0m	200S	∅	TO18	DB∅						
53	2N4856†	360m	10	15	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	30	1.8p#	2.4m	200S	∅	TO18	DB∅						
54	JAN2N4856	360m	10	15	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	30	1.8p#	2.4m	200S	∅	TO18	DB∅						
55	2N4856AT	360m	6.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	25	1.8p#	2.0m	200S	∅	TO18	DB∅						
56	2N4857†	360m	6.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	40	1.8p#	2.0m	200S	∅	TO18	DB∅						
57	JAN2N4857	360m	6.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	40	1.8p#	2.0m	200S	∅	TO18	DB∅						
58	2N4857AT	360m	6.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	40	1.8p#	2.0m	200S	∅	TO18	DB∅						
59	2N4858†	360m	4.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	60	1.8p#	2.0m	200S	∅	TO18	DB∅						
60	JAN2N4858	360m	4.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	60	1.8p#	2.4m	200S	∅	TO18	DB∅						
61	2N4858AT	360m	4.0†	15Δ	40	40	50m	5.0m	250p	0.0	20	1.0m	3.0m	60	1.8p#	2.0m	200S	∅	TO18	DB∅						
62	2N4859†	360m	10†	15Δ	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	25	1.8p#	2.0m	200S	∅	TO18	DB∅						
63	JAN2N4859	360m	10	15	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	30	1.8p#	2.4m	200S	∅	TO18	DB∅						
64	2N4859AT	360m	10†	15Δ	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	25	1.8p#	2.0m	200S	∅	TO18	DB∅						
65	2N4860†	360m	6.0†	15Δ	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	40	1.8p#	2.0m	200S	∅	TO18	DB∅						
66	JAN2N4860	360m	6.0†	15Δ	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	40	1.8p#	2.4m	200S	∅	TO18	DB∅						
67	2N4860AT	360m	6.0†	15Δ	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	40	1.8p#	2.0m	200S	∅	TO18	DB∅						
68	2N4861†	360m	4.0†	15Δ	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	60	1.8p#	2.0m	200S	∅	TO18	DB∅						
69	JAN2N4861	360m	4.0	15	30	30	50m	5.0m	250p	0.0	20	1.0m	3.0m	60	1.8p#	2.4m	200S	∅	TO18	DB∅						
70	2N4861AT	360m	4.0†	15Δ	3																					

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	1 MAX. DEVICE DISS @ 25°C (W)	2 MAX. Vp (V)	3 MAX. Vds & Vgs (V)	4 ABS MAX RATINGS @ 25°C				10 Id (A)	11 Ig (A)	12 Idss @ Vgs=0 & Vds=Vp (A)	13 MAX. Igss @ Vgs>Vp & Vds=0 (A)	PARAMETERS @ 25°C				DERATE IN		MAX TEMP (°C)	STRUCTURE	DWG #	C O A D E								
					5 BVdss (V)	6 BVgss (V)	7 Id (A)	8 Ig (A)					TEST COND		COMMON SOURCE		r(DS) on (Ω)	MAX. Cis (F)					FREE AIR W/C	MAX TEMP (°C)	STRUCTURE	DWG #	C O A D E			
													Vgs (V)	Vds (V)	gfs (mhos)													Yos (mhos)	on (Ω)	Cis (F)
															MIN	MAX														
1	UC588	360m	6.0t	15	40	30	10m	15mΔ	1.0n	0.0	15	4.5m	7.5m	50u	4.0p	2.8m	200	10106	DD											
2	2N5902▼	367m	4.5t	10Δ	40	40	500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
3	2N5903▼	367m	4.5t	10Δ	40	40	500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
4	2N5904▼	367m	4.5t	10Δ	40	40	500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
5	2N5905▼	367m	4.5t	10Δ	40	40	500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
6	2N5906▼	367m	4.5t	10Δ	40	40	500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
7	2N5907▼	367m	4.5t	10Δ	40	40	500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
8	2N5908▼	367m	4.5t	10Δ	40	40	500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
9	2N5909▼	367m	4.5t	10Δ	40	40	500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p#	3.0m	150S	∅	1078	PE											
10	2N5911▼	367m	5.0t	10Δ	25	25	100p	40m	100p	5.0m	10m	100u	5.0p#	3.0m	150S	∅	1078	PE												
11	2N5912▼	367m	5.0t	10Δ	25	25	100p	40m	100p	5.0m	10m	100u	5.0p#	3.0m	150S	∅	1078	PE												
12	40468A	375m	Δ	Δ	20	1.0	25m	25mΔ	1.0n	15	3.0m	8.0m	3.0u	5.0p#	2.5m	175J	∅	1072	DW											
13	40559A	375m	3.0Δ	Δ	25	125	50m	10m	10p	10	1.0m	8.0m	3.0u	5.0p#	2.5m	175J	∅	1072	DW											
14	IT1750	375m	4.0t	20Δ	50	50	50m	10m	10p	0.0	20	1.0m	8.0m	3.0u	5.0p#	2.1m	200S	#	R120	PC										
15	NDF9406▼	375m	4.0t	20Δ	50	50	50m	10m	10p	0.0	20	1.0m	8.0m	3.0u	5.0p#	2.1m	200S	#	R120	PC										
16	NDF9407▼	375m	4.0t	20Δ	50	50	50m	10m	10p	0.0	20	1.0m	8.0m	3.0u	5.0p#	2.1m	200S	#	R120	PC										
17	NDF9408▼	375m	4.0t	20Δ	50	50	50m	10m	10p	0.0	20	1.0m	8.0m	3.0u	5.0p#	2.1m	200S	#	R120	PC										
18	NDF9409▼	375m	4.0t	20Δ	50	50	50m	10m	10p	0.0	20	1.0m	8.0m	3.0u	5.0p#	2.1m	200S	#	R120	PC										
19	NDF9410▼	375m	4.0t	20Δ	50	50	50m	10m	10p	0.0	20	1.0m	8.0m	3.0u	5.0p#	2.1m	200S	#	R120	PC										
20	2N3084	400m	10t	15	30	15	50m	3.0m	1.0n	1.0	15	.40m	2.0m	50u%	14p	2.3m	200C		R179r	DD										
21	2N3085	400m	10t	15	30	15	50m	3.0m	1.0n	1.0	15	.40m	2.0m	50u%	14p	2.3m	200C		R179r	DD										
22	2N3086	400m	10t	15	40	15	50m	3.0m	1.0n	1.0	15	.40m	2.0m	50u%	14p	2.3m	200C		R179r	DD										
23	2N3087	400m	10t	15	40	15	50m	3.0m	1.0n	1.0	15	.40m	2.0m	50u%	14p	2.3m	200C		R179r	DD										
24	2N3088	400m	5.0t	15	15	10	50m	2.0mΔ	1.0n	1.0	15	.30m	2.0m	50u%	14p#	2.3m	200C		R179r	DD										
25	2N3088A	400m	5.0t	15	15	10	50m	2.0mΔ	1.0n	1.0	15	.30m	2.0m	50u%	14p#	2.3m	200C		R179r	DD										
26	2N3089	400m	5.0t	15	15	10	50m	2.0mΔ	1.0n	1.0	15	.30m	2.0m	50u%	14p#	2.3m	200C		R179r	DD										
27	2N3089A	400m	5.0t	15	15	10	50m	2.0mΔ	1.0n	1.0	15	.30m	2.0m	50u%	14p#	2.3m	200C		R179r	DD										
28	2N3465	400m	10t	15	40	40Δ	50m	5.0m	1.0n	0.0	15	.40m	1.2m	10u%	15p	2.3m	200C		R179r	DD										
29	2N3466	400m	10t	15	40	40Δ	50m	5.0m	1.0n	0.0	15	.40m	1.2m	10u%	15p	2.3m	200C		R179r	DD										
30	2N4447	400m	10	5.0Δ	25	25	400m	100m	150m%	3.0n	0.0	10	6.0m	18m	5.0	70p#	2.3m	200S		T046	DD									
31	2N4448	400m	10	5.0Δ	25	25	400m	100m	150m%	3.0n	0.0	10	6.0	18m	5.0	70p#	2.3m	200S		T046	DD									
32	2N4447†	400m	10	5.0Δ	20	20	400m	100m	150m%	3.0n	0.0	10	6.0	18m	5.0	70p#	2.3m	200S		T046	DD									
33	2N4448†	400m	10	5.0Δ	20	20	400m	100m	150m%	3.0n	0.0	10	6.0	18m	5.0	70p#	2.3m	200S		T046	DD									
34	2N5158†	400m	8.0	5.0Δ	40	40	400m	100m	100m%	1.0n	10∅	10	25m%	150m%	100u%	5.0p#	2.3m	200S		T046	DJ									
35	2N5159†	400m	10	5.0Δ	40	40	400m	100m	100m%	1.0n	10∅	10	25m%	150m%	100u%	5.0p#	2.3m	200S		T046	DJ									
36	2N6550	400m	3.0t	10	20Δ	20Δ	400m	250m	3.0n	0.0	10	6.0m	18m	5.0	70p#	2.3m	200S		T046	DD										
37	3N140	400m	4.0t	16Δ	20	4.0	50m	3.0m	1.0n	4.0	14	6.0m	18m	5.0	70p#	2.7m	175A	∅	1072	DX										
38	3N141	400m	4.0t	16Δ	20	4.0	50m	3.0m	1.0n	4.0	14	6.0m	18m	5.0	70p#	2.7m	175A	∅	1072	DX										
39	3N153	400m	4.0t	16Δ	20	8.0	50m	5.0m	1.0n	5.0p	0.0	14	7.0m	18m	200	7.0p#	2.6m	175S	∅	1072	DW									
40	3N159	400m	4.0t	16Δ	20	8.0	50m	5.0mΔ	1.0n	0.0	14	7.0m	18m	200	7.0p#	2.6m	175S	∅	1072	DW										
41	40467A	400m	8.0t	12Δ	20	1.0	50m	5.0mΔ	1.0n	15	4.0m	7.5mΔ	5.5p#	2.7m	175A	∅	1072	DX												
42	40600	400m	2.0t	15Δ	20	8.0	50m	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ								
43	40601	400m	2.0t	15Δ	20	8.0	50m	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ								
44	40602	400m	2.0t	15Δ	20	8.0	50m	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ								
45	40603	400m	2.0t	15Δ	20	8.0	50m	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ	18m*	1.0n	4.0	13	10mΔ								
46	40604	400m	2.0t	15Δ	20	8.0	50m	18m*	1.0n	4.0	13	2.8mΔ	400u	200u	500n	.01k%	16p†	2.3m	200J	#	R135d	DD								
47#	C81	400m	18	50	10	10	400m	100m	30m#	3.0n	10∅	10	25m%	150m%	100u%	5.0p#	2.3m	200J	#	R135d	DD									
48	CM697†	400m	3.0	5.0	25	25	400m	100m	30m#	3.0n	10∅	10	25m%	150m%	100u%	5.0p#	2.3m	200J	#	R135d	DD									
49	CM800	400m	7.0	5.0	30	30	400m	100m	30m#	3.0n	10∅	10	25m%	150m%	100u%	5.0p#	2.3m	200J	#	R135d	DD									
50#	ESM4446	400m	10	5.0	25	25	100m	100m%	200p	8.0	12	50p	5.0p	2.3m	200J					T018	DD									
51#	ESM4448	400m	10	5.0	25	25	100m	100m%	200p	8.0	12	50p	5.0p	2.3m	200J					T018	DD									
52	HEPF2004-RT	400m	10t	20	20	1.0	50m	30m	1.0n	0.0	10	6.0k	20mΔ	10m%	50	15p#	4.0m	175J		T072	DX									
53	NF511	400m	10t	20	20	40	40	10m	50m%	100n	0.0	10	5.0m%	10m%	5.0	70p#	2.3m	200S	#	T052	DB									
54	PTC161-RT	400m	10	5.0	25	25	400m	100m	150m%	3.0n	0.0	10	5.0m%	10m%	5.0	70p#	2.3m	200S	#	T052	DB									
55	U240†	400m	10	5.0	25	25	400m	100m	150m%	3.0n	0.0	10	5.0m%	10m%	5.0	70p#	2.3m	200S	#	T052	DB									
56	U241†	400m	10	5.0	25	25	400m	100m	150m%	3.0n	0.0	10	5.0m%	10m%	5.0	70p#	2.3m	200S	#	T052	DB									
57	U242†	400m	10	5.0	25	25	400m	100m	150m%	3.0n	0.0	10	5.0m%	10m%	5.0	70p#	2.3m	200S	#	T052	DB									
58	U243†	400m	10	5.0	25	25	400m	100m	150m%	3.0n	0.0	10	5.0m%	10m%	5.0	70p#	2.3m	200S	#	T052	DB									
59	2N5543	500m	15t	30	75	30	50m	10m%	1.0u	0.0	30	750u	3.0m†	100u*	2.0k%	10p#	3.3m	200S	#	T039	DB									
60	2N5544	500m	15t	30	75	30	50m	10m%	1.0u	0.0	30	750u	3.0m†	100u*	2.0k%	10p#	3.3m	200S	#	T039	DB									
61	HEPF2007-RT	500m	10t	20	20	1.0	30m	30m	20n	0.0	15	14	Δ	%	7.0p#	5.0m	175J	†	X158	EE										
62	J108†	500m	10t	5.0Δ	25	25	50m	80m#	3.0n	10∅	15	25mΔ	250u	8.0	12	50p	5.0m	125A	#	T092	DE									
63	J109†	500m	6.0t	5.0Δ	25	25	50m	40m#	3.0n	10∅	15	25mΔ	250u	12	18	50p	5.0m	125A	#	T092	DE									
64	J110†	500m	4.0t	5.0Δ	25	25	50m	10m#	3.0n	10∅	15	25mΔ	250u	18	%	5.0m	125A	#	T092	DE										
65	J140†	500m	2.5t	15	50	50	10m	10m%	100p	0.0	10	2.0m	7.0m	20u%	8.0p#	11m	150S	#	S16	QW										
66	J1402	500m	2.5t	15	50																									

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	M T A E M P X	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE			fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# C O D E		
					Ic (A)	Ib (A)	Vcbo (V)	Vebo (V)	Vceo (V)	Icbo @ 25°C (A)	Vcb (V)	Ic (A)							MIN	MAX
1#	2SB126A		30	#J	3.5		60	20	220u	1.0	3.0	15	50	6.0k		A	T03	C0		
2#	2SB127A		30	#J	3.5		60	20	220u	1.0	3.0	34	100	6.0k		A	T03	C0		
3#	2SB468		10	#J	10	10	200	1.5	90	1.5	4.0	14	130		2.5u#Z	A	T03	C0		
4#	AD152		6.0	#J	1.0		45	12	23*	30u	1.0	500m	35	160		A	F9	C0		
5#	AD155		6.0	#J	1.0		25	12	15*	30u	1.0	500m	35	115		A	F9	C0		
6#	AD164		6.0	#J	1.0		25	10	20*	200u	1.0	500m	60	185		A	F9	C0		
7	HEP200-RT		90	#J	3.0		30	10	30	6.0m	30	40		600k		A	T03	C0		
8	HEP230-RT		90	#J	5.0		30	10	30	3.0m	30	60		600k		A	T03	C0		
9	HEP231-RT		150	#J	15		30	10	30	6.0m	30	40		500k		A	T036	C0		
10	HEP232-RT		90	#J	7.0		70	10	70	8.0m	2.0	60		600k		A	T03	C0		
11	HEP233-RT		170	#J	15		65	60	65	2.0m	65	55		500k		A	T036	C0		
12	HEP234-RT		56	#J	5.0		200	2.0	200	4.0m	10	60		1.0m		A	T03	C0		
13	HEP235-RT		56	#J	10		320	2.0	320	4.0m	10	60		1.0m		A	T03	C0		
14	HEP236-RT		160	#J	25		110	2.0	80	2.0m	2.0	60		210k		A	T041	C0		
15	HEP237-RT		170	#J	30		75	4.0	60	9.0m	75	80		270k		A	T036	C0		
16	HEP238-RT		20	#J	3.0		60	2.0	40	12.5m	30	120		200k		A	T05	C0		
17	HEP239-RT		20	#J	3.0		100	2.0	60	12.5m	30	120		200k		A	T05	C0		
18	HEP623-RT		77	#J	7.0		60	2.0	35	1.0m	35	70		600k		A	T03	C0		
19	HEP624-RT		77	#J	7.0		60	2.0	35	1.0m	35	120		600k		A	T03	C0		
20	HEP625-RT		90	#J	10		100	5.0	75	2.0m	90	40		5.0k		A	T03	C0		
21	HEP626-RT		85	#J	20		80	2.0	50	1.0m	80	60		1.0m		A	T03	C0		
22	HEP627-RT		85	#J	10		80	5.0	80	2.0m	80	40		700k		A	T03	C0		
23	HEP628-RT		77	#J	7.0		60	2.0	35	1.0m	35	45		600k		A	T03	C0		
24	HEP642-RT		57	#J	3.0		30	2.0	25	1.0m	30	95		350k		A	T066	C0		
25	HEP643-RT		57	#J	3.0		30	2.0	25	1.0m	30	160		350k		A	T066	C0		
26	HEP644-RT		85	#J	10		160	5.0	160	3.0m	160	40		50k		A	T03	C0		
27	HEPG6001-RT		85	#J	25		90	1.5	80	2.0m	2.0	70		850k		A	T03	C0		
28	PTC105-RT		90	#J	7.0		72	2.0	50	15m	2.0	1.0	30	80	100k	A	T03	C0		
29	PTC114-RT		70	#J	3.0		35	1.5	22	160u	1.5	1.0	80	200	1.0m	A	T03	C0		
30	PTC120-RT		57	#J	5.0		45	1.0	30	1.0m	2.0	3.0	50	100	300k	A	T066	C0		
31	PTC122-RT		56	#J	10		320	2.2	220	2.0m	10	15		1.0m		A	T03	C0		
32	PTC138-RT		25	#J	5.0		75	1.7	65	500u	1.0	2.0	150			A	T03	C0		
33	PTC147-RT		106	#J	25		90	3.0	110	300u	1.0	1.0	60		350k	A	T03	C0		
34	PTC155-RT		9.0	#J	5.0		60	5.0	40	120n	2.0	500m	80		1.0m	A	T08	C0		
35	PTC156-RT		1.6	#J	1.0		32	1.0	32	100m	90	90		1.5m		A	T01	C0		
36	SK3009-RT		30	#J	10		60	1.0	50	2.0	1.0	90		450k		A	T03	C0		
37	SK3012-RT		150	#J	15		50	2.0	30	2.0	5.0	50		100k		A*	T036	C0		
38	SK3013-RT		150	#J	15		60	1.0	50	2.0	1.0	90		450k		A*	T03	C0		
39	SK3014-RT		12	#J	5.0		75	1.5	50	2.0	1.0	150		4.0m		A	T03	C0		
40	SK3015-RT		12	#J	5.0		75	1.5	50	2.0	1.0	150		4.0m		D*	T03	C0		
41	SK3034-RT		10	#J	10		200	2.0	2.0	2.0	35	35		2.5m		D	T03	C0		
42	SK3035-RT		5.0	#J	10		320	2.0	2.0	2.0	25	25		2.5m		D	T03	C0		
43	SK3052-RT		6.0	#J	2.0		60	1.2	60		110	110		450k		A	T066	C0		
44	SK3082-RT		12	#J	2.0		35	6.0	35		110	110		450k		A	T03	C0		
45	SK3086-RT		12	#J	2.0		35	6.0	35		110	110		450k		A	T03	C0		
46#	T20A6		60	#C	20	3.0	80	20	60	5.0m	1.5	15	50	150	2.5k	A	T03	C0		
47	JAN2N2557	14m	1.1	#S			60	20	40	70u	50	1.0	20	60	8.0m	A	T28	C0		
48#	JAN2N2559	14m	1.1	#S			100	20	60	70u	50	1.0	20	60	25.0m	A	T28	C0		
49#	AC128-01	22m	1.0	#J	1.0	40m	32	10	16	200u	0.0	1.0	45	165	1.5m	A*	X9c	A		
50#	AC128K	22m	1.0	#J	1.0	40m	32	10	32	10u	0.0	300m	90	50	1.5m	A	X9c	A		
51#	AC176K	22m	1.1	#J	1.0	500m	32	10	18	50u	0.0	300m	50	100	3.0m	A	X9a	A		
52#	AC188/01	22m	1.0	#J	1.0		25	10	15	200u	1.0	300m	100	500	1.5m	A	X9c	C		
53	2N4106	25m	1.6	#J	1.0		25	10	15	25u	1.0	5.0m	70	350	1.5m	A	T01	A		
54#	AC188	25m	1.0	#J	1.0		25	10	15	200u	1.0	300m	100	500	1.5m	A	T01	A		
55	2N2786	29m	1.5	#J	1.5m		35	5.0	20	10u	2.0	100m	33	200	1.0m	A*	T039	A		
56#	AC180K	33m	2.5	#J	1.0		32	10	24	20u	1.0	600m	50	250	1.0m	A*	X9b	A		
57	2N1172†	66m		#J	1.5	250m	40	20	20	200u	2.0	100m	30	90	17k	600u	3.0u	A	T037	A
58	2N2282	66m	5.0	#C	3.0	1.0	60	1.5†	30	100u	1.0	3.0	15	20m	400m	A	T037	A		
59	2N2283	66m	5.0	#C	3.0	1.0	100	1.5†	60	100u	1.0	3.0	15	20m	400m	A	T037	A		
60	2N2284	66m	5.0	#C	3.0	1.0	200	1.5†	100	100u	1.0	3.0	15	20m	400m	A	T037	A		
61	2N3461	66m	5.0	#C	3.0	1.0	60	1.5	30	3.0m	1.0	500m	90	150	10k	400m	A	T05	A	
62#	2SB367	66m	4.0	#J	1.0		25	12	25	100u	1.5	500m	45	170	500k†	240m	A	F6g	C0	
63#	2SB368	66m	4.0	#J	1.0		45	12	45	100u	1.5	500m	45	170	500k†	240m	A	F6g	C0	
64#	2SB473	66m	4.3	#J	1.0		32	6.0	45	15u	0.0	500m	40	180	10k	A	F5a	C0		
65#	2N101	71m	1.0	#A	1.5		25		12							A	R171	A		
66	2N101/13	80m	1.0	#J	1.5		30	15	15	5.0m	2.0	500m	11	600k	2.0	A	T013	F0		
67	2N141	80m		#J	800m		60	30	30	5.0m	1.2	50m	40	400k†		A	MM1	A		
68#	2SB63	80m	4.0	#J	500m		32	12	32	70u	1.0	500m	30	125	200k†		A	F6	A	
69#	2SB180	85m	5.5	#J	500m		40	12	30	1.0m	1.5	500m	20	150		A	T08	A		
70#	2SB481	92m	6.0	#J	1.0	200m	32	10	20	0.0	1.0	30	110	15k		A	F5b	A		
71	2N1183	100m	1.0	#C	3.0	500m	45	20	20	250u	0.0	400m	20	60	500k†	1.2	A	T08	A	
72	JAN2N1183	100m	7.5	#S			45	20	20	250u	2.0	400m	20	75	350k†	750m	A	T08	A	
73	2N1183A	100m	1.0	#C	3.0	500m	60	20	30	250u	0.0	400m	20	60	500k†	1.2	A	T08	A	
74	JAN2N1183A	100m	7.5	#S			60	30	30	250u	2.0	400m	20	75	350k†	750m	A	T08	A	
75	2N11																			

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C O D E	
						Ic	Ib	Vcbo	Vcbo	Vcbo	Icbo @ MAX Vcb @25°C (A)	Vcb						Ic
						(A)	(A)	(V)	(V)	(V)	(V)	(A)						(A)
1	2N307	200m	15	∅	∅	1.0	35	35	15m	1.5	200m	20	3.0kΔ	A	T03	C∅		
2	2N1658/13	200m	15	∅	#J	1.0	80	50	∅	∅	200m	30	10k	A	ZA22	A∅		
3	2N1659/13	200m	15	∅	#J	1.0	60	40	∅	∅	200m	30	10k	A	ZA22	A∅		
4	2N2659	200m	15	∅	#C	3.0	50	50	600u#	50	500m	30	90	A	R122	A∅		
5	2N2660	200m	15	∅	#C	3.0	70	70	600u#	50	500m	30	90	A	R122	A∅		
6	2N2661	200m	15	∅	#C	3.0	90	90	600u#	50	500m	30	90	A	R122	A∅		
7	2N2662	200m	15	∅	#C	3.0	50	50	600u#	50	500m	30	90	A	T27	A∅		
8	2N2663	200m	15	∅	#C	3.0	70	70	600u#	50	500m	30	90	A	T27	A∅		
9	2N2664	200m	15	∅	#C	3.0	90	90	600u#	50	500m	30	90	A	T27	A∅		
10	2N2665	200m	15	∅	#C	3.0	50	50	600u#	50	500m	50	150	A	R122	A∅		
11	2N2666	200m	15	∅	#C	3.0	70	70	600u#	50	500m	50	150	A	R122	A∅		
12	2N2667	200m	15	∅	#C	3.0	90	90	600u#	50	500m	50	150	A	R122	A∅		
13	2N2668	200m	15	∅	#C	3.0	50	50	600u#	50	500m	50	150	A	T27	A∅		
14	2N2669	200m	15	∅	#C	3.0	70	70	600u#	50	500m	50	150	A	T27	A∅		
15	2N2670	200m	15	∅	#C	3.0	90	90	600u#	50	500m	50	150	A	T27	A∅		
16#	2SB474	200m	12	∅	#J	2.0	35	6.0	35	200u	1.5	200m	50	275	A	F5c	A∅	
17#	2SB627	200m	13	∅	#J	10	40	14	∅	∅	3.0 Δ	100	150	A	T08	A∅		
18#	AD136	200m	11	∅	#J	10	2.0	10	22	∅	5.0	30	100	A	T08	A∅		
19#	ADY10	200m	17	∅	#J	600m	32	16	30	∅	50m	40	70	A	T08	A∅		
20#	ADY11	200m	17	∅	#J	600m	32	16	45	∅	50m	30	50	A	T08	A∅		
21#	ADY12	200m	17	∅	#J	600m	60	16	30	∅	50m	60	100	A	T08	A∅		
22#	ADY13	200m	17	∅	#J	600m	60	16	45	∅	50m	40	70	A	T08	A∅		
23#	ADY20	200m	17	∅	#J	600m	60	16	45	∅	50m	60	100	A	T08	A∅		
24#	AUY18	200m*	9.0	∅	#J	8.0	64	20	45	∅	5.0	30	100	A	T08	A∅		
25	PTC194-RT	200m	12	∅	#J	2.0	35	6.0	35	250u	1.5	200m	100	700k†	A	F5c	A∅	
26#	AD162	222m	6.0	∅	#J	3.0	32	10	20	200u	1.0	50m	74	300	A	F9b	A∅	
27	2N2835	250m	16	∅	#J	1.0	100m	32	10	32	0.0	1.0 Δ	30	10	A	F9	A∅	
28#	AD148	250m*	11	∅	#J	3.5	400m	32	10	26	1.0	1.0	30	100	A	F12	A∅	
29#	AD262	250m	10	∅	#J	4.0	2.0	35	10	20	100u	2.0	30	A	F9a	A∅		
30#	AD263	250m	10	∅	#J	4.0	2.0	60	10	40	100u	2.0	15	A	F9a	A∅		
31#	AL112	250m	10	∅	#J	6.0	1.0	130	2.0	60	10m	2.0	500m	D	T03	C∅		
32#	AL113	250m	10	∅	#J	6.0	1.0	100	1.5	40	10m	2.0	500m	D	T03	C∅		
33#	2N1038-1	263m	1.0	∅	#J	3.0	1.0	40	20	30	650u	50	1.0	A	T27	A∅		
34	2N1038-2	263m	1.0	∅	#J	3.0	1.0	40	20	30	650u	50	1.0	A	T28	A∅		
35	2N1039-1	263m	1.0	∅	#J	3.0	1.0	60	20	40	650u	50	1.0	A	T27	A∅		
36	2N1039-2	263m	1.0	∅	#J	3.0	1.0	60	20	40	650u	50	1.0	A	T28	A∅		
37	2N1040-1	263m	1.0	∅	#J	3.0	1.0	80	20	50	650u	50	1.0	A	T27	A∅		
38	2N1040-2	263m	1.0	∅	#J	3.0	1.0	80	20	50	650u	50	1.0	A	T28	A∅		
39	2N1041-1	263m	1.0	∅	#J	3.0	1.0	100	20	60	650u	50	1.0	A	T27	A∅		
40	2N1041-2	263m	1.0	∅	#J	3.0	1.0	100	20	60	650u	1.0	3.0	A	T28	A∅		
41	2N1042-1	263m	1.0	∅	#J	3.0	1.0	40	20	30	650u	1.0	3.0	A	T27	A∅		
42	2N1042-2Δ	263m	1.0	∅	#J	3.0	1.0	40	20	30	650u	1.0	3.0	A	T28	A∅		
43	2N1043-1	263m	1.0	∅	#J	3.0	1.0	60	20	40	650u	1.0	3.0	A	T27	A∅		
44	2N1043-2Δ	263m	1.0	∅	#J	3.0	1.0	60	20	40	650u	1.0	3.0	A	T28	A∅		
45	2N1044-1	263m	1.0	∅	#J	3.0	1.0	80	20	50	650u	1.0	3.0	A	T27	A∅		
46	2N1044-2Δ	263m	1.0	∅	#J	3.0	1.0	80	20	50	650u	1.0	3.0	A	T28	A∅		
47	2N1045-1	263m	1.0	∅	#J	3.0	1.0	100	20	60	650u	1.0	3.0	A	T27	A∅		
48	2N1045-2Δ	263m	1.0	∅	#J	3.0	1.0	100	20	60	650u	1.0	3.0	A	T28	A∅		
49	2N1038	267m	20	∅	#C	3.0	1.0	40	20	40	125u	1.0	1.0	A	R122	A∅		
50	2N1039	267m	20	∅	#C	3.0	1.0	60	20	60	125u	1.0	1.0	A	R122	A∅		
51	2N1040	267m	20	∅	#C	3.0	1.0	80	20	80	125u	1.0	1.0	A	R122	A∅		
52	2N1041	267m	20	∅	#C	3.0	1.0	100	20	100	125u	1.0	1.0	A	R122	A∅		
53	2N1042	267m	20	∅	#C	3.5	1.0	40	20	40	125u	1.0	3.0	A	T6	A∅		
54	JAN2N1042	267m	20	∅	#A	3.0	1.0	40	20	30	125u	1.0	3.0	A	T28	A∅		
55	2N1043	267m	20	∅	#C	3.5	1.0	60	20	60	125u	1.0	3.0	A	T6	A∅		
56	JAN2N1043	267m	20	∅	#A	3.0	1.0	60	20	40	125u	1.0	3.0	A	T28	A∅		
57	2N1044	267m	20	∅	#C	3.5	1.0	80	20	80	125u	1.0	3.0	A	T6	A∅		
58	JAN2N1044	267m	20	∅	#A	3.0	1.0	80	20	50	125u	1.0	3.0	A	T28	A∅		
59	2N1045	267m	20	∅	#C	3.5	1.0	100	20	100	125u	1.0	3.0	A	T6	A∅		
60	JAN2N1045	267m	20	∅	#A	3.0	1.0	100	20	60	125u	1.0	3.0	A	T28	A∅		
61	2N2552	267m	20	∅	#C	3.0	1.0	40	20	30	125u	50	1.0	A	T27	A∅		
62	2N2553	267m	20	∅	#C	3.0	1.0	60	20	40	125u	50	1.0	A	T27	A∅		
63	2N2554	267m	20	∅	#C	3.0	1.0	80	20	50	125u	50	1.0	A	T27	A∅		
64	2N2555	267m	20	∅	#C	3.0	1.0	100	20	60	125u	50	1.0	A	T27	A∅		
65	2N2556	267m	20	∅	#C	3.0	1.0	40	20	30	125u	50	1.0	A	T28	A∅		
66	2N2557	267m	20	∅	#C	3.0	1.0	60	20	40	125u	50	1.0	A	T28	A∅		
67	2N2558	267m	20	∅	#C	3.0	1.0	80	20	50	125u	50	1.0	A	T28	A∅		
68	2N2559	267m	20	∅	#C	3.0	1.0	100	20	60	125u	50	1.0	A	T28	A∅		
69	2N2560	267m	20	∅	#C	3.5	1.0	40	20	30	125u	1.0	3.0	A	T27	A∅		
70	2N2561	267m	20	∅	#C	3.5	1.0	60	20	40	125u	1.0	3.0	A	T27	A∅		
71	2N2562	267m	20	∅	#C	3.5	1.0	80	20	50	125u	1.0	3.0	A	T27	A∅		
72	2N2563	267m	20	∅	#C	3.5	1.0	100	20	60	125u	1.0	3.0	A	T27	A∅		
73	2N2564	267m	20	∅	#C	3.5	1.0	40	20	30	125u	1.0	3.0	A	T28	A∅		
74	2N2565	267m	20	∅	#C	3.5	1.0	60	20	40	125u	1.0	3.0	A	R122	A∅		
75	2N2566	267m	20	∅	#C	3.5	1.0	80	20	50	125u	1.0	3.0	A	R122	A∅		
76	2N2567	267m	20	∅	#C	3.5	1.0	100	20	60	125u	1.0	3.0	A	R122	A∅		
77	TI159	267m	20	∅	#J	3.0	1.0	40	20	30	650u	50	1.0	A	R101	A∅		
78	TI160	267m	20	∅	#J	3.0	1.0	60	20	40	650u	50	1.0	A	R101	A∅		
79	TI161	267m	20	∅	#J	3.0	1.0	80	20	50	650u	50	1.0	A	R101	A∅		
80	TI162	267m	20	∅	#J	3.0	1.0	100	20	60	650u	50	1.0	A	R101	A∅		
81	2N68/13	270m	20	∅	#J	3.0	1.0	30	15	15	∅	500m	15	A	ZA24	A∅		
82	JAN2N158	283m	17	∅	#A	2.0	∅	60	30	60	1.0m	2.0	1.0	A	R173a	A∅		
83#	2SB449	300m	22	∅	#J	3.5	500m	50	30	50	3.0m	0.0	3.0 Δ	A	T03	C∅		
84#	HSE800-RT	330m	25	∅	#J	3.0	500m	50	15	40	3.0m	2.0	500m	A	T03	C∅		
85	2N141/13	333m	20	∅	#J	1.0	500m	60	30	30	2.0m	2.0	500m	A	TO13	C∅		
86	2N143/13	333m	20	∅	#J	1.0	500m	60	30	30	5.0m	6.0	250m	A	TO13	C∅		
87	2N155	333m	1.5	∅	#J	3.0	500m	30	15	15	1.0m	2.0	500m	A	TO3	C∅		
88	2N156	333m	1.5	∅	#J	3.0	30	15	30	∅	1.0m	2.0	500m	A	TO13	C∅		
89	2N157	333m	8.5	∅	#J	3.0	60	30	30	∅	1.0							

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc MAX	Tj MAX	ABSOLUTE MAX. RATINGS @25°C					MAX. Vcb @ 25°C		hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	LEAD CODE
						Ic (A)	Ib (A)	Vcbo (V)	Vebo (V)	Vceo (V)	Icbo @ 25°C (A)	Vcb (V)	Ic (A)	MIN						
1	2N457†	1.0	909m	50	∅	5.0	3.0	80	20†	60	2.0m	1.5	1.0	130	∅	48m	26u	A	T03	C
2	2N458†	1.0	909m	50	∅	5.0	3.0	80	20†	80	2.0m	1.5	1.0	130	∅	48m	26u	A	T03	C
3	2N173†	1.0	∅	∅	∅	15	4.0	60	40	∅	2.0	2.0	5.0	35	70	10k	15u	A	T036	C
4	2N277	1.0	∅	∅	∅	15	4.0	40	20	40	8.0m	2.0	5.0	35	70	10k	15u	A	T036	C
5	2N278	1.0	∅	∅	∅	15	4.0	50	30	45	8.0m	2.0	5.0	35	70	10k	15u	A	T036	C
6	2N301	1.0	∅	∅	∅	1.5	∅	40	10†	32	3.0m	1.5	700m	∅	∅	∅	∅	A	T036	C
7	2N301A	1.0	∅	∅	∅	1.5	∅	60	10†	32	3.0m	1.5	700m	∅	∅	∅	∅	A	T03	C
8	2N350	1.0	∅	∅	∅	3.0	∅	40	∅	30	3.0m	2.0	700m	20	60	5.0kΔ	133m	A	T03	C
9	2N351	1.0	∅	∅	∅	3.0	∅	40	∅	30	3.0m	2.0	700m	25	90	5.0kΔ	133m	A	T03	C
10	2N376	1.0	∅	∅	∅	3.0	∅	40	∅	30	3.0m	2.0	700m	35	120	5.0kΔ	133m	A	T03	C
11	2N441†	1.0	∅	∅	∅	15	4.0	40	20	∅	8.0m	2.0	5.0	20	40	10k	15u	A	T036	C
12	2N442†	1.0	∅	∅	∅	15	4.0	50	30	∅	8.0m	2.0	5.0	20	40	10k	15u	A	T036	C
13	2N443†	1.0	∅	∅	∅	15	4.0	60	40	∅	8.0m	2.0	5.0	20	40	10k	15u	A	T036	C
14	2N554	1.0	∅	∅	∅	3.0	∅	40	∅	∅	50u	2.0	500m	30	∅	8.0k	200m	A	T03	C
15	2N555	1.0	∅	∅	∅	3.0	∅	40	∅	∅	50u	2.0	500m	20	30	8.0k	200m	A	T03	C
16	2N1046	1.0	∅	∅	∅	12	3.0	100	1.5	50	2.0m	1.5	5.0	40	∅	10mΔ	80m	A	T03	C
17	2N1046A	1.0	∅	∅	∅	12	3.0	130	1.5	50	2.0m	1.5	5.0	40	∅	15mΔ	80m	A	T03	C
18	2N1046B	1.0	∅	∅	∅	12	3.0	130	1.5	50	2.0m	1.5	10	2.0	∅	15mΔ	90m	A	T03	C
19	JAN2N1412	1.0	∅	∅	∅	∅	∅	100	60	65	6.0m	2.0	5.0	25	50	5.0kΔ	50m	A	T63	B
20	2N1412A	1.0	∅	∅	∅	∅	∅	100	60	70	6.0m	2.0	5.0	25	50	5.0kΔ	50m	A	T63	B
21	JAN2N1412A	1.0	∅	∅	∅	∅	∅	100	60	70	6.0m	2.0	5.0	25	50	5.0kΔ	50m	A	T63	B
22	2N2069	1.0	∅	∅	∅	12	3.0	40	20	30	15m	2.0	5.0	30	200	1.5kΔ	125m	A	T03	C
23	2N2070	1.0	∅	∅	∅	12	3.0	80	20	60	15m	2.0	5.0	30	200	1.5kΔ	125m	A	T03	C
24	2N2071	1.0	∅	∅	∅	12	3.0	40	20	30	15m	2.0	5.0	30	200	1.5kΔ	125m	A	T041	C
25	2N2072	1.0	∅	∅	∅	12	3.0	80	20	60	15m	2.0	5.0	30	200	1.5kΔ	125m	A	T03	C
26	2N2210	1.0	∅	∅	∅	15	4.0	100	60	65	4.0m	2.0	5.0	25	50	5.0kΔ	50m	A	R167	C
27	2N2444	1.0	∅	∅	∅	10	3.0	80	1.0†	80	2.0m	2.0	3.0	90	120	4.5mΔ	200m	A	T03	C
28	2N2526†	1.0	∅	∅	∅	10	5.0	80	5.0	80	3.0m	2.0	3.0	20	50	∅	80m	A	F4j	C
29	2N2527†	1.0	∅	∅	∅	10	5.0	120	5.0	120	3.0m	2.0	3.0	20	50	∅	80m	A	F4j	C
30	2N2528†	1.0	∅	∅	∅	10	5.0	160	5.0	160	3.0m	2.0	3.0	20	50	∅	80m	A	F4j	C
31	JAN2N2528†	1.0	∅	∅	∅	10	5.0	160	5.0	160	3.0m	2.0	3.0	20	50	∅	80m	A	F4j	C
32	2N2612	1.0	∅	∅	∅	15	5.0	65	30	65	500m	2.0	3.0	85	250	2.0kΔ	1.0	A	T03	C
33	2N2832†	1.0	∅	∅	∅	20	5.0	80	2.0	50	10m	2.0	10	25	100	10mΔ	150m	A	T03	C
34	2N2833†	1.0	∅	∅	∅	20	5.0	120	2.0	75	10m	2.0	10	25	100	10mΔ	150m	A	T03	C
35	2N2834†	1.0	∅	∅	∅	20	5.0	140	2.0	100	10m	2.0	10	25	100	10mΔ	150m	A	T03	C
36	JAN2N2834†	1.0	∅	∅	∅	20	5.0	160	2.0	100	10m	2.0	10	25	100	10mΔ	150m	A	F4e	C
37	2N2912†	1.0	∅	∅	∅	25	3.0	15	1.5	5.0	10m	2.0	5.0	200	800	10mΔ	20m	A	R74	A
38	2SB235	1.0	∅	∅	∅	15	15	80	25	80	10m	2.0	5.0	25	200	200kΔ	50m	A	T036	C
39	3N45†	1.0	∅	∅	∅	12	500m	60	28	60	3.0m	2.0	5.0	30	120	16k	3.0u	A	TO15	GB
40	3N46†	1.0	∅	∅	∅	12	500m	80	28	80	3.0m	2.0	5.0	20	80	12k	6.0u	A	TO15	GB
41	3N47	1.0	∅	∅	∅	12	1.5	40	28	25	3.0m	2.0	5.0	30	120	500kΔ	80m	A	TO15	GB
42	3N48	1.0	∅	∅	∅	12	1.5	60	28	40	3.0m	2.0	5.0	20	80	300kΔ	80m	A	TO15	GB
43	CTP1505	1.0	∅	∅	∅	13	∅	60	∅	45	2.0	2.0	5.0	15	45	∅	∅	A	T03	C
44	CTP1512	1.0	∅	∅	∅	13	∅	80	∅	60	2.0	2.0	5.0	60	120	∅	∅	A	T03	C
45	CTP1544	1.0	∅	∅	∅	25	∅	60	30	30	15m	2.0	25	25	125	4.0k	40m	A	T03	C
46	CTP1552	1.0	∅	∅	∅	25	∅	40	30	20	15m	2.0	25	25	125	4.0k	40m	A	T03	C
47	DTG110A	1.0	∅	∅	∅	15	5.0	∅	∅	70	2.0	2.0	1.0	50	∅	850kΔ	∅	A	Y204a	C
48	DTG600†	1.0	∅	∅	∅	15	5.0	∅	∅	50	2.0	2.0	5.0	50	∅	∅	30m	A	Y204a	C
49	DTG601†	1.0	∅	∅	∅	15	5.0	∅	∅	60	2.0	2.0	5.0	50	∅	∅	30m	A	Y204a	C
50	DTG602†	1.0	∅	∅	∅	15	5.0	∅	∅	70	2.0	2.0	5.0	50	∅	∅	30m	A	Y204a	C
51	DTG603†	1.0	∅	∅	∅	15	5.0	∅	∅	80	2.0	2.0	5.0	50	∅	∅	30m	A	Y204a	C
52	DTG603M†	1.0	∅	∅	∅	15	2.5	1.4	80	100m*	2.0	5.0	50	250	*	250kΔ	36m	A	Y204a	C
53	DTG2000†	1.0	∅	∅	∅	15	5.0	1.0	30	100mΔ	2.0	8.0	25	∅	∅	250kΔ	36m	A	Y204a	C
54	DTG2100†	1.0	∅	∅	∅	15	5.0	1.0	60	100mΔ	2.0	8.0	25	∅	∅	250kΔ	36m	A	Y204a	C
55	DTG2200†	1.0	∅	∅	∅	15	5.0	1.0	80	100mΔ	2.0	8.0	25	∅	∅	250kΔ	36m	A	Y204a	C
56	DTG2300†	1.0	∅	∅	∅	15	5.0	1.0	100	100mΔ	2.0	8.0	25	∅	∅	250kΔ	36m	A	Y204a	C
57	DTG2400†	1.0	∅	∅	∅	15	5.0	1.0	120	100mΔ	2.0	8.0	25	∅	∅	250kΔ	36m	A	Y204a	C
58	DTG2400M†	1.0	∅	∅	∅	15	5.0	1.5	120	20m	2.0	10	25	125	#	100kΔ	36m	A	Y204a	C
59	HSE803-RT	1.0	∅	∅	∅	∅	∅	60	20	35	1.0m	2.0	500m	30	∅	100kΔ	∅	A	T03	C
60	HSE812-RT	1.0	∅	∅	∅	∅	∅	60	20	35	1.0m	2.0	200m	20	∅	100kΔ	∅	A	T03	C
61	HSE814-RT	1.0	∅	∅	∅	∅	∅	60	20	35	1.0m	2.0	200m	80	∅	100kΔ	∅	A	T03	C
62	MP600†	1.0	∅	∅	∅	25	5.0	75	1.5	50	200u	2.0	5.0	50	∅	∅	30m	A	F4r	C
63	MP600A†	1.0	∅	∅	∅	25	5.0	75	1.5	50	200u	2.0	5.0	50	∅	∅	30m	A	F4s	C
64	MP601†	1.0	∅	∅	∅	25	5.0	75	1.5	60	200u	2.0	5.0	50	∅	∅	30m	A	F4r	C
65	MP601A†	1.0	∅	∅	∅	25	5.0	75	1.5	60	200u	2.0	5.0	50	∅	∅	30m	A	F4s	C
66	MP602†	1.0	∅	∅	∅	25	5.0	90	1.5	70	200u	2.0	5.0	50	∅	∅	30m	A	F4r	C
67	MP602A†	1.0	∅	∅	∅	25	5.0	90	1.5	70	200u	2.0	5.0	50	∅	∅	30m	A	F4s	C
68	MP603†	1.0	∅	∅	∅	25	5.0	90	1.5	80	200u	2.0	5.0	50	∅	∅	30m	A	F4r	C
69	MP603A†	1.0	∅	∅	∅	25	5.0	90	1.5	80	200u	2.0	5.0	50	∅	∅	30m	A	F4s	C
70	MP1612	1.0	∅	∅	∅	20	∅	70	2.0	50	∅	∅	10	25	100	18mΔ	03	A	T03	C
71	MP1612A	1.0	∅	∅	∅	20	∅	110	2.0	75	∅	∅	10	25	100	18mΔ	03	A	T03	C
72	MP1612B	1.0	∅	∅	∅	20	∅	13	2.0	100	∅	∅	10	25	100	18mΔ	03	A	T03	C
73	MP1613	1.0	∅	∅	∅	7.0	2.0	100	50	75	5.0m	2.0	1.0	40	70	∅	∅	A	T03	C
74	MP2060	1.0	∅	∅	∅	7.0	2													

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W/C)	Pc	M T A X E M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		BIAS Vcb (V)	MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #/s/a/2000 Ser.	# C O D E	
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	ICbo @ MAX Vcb @ 25°C (A)	hFE (A)										
1	JAN2N1652†	1.2	100	∅	∅	25	∅	100	1.5	60	5.0m	2.0	10	35	105	28m	10u	∅	TO41	C∅		
2	2N1653	1.2	100	∅	∅	25	∅	120	1.5	80	2.0m	2.0	10	35	140	28m	10u	∅	TO41	C∅		
3	JAN2N1653†	1.2	100	∅	∅	25	∅	120	1.5	80	5.0m	2.0	10	35	105	28m	10u	∅	TO41	C∅		
4	2N1751	1.2	90	∅	∅	25	∅	25	∅	2.5	5.0m	1.5	20	30	90	1.5M	∅	DA	TO3	C∅		
5	2N1970	1.2	93	∅	∅	15	∅	4.0	∅	100	4.0m	2.0	5.0	17	40	5.0k	∅	∅	TO36	C∅		
6	2N2061A†	1.2	90	∅	∅	5.0	∅	3.0	∅	20	10	15	2.0	2.0	60	5.0k	200m	12u	∅	TO3	C∅	
7	2N2062A†	1.2	90	∅	∅	5.0	∅	3.0	∅	20	10	15	2.0	2.0	50	1.0k	140m	12u	∅	TO3	C∅	
8	2N2063A†	1.2	90	∅	∅	5.0	∅	3.0	∅	20	10	15	2.0	2.0	60	5.0k	200m	12u	∅	TO3	C∅	
9	2N2064A†	1.2	90	∅	∅	5.0	∅	3.0	∅	20	10	15	2.0	2.0	50	1.0k	140m	12u	∅	TO3	C∅	
10	2N2065A†	1.2	90	∅	∅	5.0	∅	3.0	∅	30	40	5.0	2.0	2.0	60	5.0k	200m	12u	∅	TO3	C∅	
11	2N2066A†	1.2	90	∅	∅	5.0	∅	3.0	∅	30	40	5.0	2.0	2.0	50	1.0k	140m	12u	∅	TO3	C∅	
12	2N2211	1.2	90	∅	∅	5.0	∅	3.0	∅	80	40	20m	4.0	1.0	60	5.0k	∅	∅	TO3	C∅		
13	2N2212	1.2	60	∅	∅	10	∅	3.0	∅	120	1.5	120	2.0m	∅	5.0	50	120	450k	∅	TO41	C∅	
14	2N2285	1.2	100	∅	∅	25	∅	5.0	∅	60	1.5	30	5.0m	2.0	10	35	140	∅	TO3	C∅		
15	2N2286	1.2	100	∅	∅	25	∅	5.0	∅	100	1.5	60	5.0m	2.0	10	35	140	∅	TO3	C∅		
16	2N2287	1.2	100	∅	∅	25	∅	5.0	∅	120	1.5	80	5.0m	2.0	10	35	140	∅	TO3	C∅		
17	2N2445	1.2	90	∅	∅	15	∅	3.0	∅	100	50	50	20m	∅	10	30	60	100k	∅	TO41	C∅	
18	2N2446†	1.2	90	∅	∅	7.0	∅	5.0	∅	60	20	50	2.0m	∅	5.0	15	45	3.0k	∅	TO3	C∅	
19	2N2636†	1.2	100	∅	∅	25	∅	2.5	∅	100	1.5	60	10m	∅	25	20	80	26m	∅	TO41	C∅	
20	2N2637†	1.2	100	∅	∅	25	∅	2.5	∅	100	1.5	60	10m	∅	25	20	80	26m	∅	TO41	C∅	
21	2N2638†	1.2	100	∅	∅	25	∅	2.5	∅	100	1.5	60	10m	∅	25	20	80	26m	∅	TO41	C∅	
22	2N2691†	1.2	100	∅	∅	15	∅	5.0	∅	100	1.5	80	5.0m	1.5	20	30	100	60k	∅	TO41	C∅	
23	2N3124	1.2	90	∅	∅	15	∅	5.0	∅	40	20	30	20m	∅	10	50	100	2.5k	∅	TO41	C∅	
24	2N3125	1.2	90	∅	∅	3.3	∅	1.7	∅	80	40	80	15m	∅	3.0	50	75	5.0k	∅	TO41	C∅	
25	2N3126	1.2	90	∅	∅	5.0	∅	3.0	∅	100	12	75	3.0m	∅	10	10	30	6.0k	∅	TO41	C∅	
26	2N4242	1.2	106	∅	∅	5.0	∅	5.0	∅	100	40	70	2.0m	∅	2.0	40	200	3.0k	∅	TO3	C∅	
27	2N4243	1.2	106	∅	∅	10	∅	3.0	∅	80	40	70	2.0m	∅	5.0	40	80	75m	∅	TO3	C∅	
28	2N4244	1.2	106	∅	∅	10	∅	3.0	∅	40	20	40	2.0m	∅	5.0	40	80	75m	∅	TO3	C∅	
29	2N4245	1.2	106	∅	∅	10	∅	3.0	∅	40	20	40	2.0m	∅	5.0	40	80	75m	∅	TO3	C∅	
30	2N4246	1.2	106	∅	∅	10	∅	3.0	∅	60	30	55	2.0m	∅	5.0	60	120	75m	∅	TO3	C∅	
31	2N4247	1.2	106	∅	∅	10	∅	3.0	∅	40	20	40	2.0m	∅	5.0	60	120	75m	∅	TO3	C∅	
32	2N5156†	1.2	93	∅	∅	10	∅	2.0	∅	100	60	60	4.0m	∅	5.0	25	60	150k	∅	TO3	C∅	
34	3N49	1.2	94	∅	∅	15	∅	∅	∅	60	28	35	3.0m	∅	5.0	30	120	600k	∅	T70	GK∅	
35	3N50	1.2	94	∅	∅	15	∅	∅	∅	80	28	50	3.0m	∅	5.0	20	80	300k	∅	T70	GK∅	
36	3N51	1.2	94	∅	∅	15	∅	∅	∅	28	25	30	3.0m	∅	5.0	30	120	500k	∅	T70	GK∅	
37	3N52	1.2	94	∅	∅	15	∅	∅	∅	60	28	40	3.0m	∅	5.0	20	80	300k	∅	T70	GK∅	
38	#ADY261	1.2	100	∅	∅	25	∅	3.0	∅	80	40	40	4.0m	∅	0.0	25	∅	100k	∅	TO3	C∅	
39	#ADZ11	1.2	45	∅	∅	20	∅	2.0	∅	50	30	40	8.0m	∅	1.2	40	120	80k	∅	TO3	C∅	
40	#ADZ12	1.2	45	∅	∅	20	∅	2.0	∅	50	30	40	8.0m	∅	1.2	40	120	100k	∅	TO3	C∅	
41	CQT940A	1.2	90	∅	∅	15	∅	5.0	∅	100	20	85	∅	∅	10	20	30	90m	∅	TO3	C∅	
42	CQT940B	1.2	90	∅	∅	15	∅	5.0	∅	100	20	85	∅	∅	10	20	30	90m	∅	TO3	C∅	
43	CQT1110	1.2	90	∅	∅	5.0	∅	4.0	∅	10	30	2.0m	∅	1.0	50	250	250k	∅	TO3	A		
44	CQT1110A	1.2	90	∅	∅	5.0	∅	4.0	∅	10	30	2.0m	∅	1.0	50	250	250k	∅	TO3	A		
45	CQT1111	1.2	90	∅	∅	5.0	∅	6.0	∅	10	50	2.0m	∅	1.0	50	250	250k	∅	TO3	A		
46	CQT1111A	1.2	90	∅	∅	5.0	∅	6.0	∅	10	50	2.0m	∅	1.0	50	250	250k	∅	TO3	A		
47	CQT1112	1.2	90	∅	∅	10	∅	65	∅	65	65	65	2.0m	∅	1.0	75	300	250k	∅	TO3	A	
48	CTP1500	1.2	90	∅	∅	15	∅	5.0	∅	100	30	80	8.0m	∅	5.0	30	75	70m	∅	TO3	C∅	
49	CTP1504	1.2	90	∅	∅	15	∅	5.0	∅	60	30	50	8.0m	∅	5.0	30	75	70m	∅	TO3	C∅	
50	CTP1508	1.2	90	∅	∅	15	∅	5.0	∅	40	30	40	8.0m	∅	5.0	30	75	70m	∅	TO3	C∅	
51	CTP3500	1.2	90	∅	∅	15	∅	5.0	∅	100	30	80	8.0m	∅	5.0	30	75	70m	∅	TO41	C∅	
52	CTP3503	1.2	90	∅	∅	15	∅	5.0	∅	80	30	70	8.0m	∅	5.0	30	75	70m	∅	TO41	C∅	
53	CTP3504	1.2	90	∅	∅	15	∅	5.0	∅	60	30	50	8.0m	∅	5.0	30	75	70m	∅	TO41	C∅	
54	CTP3508	1.2	90	∅	∅	15	∅	5.0	∅	40	30	40	8.0m	∅	5.0	30	75	70m	∅	TO41	C∅	
55	CTP3544	1.2	90	∅	∅	25	∅	5.0	∅	60	30	40	15m	∅	2.0	25	25	125	5.0k	∅	TO41	C∅
56	CTP3545	1.2	90	∅	∅	25	∅	5.0	∅	80	30	40	15m	∅	2.0	25	25	125	5.0k	∅	TO41	C∅
57	CTP3552	1.2	90	∅	∅	25	∅	5.0	∅	40	30	30	10m	∅	2.0	25	25	75	5.0k	∅	TO41	C∅
58	CTP3553	1.2	90	∅	∅	25	∅	5.0	∅	100	30	75	10m	∅	2.0	25	25	75	5.0k	∅	TO41	C∅
59	DTG110	1.2	7.5	∅	∅	7.0	∅	1.0	∅	20	65	200u	2.0	1.0	74	250	∅	200k	∅	Y204a	C∅	
60	DTG110B	1.2	7.5	∅	∅	7.0	∅	1.0	∅	20	65	200u	2.0	1.0	65	300	∅	500k	∅	Y204a	C∅	
61	DTG1010†	1.2	106	∅	∅	15	∅	3.0	∅	1.0	325	∅	15m	∅	∅	∅	∅	450k	∅	TO3	C∅	
62	DTG1110†	1.2	106	∅	∅	15	∅	3.0	∅	1.0	200	∅	15m	∅	∅	∅	∅	450k	∅	TO3	C∅	
63	DTG1200	1.2	106	∅	∅	15	∅	3.0	∅	1.0	120	∅	15m	∅	∅	∅	∅	450k	∅	TO3	C∅	
64	HSE802-RT	1.2	90	∅	∅	∅	∅	∅	∅	50	20	30	3.0m	∅	2.0	500m	50	100k	∅	TO3	C∅	
65	HSE805-RT	1.2	90	∅	∅	∅	∅	∅	∅	65	20	30	1.0m	∅	2.0	200m	50	100k	∅	TO3	C∅	
66	HSE811-RT	1.2	90	∅	∅	∅	∅	∅	∅	40	10	25	3.0m	∅	2.0	200m	30	100k	∅	TO3	C∅	
67	MP110	1.2	106	∅	∅	7.0	∅	2.0	∅	65	∅	∅	2.0m	∅	2.0	1.0	74	250	320k	∅	TO3	C∅
68	MP110B	1.2	106	∅	∅	7.0	∅	2.0	∅	90	2.0	40	200u	∅	1.0	65	300	500k	∅	TO3	C∅	
69	MP249A	1.2	90	∅	∅	6.0	∅	1.0	∅	55	∅	∅	5.0u	∅	5.0	3.0	50	100	4.0k	∅	TO3	C∅
70	MP525	1.2	106	∅	∅	10	∅	∅	∅	60	∅	∅	200u	∅	2.0	3.0	30	200	∅	∅	TO3	C∅
71	MP1077	1.2	106	∅	∅	15	∅	∅	∅	100	100	45	2.0	∅	2.0</							

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	2	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. I _{cb0} @ MAX V _{cb} @ 25°C		BIAS hFE		MIN	MAX	f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# C O A D E		
						I _c	I _b	V _{cb0}	V _{eb0}	V _{ceo}	(A)	(V)	(A)	(V)									(A)	(V)
						(A)	(A)	(V)	(V)	(V)	(A)	(V)	(A)	(V)									(A)	(V)
1		2N2155A	2.0	170	+	30	30	90	45	75	4.0m	2.0	5.0	50	100	2.0kΔ	2.0			T85	T0			
2		2N2156	2.0	170	+	30	30	45	25	30	4.0m	2.0	5.0	80	160	2.0kΔ	2.0m			T85	T0			
3		2N2156A	2.0	170	+	30	30	45	25	30	4.0m	2.0	5.0	80	160	2.0kΔ	2.0			T85	T0			
4		2N2157	2.0	170	+	30	30	60	30	45	4.0m	2.0	5.0	80	160	2.0kΔ	2.0m			T85	T0			
5		2N2157A	2.0	170	+	30	30	60	30	45	4.0m	2.0	5.0	80	160	2.0kΔ	2.0			T85	T0			
6		2N2158	2.0	170	+	30	30	75	40	60	4.0m	2.0	5.0	80	160	2.0kΔ	2.0m			T85	T0			
7		2N2158A	2.0	170	+	30	30	75	40	60	4.0m	2.0	5.0	80	160	2.0kΔ	2.0			T85	T0			
8		2N2159	2.0	170	+	30	30	90	45	75	4.0m	2.0	5.0	80	160	2.0kΔ	2.0m			T85	T0			
9		2N2159A	2.0	170	+	30	30	90	45	75	4.0m	2.0	5.0	80	160	2.0kΔ	2.0			T85	T0			
10		2N2357f	2.0	170	+	50	5.0	60	1.5	30	50m	1.5	20	30	90		18m	15u		T041	C0			
11		2N2358f	2.0	170	+	50	5.0	100	1.5	60	50m	1.5	20	30	90		18m	15u		T041	C0			
12		2N2359f	2.0	170	+	50	5.0	120	1.5	80	50m	1.5	20	30	90		18m	15u		T041	C0			
13		2N2490f	2.0	170	+	12	4.0	70	40	50	200u	2.0	5.0	20	40	5.0kΔ	58m	25u		T036	C0			
14		2N2491f	2.0	170	+	12	4.0	60	30	40	200u	2.0	5.0	35	70	5.0kΔ	58m	25u		T036	C0			
15		2N2492	2.0	170	+	12	4.0	80	60	65	200u	2.0	5.0	25	50	5.0kΔ	50m	25u		T036	C0			
16		2N2493	2.0	170	+	12	4.0	100	80	75	200u	2.0	5.0	25	50	5.0kΔ	41m	25u		T036	C0			
17		2N2691A†	2.0	170	+	20	5.0	120	5.0	80	5.0m	1.5	20	50	100	600kΔ	30m	700u		T041	C0			
18		2N2728†	2.0	170	+	50	10	15	15	5.0	10m	2.0	20	40	130	3.0kΔ	2.0m	25u		T036	C0			
19		2N2730†	2.0	80	+	65	10	80	30	60	5.0m	2.0	25	30	120	#	18u		T036	C0				
20		2N2731†	2.0	80	+	65	10	60	30	45	5.0m	2.0	25	30	120	#	18u		T036	C0				
21		2N2732†	2.0	80	+	65	10	40	20	30	5.0m	2.0	25	30	120	#	18u		T036	C0				
22		2N2793	2.0	170	+	60	10	75	40	60	4.0m	1.5	15	50	100	2.0kΔ	9.0m			T036	C0			
23		2N3146	2.0	150	+	15	3.0	150	60	65	1.5	5.0	30	90	200kΔ	80m			T03	C0				
24		2N3147	2.0	150	+	15	3.0	180	80	75	1.5	5.0	30	90	200kΔ	80m			T03	C0				
25		2N3311	2.0	170	+	5.0	5.0	30	20	20	5.0m	2.0	3.0	60	120	1.0kΔ				T036	C0			
26		2N3312	2.0	170	+	5.0	5.0	45	25	30	5.0m	2.0	3.0	60	120	1.0kΔ				T036	C0			
27		2N3313	2.0	170	+	5.0	5.0	60	30	40	5.0m	2.0	3.0	60	120	1.0kΔ				T036	C0			
28		2N3314	2.0	170	+	5.0	5.0	30	20	20	5.0m	2.0	3.0	100	200	1.0kΔ				T036	C0			
29		2N3315	2.0	170	+	5.0	5.0	45	25	30	5.0m	2.0	3.0	100	200	1.0kΔ				T036	C0			
30		2N3316	2.0	170	+	5.0	5.0	60	30	40	5.0m	2.0	3.0	100	200	1.0kΔ				T036	C0			
31		2N4048†	2.0	170	+	60	10	45	25	30	4.0m	2.0	15	60	180	#	20u			T036	C0			
32		2N4049†	2.0	170	+	60	10	60	30	45	4.0m	2.0	15	60	180	#	20u			T036	C0			
33		2N4050†	2.0	170	+	60	10	75	40	60	4.0m	2.0	15	60	180	#	20u			T036	C0			
34		2N4051†	2.0	170	+	60	10	45	25	30	4.0m	2.0	15	80	240	#	20u			T036	C0			
35		2N4052†	2.0	170	+	60	10	60	30	45	4.0m	2.0	15	80	240	#	20u			T036	C0			
36		2N4053†	2.0	170	+	60	10	75	40	60	4.0m	2.0	15	80	240	#	20u			T036	C0			
37		2N4276†	2.0	170	+	60	10	30	20	20	4.0m	2.0	15	60	180	#	20u			T03	C0			
38		2N4277†	2.0	170	+	60	10	30	20	20	4.0m	2.0	15	80	240	#	20u			T03	C0			
39		2N4278†	2.0	170	+	60	10	45	25	30	4.0m	2.0	15	60	180	#	20u			T03	C0			
40		2N4279†	2.0	170	+	60	10	45	25	30	4.0m	2.0	15	80	240	#	20u			T03	C0			
41		2N4280†	2.0	170	+	60	10	60	30	45	4.0m	2.0	15	60	180	#	20u			T03	C0			
42		2N4281†	2.0	170	+	60	10	60	30	45	4.0m	2.0	15	80	240	#	20u			T03	C0			
43		2N4282†	2.0	170	+	60	10	75	40	60	4.0m	2.0	15	60	180	#	20u			T03	C0			
44		2N4283†	2.0	170	+	60	10	75	40	60	4.0m	2.0	15	80	240	#	20u			T03	C0			
45#		2SB407	2.0	30	+	7.0		30	10	30	5.0m	1.5	1.0	80	240	#	350kΔ			T03	C0			
46		HEPG6002-RT	2.0	170	+	65		40	20	30	4.0m	2.0	5.0	50	100	2.7k	20m			T036	C0			
47		MP500	2.0	170	+	60		45	25	30	200u	2.0	15	30	75	2.0kΔ	9.0m			T85	T0			
48		MP500A	2.0	170	+	60		45	25	30	200u	2.0	50	12	20	2.0kΔ	9.0m			T036	C0			
49		MP501	2.0	170	+	60		60	30	45	200u	2.0	15	30	75	2.0kΔ	9.0m			T85	T0			
50		MP501A	2.0	170	+	60		60	30	45	200u	2.0	50	12	20	2.0kΔ	9.0m			T036	C0			
51		MP502	2.0	170	+	60		75	40	60	200u	2.0	15	30	75	2.0kΔ	9.0m			T85	T0			
52		MP502A	2.0	170	+	60		75	40	60	200u	2.0	50	12	20	2.0kΔ	9.0m			T036	C0			
53		MP503	2.0	170	+	60		90	45	75	4.0m	2.0	15	30	75	2.0kΔ	9.0m			T85	T0			
54		MP504	2.0	170	+	60		45	25	30	200u	2.0	15	50	125	2.0kΔ	9.0m			T85	T0			
55		MP504A	2.0	170	+	60		45	25	30	200u	2.0	50	12	20	2.0kΔ	9.0m			T036	C0			
56		MP505	2.0	170	+	60		60	30	45	200u	2.0	15	50	125	2.0kΔ	9.0m			T85	T0			
57		MP505A	2.0	170	+	60		60	30	45	200u	2.0	50	12	20	2.0kΔ	9.0m			T036	C0			
58		MP506	2.0	170	+	60		75	40	60	200u	2.0	15	50	125	2.0kΔ	9.0m			T85	T0			
59		MP506A	2.0	170	+	60		75	40	60	200u	2.0	50	12	20	2.0kΔ	9.0m			T036	C0			
60		MP507	2.0	170	+	60		90	45	75	4.0m	2.0	15	50	125	2.0kΔ	9.0m			T85	T0			
61		MP4276†	2.0	170	+	60	10	30	20	20	4.0m	2.0	15	60	180	#	20u			T041	C0			
62		MP4277†	2.0	170	+	60	10	30	20	20	4.0m	2.0	15	80	240	#	20u			T041	C0			
63		MP4278†	2.0	170	+	60	10	45	25	30	4.0m	2.0	15	60	180	#	20u			T041	C0			
64		MP4279†	2.0	170	+	60	10	45	25	30	4.0m	2.0	15	80	240	#	20u			T041	C0			
65		MP4280†	2.0	170	+	60	10	60	30	45	4.0m	2.0	15	60	180	#	20u			T041	C0			
66		MP4281†	2.0	170	+	60	10	60	30	45	4.0m	2.0	15	80	240	#	20u			T041	C0			
67		MP4282†	2.0	170	+	60	10	75	40	60	4.0m	2.0	15	60	180	#	20u			T041	C0			
68		MP4283†	2.0	170	+	60	10	75	40	60	4.0m	2.0	15	80	240	#	20u			T041	C0			
69#		PT6	2.0	6.0	+	2.0	#	32	10	20	200u	1.0	50m	74	300	1.5MΔ				F4n	A0			
70		SDG604	2.0	90	+	25	2.5	30	1.5	20	2.0	2.0	20	30	90		18m			T03	C0			
71		SDG605	2.0	90	+	25	2.5	45	1.5	30	2.0	2.0	20	30	90		18m			T03	C0			
72		SDG606	2.0	90	+	25	2.5	60	1.5	45	2.0	2.0	20	30	90		18m			T03	C0			
73		SDG607	2.0	90	+	25	2.5	75	1.5	60	2.0	2.0	20	30	90		18m			T03	C0			
74		SDT1808	2.0	170	+	60	10	80	30	60	5.0m	2.0	50	15		340kΔ	10m	10u		T036	C0			

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	2	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		MAX. SAT. RES. (Ω)	tr (s)	STRUC. TURE	DWG Y200 s/a TO200 Ser.	# C O D E		
							Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	hFE MIN	hFE MAX						fae (Hz)	
1#		2SA473		10	∅	\$J	3.0		30	5.0	25	100	1.0	50m	40	400	200M\$	B17	A	
2#		2SA483		20	∅	\$J	1.0	1.0 ∅	150	5.0	150	100	10	100m	30	250	9.0M\$	T066	C	
3#		2SA489		30	∅	\$J	4.0		70	5.0	60	30	50m	40	240	5.0M\$	B17	A		
4#		2SA555		350	∅		500m		50	4.0	50	500	3.0	10	40	200		T01		
5#		2SA597		50	∅	\$J	1.0		50	4.0	40	1.0	300	150m	10	250	400M\$	PE T039	A	
6#		2SA656A		6.0	∅	\$J	7.0	2.0	130	5.0	110	100	5.0	1.0	30	300	5.0M\$	DM T03	C	
7#		2SA657A		50	∅	\$J	7.0	2.0	100	5.0	80	100	5.0	1.0	30	300	5.0M\$	DM T03	C	
8#		2SA658A		60	∅	\$J	7.0	2.0	70	5.0	50	100	5.0	1.0	30	300	5.0M\$	DM T03	C	
9#		2SA663		50	∅	\$J	7.0		100	5.0	80	1.0	50	1.0	30	200	6.0M\$	EM T03	C	
10#		2SA714		60	∅	\$S	12 #		150	6.0	100	1.0	5.0	1.0	320	8.0 \$	E T03	C		
11#		2SA714L		60	∅	\$S	12 #		100	6.0	80	1.0	5.0	1.0	320	8.0 \$	E T03	C		
12#		2SA740		25	∅	\$J	1.5		150	5.0	150	20	10	500m	40	140	8.0M\$	DM Y220b	D	
13#		2SA814		15	∅	\$J	1.0		120	5.0	120	1.0	5.0	150m	70	240	30M\$	EM Y220b	D	
14#		2SA815		15	∅	\$J	1.0		100	5.0	100	1.0	5.0	150m	70	240	30M\$	EM Y220b	D	
15#		2SA818		1.0	∅	\$J	50m		180	5.0	150	1.0	5.0	10m	70	240	120M\$	D B15	A	
16#		2SB502A		25	∅	\$J	3.0		110	10	80	10	500m	30	280	1.0M\$	DM T066	C		
17#		2SB503A		25	∅	\$J	3.0		80	10	50	10	500m	30	280	1.0M\$	DM T066	C		
18#		2SB507		30	∅	\$J	3.0		60	5.0	60	100	2.0	1.0	40	320	8.0M\$	E B17		
19#		2SB508		30	∅	\$J	3.0		60	5.0	60	100	2.0	1.0	40	320	8.0M\$	E B17		
20#		2SB509		35	∅	\$J	4.0		60	5.0	60	100	2.0	1.0	40	320	8.0M\$	E T066		
21#		2SB510		800m		\$	1.5 #		80	7.0	60	1.0	200m	60	320 #	5.0M\$	1.0	FE T039	A	
22#		2SB511		10	∅	\$J	1.5		35	5.0	35	100	2.0	1.0	40	320	8.0M\$	E B17		
23#		2SB514		20	∅	\$J	2.0		50	5.0	50	100	2.0	1.0	40	320	8.0M\$	E B17		
24#		2SB515		20	∅	\$J	2.0		50	5.0	50	100	2.0	1.0	40	320	8.0M\$	E B17		
25#		2SB518		60	∅	\$J	7.0		90	8.0	90	100	2.0	3.0	50 ∅		3.0M\$Δ	T03	C	
26#		2SB519		100	∅	\$J	7.0		110	8.0	110	100	2.0	4.0	50 ∅		3.0M\$Δ	T03	C	
27#		2SB520		120	∅	\$J	12		140	8.0	140	100	2.0	5.0	50 ∅		3.0M\$Δ	T03	C	
28#		2SB521		43	∅	\$J	5.0	1.0	60	8.0	60	2.0	2.0	100m	45	250 *	7.0M\$	50 #	E Y220	D
29#		2SB522		43	∅	\$J	5.0	1.0	60	8.0	60	2.0	2.0	100m	45	250 *	7.0M\$	50 #	E Y220	T
30#		2SB552		150	∅	\$J	15		220	5.0	180	500	5.0	5.0	25	80	4.0M\$	1.0	DM T03	C
31#		2SB554		150	∅	\$J	15		160	5.0	160	100	5.0	2.0	40	140	6.0M\$	DM T03	C	
32#		2SB555		100	∅	\$J	12		140	5.0	140	100	5.0	2.0	40	140	6.0M\$	DM T03	C	
33#		2SB556		100	∅	\$J	12		120	5.0	120	100	5.0	2.0	40	140	6.0M\$	DM T03	C	
34#		2SB557		80	∅	\$J	8.0		120	5.0	120	100	5.0	1.0	40	140	7.0M\$	DM T03	C	
35#		2SB558		60	∅	\$J	7.0		100	5.0	100	100	5.0	1.0	40	140	7.0M\$	DM T03	C	
36#		2SB595		40	∅	\$J	5.0	4.0	100	5.0	100	100	5.0	1.0	40	240	4.0M\$	DM Y220b	D	
37#		2SB596		30	∅	\$J	4.0	3.0	80	5.0	80	30	500m	40	240	3.0M\$Δ	DM Y220b	D		
38#		BD534		50	∅	\$J	4.0	1.0	45	5.0	45	2.0	2.0	25	25		3.0M\$Δ	E Y220a		
39#		BD536		50	∅	\$J	4.0	1.0	60	5.0	60	2.0	2.0	25	25		3.0M\$Δ	E Y220a		
40#		BD538		50	∅	\$J	4.0	1.0	80	5.0	80	2.0	2.0	15	15		3.0M\$Δ	E Y220a		
41#		BFR231		7.0	∅	\$J						10	500m	20	20		60M\$Δ	50n∅	T039	A
42#		BSV82		10	∅	\$J						1.0	500m	15	15		120M\$	50n∅	T039	A
43		HA7730		1.0	∅	\$			40	20		5.0	5.0	22	∅		1.0M\$	A	R192	
44		HA7731		1.0	∅	\$			80	40		2.0	10	5.0	22	∅	1.0M\$	A	R192	
45		HA7732		1.0	∅	\$			40	20		5.0	10	5.0	60	∅	1.0M\$	A	R192	
46		HA7733		1.0	∅	\$			80	40		2.0	10	5.0	60	∅	1.0M\$	A	R192	
47		HEP76-RT		1.0	∅	\$J	400m\$		40	3.5	20	1.0	25	15		250M\$	A	T039	A	
48		HEP242-RT		6.0	∅	\$J	3.0 \$		60	7.0	40	500	5.0	40	60	∅	8.0M\$	A	T05	B
49		HEP246-RT		30	∅	\$J	3.0 \$		60	5.0	40	500	5.0	40	60	∅	8.0M\$	A	B16b	B
50		HEP248-RT		150	∅	\$J	10 \$		70	7.0	50	2.0	40	60	∅	6.0M\$	A	T03	C	
51		HEP700-RT		40	∅	\$J	5.0 \$		40	5.0	40	100	5.0	25	70	∅	8.0M\$	A	B16b	B
52		HEP702-RT		25	∅	\$J	3.0 \$		80	5.0	80	100	5.0	60	80	∅	8.0M\$	A	T066	C
53		HEP705-RT		87	∅	\$J	5.0 \$		40	5.0	40	1.0	40	250	∅	4.0M\$	A	T03	C	
54		HEP708-RT		1.8	∅	\$J	600m\$		60	5.0	60	3.0	30	85	∅	275M\$	A	T018	A	
55		HEP710-RT		3.0	∅	\$J	100m\$		95	4.5	80	5.0	15	25	∅	200M\$	A	T05	A	
56		HEPS3003-RT		6.0	∅	\$J	5.0 \$		80	5.0	80	100	5.0	80	∅	30M\$	A	B18	A	
57		HEPS3027-RT		8.0	∅	\$J	1.5 \$		35	4.0	35	100	∅	110	∅	50M\$	A	B18	A	
58		HEPS3028-RT		8.0	∅	\$J	1.5 \$		35	4.0	35	100	∅	200	∅	50M\$	A	B18	A	
59		HEPS3029-RT		8.0	∅	\$J	1.5 \$		35	4.0	35	100	∅	320	∅	50M\$	A	B18	A	
60		HEPS3030-RT		8.0	∅	\$J	1.5 \$		35	4.0	35	100	∅	550	∅	50M\$	A	B18	A	
61		HEPS3031-RT		5.0	∅	\$J	1.0 \$		80	4.0	80	100	∅	140	∅	125M\$	A	B18	A	
62		HEPS5002-RT		90	∅	\$J	10 \$		70	5.0	60	1.0	50	∅	2.0M\$	A	B5b	B6		
63		HEPS5005-RT		90	∅	\$J	10 \$		90	4.0	90	100	∅	70	∅	2.0M\$	A	B5b	B6	
64		HEPS5006-RT		40	∅	\$J	4.0 \$		80	5.0	80	100	∅	60	∅	2.0M\$	A	B5a	B	
65		HEPS5007-RT		40	∅	\$J	4.0 \$		60	5.0	60	100	∅	60	∅	2.0M\$	A	B5a	B	
66		HEPS5008-RT		65	∅	\$J	5.0 \$		40	4.0	40	100	∅	70	∅	2.0M\$	A	B5b	B6	
67		HEPS5009-RT		65	∅	\$J	5.0 \$		40	4.0	40	100	∅	120	∅	2.0M\$	A	B5b	B6	
68		HEPS5010-RT		65	∅	\$J	5.0 \$		40	4.0	40	100	∅	200	∅	2.0M\$	A	B5b	B6	
69		HEPS7001-RT		200	∅	\$J	30 \$		100	4.0	100	1.0	75	∅	75	∅	2.0M\$	A	T03	C
70		PTC106-RT		150	∅		15		55	40	20	8.0	2.0	5.0	40	90 ∅	10k\$Δ	A	T036	A
71		PTC111-RT		12	∅		3.0		70	7.0	70	10	200m	40	120	50M\$Δ	A	B17a	D	
72		PTC113-RT		25	∅		4.0		90	4.0	80	1.0	40	50	30	80 ∅	6.0M\$	A	T066	
73		PTC141-RT		7.0	∅		1.0		105	8.0	100	15	10	100m	100 ∅		9.0M\$	A	T05	A
74		PTC142-RT		6.0	∅		3.0		65	8.0	45	500	10	500m	60		8.0M\$	A	T05	A
75		PTC149-RT		150	∅		15		100	7.0	70	2.0	50	1.0	60	∅	6.0M\$	A	T03	C
76		PTC157-RT		40	∅		4.0		60	5.0	60	100	10	250m	60	∅	8.0M\$	A	B17a	D
77		PTC160-RT		40	∅		4.0		60	5.0	60	100	10	500m	70	∅	8.0M\$	A	B16	B
78		PTC174-RT		250	∅		30		100	6.0	100	1.0	2.0	4.0	20	120	2.0M\$	A	T03	C
79		PTC177-RT		1.0	∅	\$J	1.0		70	5.0	60	100	∅	150m	160	∅	120M\$	PE	R198	B
80		SK3025-RT		7.0	∅	\$J	1.0		90	7.0	90	10	150m	100	∅	100M\$	#	T05	A	
81		SK3053-RT		10	∅	\$J	1.0		200	4.0	200	10	50m	90	∅	15M\$		PE	T05	A
82																				

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	2	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. I _{cb} @ MAX V _{cb} @25°C (A)	BIAS			MAX. f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG Y200 s/a T0200 Ser.	# E O D E		
							I _c	I _b	V _{cb}	V _{eb}	V _{ce}		V _{cb}	I _c	MIN							MAX	
							(A)	(A)	(V)	(V)	(V)		(V)	(A)	(V)							(A)	
1		HA7528	7.1m	1.0		\$J			60	60		100n	5.0	1.0m	42	†							
2		HA7529	7.1m	1.0		\$J			90			100n			14	†							
3		HA7723	7.1m	1.0		\$J		50m	50	10		1.0u	6.0	1.0m	25	∅				R192			
4		HA7725	7.1m	1.0		\$J		50m	100	60		1.0u	6.0	1.0m	14	∅				R192			
5		HA7734	7.1m	1.0		\$J		50m	50	20		1.0u	6.0	1.0m	14	∅	†			R192			
6		HA7735	7.1m	1.0		\$J		50m	50	20		1.0u	6.0	1.0m	25	∅	†			R192			
7		HA7736	7.1m	1.0		\$J		50m	50	20		1.0u	6.0	1.0m	50	∅	†			R192			
8		HA7737	7.1m	1.0		\$J		50m	50	20		1.0u	6.0	1.0m	18	∅	†			R192			
9		2N1238	7.4m	1.0		\$J			15	15	15	100n	5.0	1.0m	14		32			R192			
10		2N1239	7.4m	1.0		\$J			15	15	15	100n	5.0	1.0m	28	65				R192			
11		2N1240	7.4m	1.0		\$J			35	35	35	100n	5.0	1.0m	14	32				R192			
12		2N1241	7.4m	1.0		\$J			35	35	35	100n	5.0	1.0m	28	65				R192			
13		2N1242	7.4m	1.0		\$J			60	60	60	100n	5.0	1.0m	14	32				R192			
14		2N1243	7.4m	1.0		\$J			60	60	60	100n	5.0	1.0m	28	65				R192			
15		2N1244	7.4m	1.0		\$J			110	110	110	100n	5.0	1.0m	14	32				R192			
16		2SA607	8.0m	1.0		\$J		700m	100	5.0	80	3.0u	5.0	200m	40		200 #	50M	4.0 #	T037			
17		2SA607S	8.0m	1.0		\$J		700m	100	5.0	80	3.0u	5.0	200m	40		200 #	50M	4.0 #	T037			
18		2SA898	8.0m	1.0		\$J		50m	150	5.0	120	1.0u	5.0	10m	150	∅		100M	50	B5c			
19		2SA899	8.0m	1.0		\$J		50m	150	5.0	150	1.0u	5.0	10m	150	∅		100M	50	B5c			
20		2SA914	8.0m	1.0		\$J		100m	150	5.0	150	1.0u	5.0	10m	65		450	200M	20	T0126			
21		BCX51	8.0m	1.0		\$J		100m	45	5.0	45	100n	2.0	150m	40		250	50M	1.0	X166			
22		BCX52	8.0m	1.0		\$J		100m	60	5.0	60	100n	2.0	150m	40		160	50M	1.0	X166			
23		BCX53	8.0m	1.0		\$J		100m	100	5.0	80	100n	2.0	150m	40		160	50M	1.0	X166			
24		2SA684	9.0m	1.0		TJ	1.5 #		60	5.0	50	100n	1.0	500m	60	†	340	†	200M	R182a			
25		2SA751	9.0m	1.0		TJ	1.5 #		30	5.0	25	100n	1.0	500m	60	†	340	†	200M	R209			
26		2SA752	9.0m	1.0		TJ	1.5 #		60	5.0	50	100n	1.0	500m	60	†	340	†	200M	R209			
27		2SA900	9.6m	1.2		∅	2.0 #		20	5.0	18	1.0u	2.0	500m	90			200M		T0126			
28		PE8550	9.8m	1.2		\$J	1.5		30	6.0	25	100n	1.0	1.0	40		200		750m	DPL T092			
29		PE8551	9.8m	1.2		\$J	1.5		45	6.0	35	100n	1.0	1.0	30		180		130n	DPL T092			
30		2SA79K1	10m	1.0		\$J	1.5		35	5.0	35	20u	2.0	500m	60		320 *	110M	500m	PE T B11			
31		2SA780AKT	10m	1.0		\$J	1.0		80	4.0	80	20u*	4.0	50m	40		320 *	120M	1.5	110n			
32		ST72039†	10m	1.5		\$J	5.0		80	8.0	80 *	20u	1.0	2.0	30		120 #	20M	500n	PL T05			
33		ST72040†	10m	1.5		\$J	5.0		100	8.0	100 *	20u	1.0	2.0	30		120 #	20M	500n	PL T05			
34		ST72041†	10m	1.5		\$J	5.0		120	8.0	120 *	20u	1.0	2.0	30		120 #	20M	500n	PL T05			
35		2N3485†	11m	2.0		\$S	600m		60	5.0	40	20n	1.0	150m	40		120 #	200M	3.2	EA T046			
36		2N3486†	11m	2.0		\$S	600m		60	5.0	40	20n	1.0	150m	100		300 #	200M	3.2	EA T046			
37		2N5229∅	12m	2.0		\$S	50m		15	15		1.0n	1.0	100u	50			8.0M		T046			
38		2N5230∅	12m	2.0		\$S	50m		30	30		1.0n	1.0	100u	50			8.0M		T046			
39		2N5231∅	12m	2.0		\$S	50m		50	50		1.0n	1.0	100u	50			8.0M		T046			
40		TRSP2255	13m	2.0		\$A	400m	50m	225	5.0	225	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
41		TRSP2255S	13m	2.0		\$A	400m	50m	250	5.0	225	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
42		TRSP2505	13m	2.0		\$A	400m	50m	250	5.0	250	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
43		TRSP2505S	13m	2.0		\$A	400m	50m	275	5.0	250	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
44		TRSP2755	13m	2.0		\$A	400m	50m	275	5.0	275	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
45		TRSP2755S	13m	2.0		\$A	400m	50m	300	5.0	275	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
46		TRSP3015	13m	2.0		\$A	400m	50m	300	5.0	300	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
47		TRSP3015S	13m	2.0		\$A	400m	50m	325	5.0	300	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
48		TRSP3505	13m	2.0		\$A	400m	50m	350	5.0	350	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
49		TRSP3515S	13m	2.0		\$A	400m	50m	375	5.0	350	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
50		TRSP4015	13m	2.0		\$A	400m	50m	400	5.0	400	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
51		TRSP4015S	13m	2.0		\$A	400m	50m	425	5.0	400	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
52		TRSP4255S	13m	2.0		\$A	400m	50m	450	5.0	425	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
53		TRSP4505	13m	2.0		\$S	400m	50m	450	5.0	450	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
54		TRSP4505S	13m	2.0		\$A	400m	50m	475	5.0	450	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
55		TRSP4755S	13m	2.0		\$A	400m	50m	500	5.0	475	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
56		TRSP5015	13m	2.0		\$S	400m	50m	500	5.0	500	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
57		TRSP5015S	13m	2.0		\$S	400m	50m	525	5.0	500	3.0u	1.0	25m	25	#	50	∅	20M	200	200n	DM	F8
58		JAN2N3762†	16m	1.0		\$J	1.5		40	5.0	40 *	100n	1.0	500m	40		140 #	180M	1.0 #	35n	T05		
59		JAN2N3763†	16m	1.0		\$J	1.5		60	5.0	60 *	100n	1.0	500m	40		140 #	180M	1.0 #	35n	T05		
60		2N6554	16m	2.0		\$S	1.0	100m	60	5.0	60	100n	1.0	50m	80		300	75M	2.0 #		Y202c		
61		2N6555	16m	2.0		\$S	1.0	100m	80	5.0	80	100n	1.0	50m	80		300	75M	2.0 #		Y202c		
62		2N6556	16m	2.0		\$S	1.0	100m	100	5.0	100	100n	1.0	50m	80		300	75M	2.0 #		Y202c		
63		92PE77A	20m	1.2		\$J	2.0	500m	60	5.0	45	100n	2.0	250m	40			50M			PLT B32		
64		92PE77B	20m	1.2		\$J	2.0	500m	80	5.0	60	100n	2.0	250m	40			50M			PLT B32		
65		92PE77C	20m	1.2		\$J	2.0	500m	100	5.0	80	100n	2.0	250m	40			50M			PLT B32		
66		92PU51	20m	1.2		\$J	2.0		40	5.0	30	100n	1.0	1.0	50			50M	500m		DPLT B32		
67		92PU51A	20m	1.2		\$J	2.0		50	5.0	40	100n	1.0	1.0	50			50M	500m		DPLT B32		
68		92PU55	20m	1.2		\$J	2.0	500m	60	4.0	60	100n	1.0	50m	80			50M			PLT B32		
69		92PU56	20m	1.2		\$J	2.0	500m	80	4.0	80	100n	1.0	50m	80			50M			PLT B32		
70		92PU57	20m	1.2		\$J	2.0	500m	100	4.0	100	100n	1.0	50m	80			50M			PLT B32		
71		40391	20m	3.5		\$J	1.0	500m	60	7.0	40	25n	1.0	1.0	15			60M	9.3		DPEA F31		
72		40410	20m	3.0 #		\$J	700m	200m	40	9.0	50	1.0u*	4.0	150m	50		250	100M	9.3		DPEA F31		
73		BD370A	20m	1.2		\$J	2.0	500m	45	5.0	45	100n	1.0	100m	40		400	50M			PLT B32		
74		BD370B	20m	1.2																			

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE				MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	H C A D E	
					Ic (A)	Ib (A)	BVcbo (V)	BVceo (V)	Vcbo (V)	MAX Vcb @ 25°C (A)	Vcb (V)	Ic (A)	MIN						MAX
1	2N37761	50m\$	5.0	∅	\$J	1.0	500m	80	8.0†	80	500u#	2.0	200m	20	60 #	1.0M\$Δ	3.0u∅	T05	A∅
2	2N37771	50m\$	5.0	∅	\$J	1.0	500m	100	8.0†	100	500u#	2.0	200m	20	60 #	1.0M\$Δ	3.0u∅	T05	A∅
3	2N37781	50m\$	5.0	∅	\$J	1.0	500m	40	8.0†	40	500u#	2.0	200m	10	40 #	1.0M\$Δ	3.0u∅	T05	A∅
4	2N37791	50m\$	5.0	∅	\$J	1.0	500m	60	8.0†	60	500u#	2.0	200m	10	40 #	1.0M\$Δ	3.0u∅	T05	A∅
5	2N37801	50m\$	5.0	∅	\$J	1.0	500m	80	8.0†	80	500u#	2.0	200m	10	40 #	1.0M\$Δ	3.0u∅	T05	A∅
6	2N37811	50m\$	5.0	∅	\$J	1.0	500m	100	8.0†	100	500u#	2.0	200m	10	40 #	1.0M\$Δ	3.0u∅	T05	A∅
7	2N37821	50m\$	5.0	∅	\$J	3.0	1.0	40	8.0†	40	500u#	3.0	1.0	10	60 #	1.0M\$Δ	3.0u∅	T05	A∅
8	2N37951	50m\$	5.0	∅	\$J	1.0	500m	120	10	120	1.0m#	2.0	10m	12	36	500k\$Δ	5.0u	T05	∅
9	2N54041	50m\$	1.0	Δ	\$J	5.0	2.0	80	6.0†	80	10u#	5.0	2.0	20	60	40M\$Δ	1.0	T05	A∅
10	2N54051	50m\$	1.0	Δ	\$J	5.0	2.0	100	6.0†	100	10u#	5.0	2.0	20	60	40M\$Δ	1.0	T05	A∅
11	2N54061	50m\$	1.0	Δ	\$J	5.0	2.0	80	6.0†	80	10u#	5.0	2.0	40	120	40M\$Δ	800m	T05	A∅
12	2N54071	50m\$	1.0	Δ	\$J	5.0	2.0	100	6.0†	100	10u#	5.0	2.0	40	120	40M\$Δ	800m	T05	A∅
13#	2SA496	50m	5.0	∅	\$J	800m	800m	40	5.0	30	1.0u∅	2.0	50m	40	240	100M\$	1.6	PE	B7
14#	2SA505	50m	5.0	∅	\$J	800m	800m	70	5.0	50	110u∅	2.0	50m	40	240	100M\$	1.6	PE	B7
15#	BF470	50m	1.8	∅	\$J	100m	250	5.0	5.0	250	10n∅	2.0	25m	50		60M\$	800	PE	T0126
16	D41D10	50m	1.3	#	\$J	1.0			5.0	75	100n\$	2.0	100m	50	150	150M\$			B15b
17	D41D11	50m	1.3	#	\$J	1.0			5.0	75	100n\$	2.0	100m	120	360	150M\$			B15b
18	D41D13	50m	1.3	#	\$J	1.0			5.0	75	100n\$	2.0	100m	50	150	150M\$	2.0		B15b
19	D41D14	50m	1.3	#	\$J	1.0			5.0	75	100n\$	2.0	100m	120	360	150M\$	2.0		B15b
20	NP3548	50m	5.0	∅	\$J	800m		100	5.0	80	1.0u	5.0	200m	40	320 #	80 \$		E	T0126
21	NP3549	50m	5.0	∅	\$J	800m		120	5.0	100	1.0u	5.0	200m	40	320 #	80 \$		E	T0126
22	NP3548	50m	5.0	∅	\$J	800m		120	5.0	100	1.0u	5.0	200m	40	320 #	80 \$		E	T0126
23	SDT3321	50m	1.0		\$J	5.0	2.0	40	6.0	40	0.1m	5.0	2.0	40	120	40M\$Δ	.50	PE	T05
24	SDT3322	50m	1.0		\$J	5.0	2.0	60	6.0	60	0.1m	5.0	2.0	40	120	40M\$Δ	.50	PE	T05
25	SDT3323	50m	1.0		\$J	5.0	2.0	80	6.0	80	0.1m	5.0	2.0	40	120	40M\$Δ	.50	PE	T05
26	SDT3324	50m	1.0		\$J	5.0	2.0	100	6.0	100	0.1m	5.0	2.0	40	120	40M\$Δ	.50	PE	T05
27	SDT3325	50m	1.0		\$J	5.0	2.0	40	6.0	40	0.1m	5.0	2.0	20	60	40M\$Δ	.50	PE	T05
28	SDT3326	50m	1.0		\$J	5.0	2.0	60	6.0	60	0.1m	5.0	2.0	20	60	40M\$Δ	.50	PE	T05
29	SDT3327	50m	1.0		\$J	5.0	2.0	80	6.0	80	0.1m	5.0	2.0	20	60	40M\$Δ	.60	PE	T05
30	SDT3328	50m	1.0		\$J	5.0	2.0	100	6.0	100	0.1m	5.0	2.0	20	60	40M\$Δ	.60	PE	T05
31	SDT3329	50m	1.0		\$J	5.0	2.0	120	6.0	120	0.1m	5.0	2.0	20	60	40M\$Δ	.60	PE	T05
32	MPSU52	54m	1.0		TJ	800m		60	5.0	40	100n#	10	150m	50	300	150M\$	2.6	ANT	B18
33#	JAN2N38671	56m	1.0		\$S	3.0		40	4.0	40	1.0u#	2.0	1.5	40	200 #	60M\$Δ	500m	100n∅	A∅
34#	JAN2N38681	56m	1.0		\$S	3.0		60	4.0	60	1.0u#	2.0	1.5	30	150 #	60M\$Δ	500m	100n∅	A∅
35	2N53221	56m	10		\$J	2.0	1.0	100	7.0	75	100u#	4.0	500m	30	130	50M\$Δ	1.4	100n∅	A∅
36	2N53231	56m	10		\$J	2.0	1.0	75	5.0	50	100u#	4.0	500m	40	250	50M\$Δ	2.4	100n∅	A∅
37	2N5415	56m#	1.0		\$S	1.0	500m	200	4.0	200	50u∅	10	50m	30	150	15M\$Δ			T05
38	2N5416	56m#	1.0		\$S	1.0	500m	350	6.0	300	50u∅	10	50m	30	120	15M\$Δ			T05
39	40595	56m	1.2		\$A	2.0	1.0		4.0		10u*	4.0	300m	70	350		2.7		T05
40	STIP10	56m#	1.0		\$S	1.0	500m	100	5.0	100	3.0u	10	20m	30	200	30M			T05
41	STIP20	56m#	1.0		\$S	1.0	500m	200	5.0	200	4.0u	10	20m	30	200	30M			T05
42	STIP30	56m#	1.0		\$S	1.0	500m	300	5.0	300	4.0u	10	20m	25	200	30M			T05
43	STIP40	56m#	1.0		\$S	1.0	500m	400	5.0	400	4.0u	10	20m	25	200	30M			T05
44	TRSP15X	56m	10		\$A	1.0	500m	175	12	150	100u	10	30m	900	40k	25M\$Δ			T05
45	TRSP20X	56m	10		\$A	1.0	500m	200	12	200	100u	10	30m	900	40k	25M\$Δ			T05
46	TRSP25X	56m	10		\$A	1.0	500m	250	12	250	100u	10	30m	900	40k	25M\$Δ			T05
47	TRSP30X	56m	10		\$A	1.0	500m	300	12	300	100u	10	30m	900	40k	25M\$Δ			T05
48	TRSP3743	56m	2.0		\$	1.0		300	5.0	300	300n	10	30m	25	250	30M			F8
49	TRSP4000	56m	1.0		\$	1.0		100	4.0	100	1.0u	10	10m	20	250	20M			T05
50	TRSP4001	56m	1.0		\$	1.0		150	4.0	150	1.0u	10	10m	20	250	20M			T05
51	TRSP4002	56m	1.0		\$	1.0	500m	200	4.0	200	3.0u	10	10m	20	250	20M			T05
52	TRSP4003	56m	1.0		\$	1.0	500m	250	4.0	250	3.0u	10	10m	20	250	20M			T05
53	TRSP4930	56m	2.0		\$	1.0		200	4.0	200	1.0u	10	10m	20	200	20M			F8
54	TRSP4931	56m	2.0		\$	1.0		250	4.0	200	1.0u	10	10m	20	200	20M			F8
55	TRSP5281	56m	2.0		\$	1.0		175	6.0	150	1.0u	10	10m	30	200	20M			F8
56	TRSP5282	56m	2.0		\$	1.0		325	6.0	300	1.0u	10	10m	30	200	20M			F8
57	TRSP5415	56m	2.0		\$	1.0	500m	4.0	4.0	200	50uΔ	10	50m	30	150	20M			F8
58	TRSP5416	56m	2.0		\$	1.0	500m	350	6.0	300	50uΔ	10	50m	30	120	20M			F8
59	2N5781	57m	10		\$J	3.5	1.0	80	5.0	80	1.0m#	2.0	1.0	20	100	8.0M\$Δ	625m		P
60	2N5782	57m	10		\$J	3.5	1.0	65	5.0	65	1.0m#	2.0	1.2	20	100	8.0M\$Δ	625m		P
61	2N5783	57m	10		\$J	3.5	1.0	45	3.5	45	1.0m#	2.0	1.6	20	100	8.0M\$Δ	625m		P
62	2N6190†	57m	10		\$J	5.0	1.0	80	6.0†	80	10u+	2.0	2.0	30	120 #	30M\$Δ		100n∅	T039
63	2N6191†	57m	10		\$J	5.0	1.0	80	6.0†	80	10u+	2.0	2.0	60	240 #	30M\$Δ		100n∅	T039
64	2N6192†	57m	10		\$J	5.0	1.0	100	6.0†	100	10u+	2.0	2.0	30	120 #	30M\$Δ		100n∅	T039
65	2N6193†	57m	10		\$J	5.0	1.0	100	6.0†	100	10u+	2.0	2.0	60	240 #	30M\$Δ		100n∅	T039
66	40595L	57m	1.2		\$A	2.0	1.0		4.0	95	10u*	4.0	300m	70	350		2.7		T05
67	40595S	57m	1.2		\$A	2.0	1.0		4.0	95	10u*	4.0	300m	70	350		2.7		T039
68#	BSS17	57m	10		\$J	2.0	1.0	100	7.0	75	500n∅	4.0	500m	30	130 #	50M\$Δ		100n∅	PE
69#	BSS18	57m	10		\$J	2.0	1.0	75	5.0	50	5.0u∅	4.0	500m	40	250 #	50M\$Δ		100n∅	PE
70#	MJ5415	57m	10		\$J	1.0	500m	200	4.0	200	50u∅	10	50m	30	150 #	15M\$Δ	50 #		T039
71#	MJ5416	57m	10		\$J	1.0	500m	350	7.0	300	50u∅	10	50m	30	120 #	15M\$Δ	50 #		T039
72	MJ8100†	57m	10		\$J	5.0	1.0	60	5.0	60	10u	2.0	2.0	25	180 #	30M\$Δ		100n∅	T039
73	MJ8101†	57m	10		\$J	5.0	1.0	80	5.0	80	10u	2.0	2.0	25	180 #	30M\$Δ		100n∅	T039
74	MM4005	57m	1.0		\$J	1.0		60	3.0	60	100n∅	1.0	1.0m	40		50M\$Δ			AN
75	MM4006	57m	1.0		\$J	1.0		80	3.0	80	100n∅	1.0	1.0m	40		50M\$Δ			AN
76	MM4007	57m	1.0		\$J	1.0		100	3.0	100	100n∅	1.0	1.0m	40		50M\$Δ			AN
77	RCA1																		

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE			f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	Y200 s/a TO200 Ser.	#	C O D E	
					lc (A)	lb (A)	BVcbo (V)	BVebo (V)	BVceo (V)	l _{cb0} (A)	V _{cb} (V)	lc (A)									MIN
1#	Z5B505	100m	1.0	3.0 #	500m	80	10	60	1.0u#	2.0	500m	40	#	300	#	PE	F19		B	B	
2#	BD136	100m	6.5 ∅	5.0m		45	5.0	45	100n∅	2.0	150m	40	#	250	#	PE	B16p		B	B	
3	BD136Z	100m	1.2	1.5		45	5.0	45	100n∅	2.0	150m	40	#	250	#	PE	B16f		B	B	
4#	BD138	100m	6.5 ∅	5.0m		60	5.0	60	100n∅	2.0	150m	40	#	180	#	PE	B16p		B	B	
5	BD138Z	100m	1.2	1.5		60	5.0	60	100n∅	2.0	150m	40	#	180	#	PE	B16f		B	B	
6#	BD140	100m	6.5 ∅	5.0m		60	5.0	80	100n∅	2.0	150m	40	#	180	#	PE	B21		B	B	
7	BD140Z	100m	1.2	1.5		80	5.0	80	100n∅	2.0	150m	40	#	160	#		B16f		B	B	
8	D43C11	100m	2.1	3.0		5.0	5.0	30	10u#	1.0	200m	40	#	120	#		B15b		B	B	
9	D43C21	100m	2.1	3.0		5.0	5.0	30	10u#	1.0	200m	40	#	120	#		B15b		B	B	
10	D43C31	100m	2.1	3.0		5.0	5.0	30	10u#	1.0	200m	40	#	120	#		B15b		B	B	
11	D43C41	100m	2.1	3.0		5.0	5.0	45	10u#	1.0	200m	40	#	120	#		B15b		B	B	
12	D43C51	100m	2.1	3.0		5.0	5.0	45	10u#	1.0	200m	40	#	120	#		B15b		B	B	
13	D43C61	100m	2.1	3.0		5.0	5.0	45	10u#	1.0	200m	40	#	120	#		B15b		B	B	
14	D43C71	100m	2.1	3.0		5.0	5.0	45	10u#	1.0	200m	40	#	120	#		B15b		B	B	
15	D43C81	100m	2.1	3.0		5.0	5.0	60	10u#	1.0	200m	40	#	120	#		B15b		B	B	
16	D43C9	100m	2.1	3.0		5.0	5.0	60	10u#	1.0	200m	40	#	120	#		B15b		B	B	
17	D43C10	100m	2.1	3.0		5.0	5.0	80	10u#	1.0	200m	40	#	120	#		B15b		B	B	
18	D43C11	100m	2.1	3.0		5.0	5.0	80	10u#	1.0	200m	40	#	120	#		B15b		B	B	
19	D43C12	100m	2.1	3.0		5.0	5.0	80	10u#	1.0	200m	40	#	120	#		B15b		B	B	
20	MJE170	100m	1.5	3.0	1.0	60	7.0	40	100n	1.0	100m	50	250	50M#	600m	Δ	B6		B	B	
21	MJE171	100m	1.5	3.0	1.0	80	7.0	60	100n	1.0	100m	50	250	50M#	600m	Δ	B6		B	B	
22	MJE172	100m	1.5	3.0	1.0	100	7.0	80	100n	1.0	100m	50	250	50M#	600m	Δ	B6		B	B	
23	SDT3575	100m	17	2.0	1.0	40	6.0	40	100u	1.0	250m	30	150	10M			TO66				
24	SDT3576	100m	17	2.0	1.0	60	6.0	60	100u	1.0	250m	30	150	10M			TO66				
25	SDT3577	100m	17	2.0	1.0	80	6.0	80	100u	1.0	250m	30	150	10M			TO66				
26	SDT3578	100m	17	2.0	1.0	40	5.0	30	100n	1.0	500m	25	100	40M		PL	TO66				
27	SDT3579	100m	17	2.0	1.0	60	5.0	50	100n	1.0	500m	25	100	40M		PL	TO66				
28	2N4387	114m	20	2.0	300m	40	5.0	40	10u#	5.0	500m	25	100	25M#	3.0		TO66		C	C	
29	2N4388	114m	20	2.0	300m	60	5.0	60	10u#	5.0	500m	25	100	25M#	3.0		TO66		C	C	
30	2N5161	114m	20	1.5		60	4.0	40	100u∅	5.0	250m	10					TO60		A	A	
31	2N5597	114m	20	2.0	1.0	80	5.5	60	1.0m#	5.0	1.0	70	200	#	60M#		PE	TO66		C	C
32	2N5599	114m	20	2.0	1.0	100	5.5	80	1.0m#	5.0	1.0	30	90	#	50M#		PE	TO66		C	C
33	2N5601	114m	20	2.0	1.0	100	5.5	80	1.0m#	5.0	1.0	70	200	#	60M#		PE	TO66		C	C
34	2N5603	114m	20	2.5	1.0	120	5.5	100	1.0m#	5.0	1.0	30	90	#	50M#		PE	TO66		C	C
35	2N6095	114m	20	2.5		36	4.0	18	500u∅	5.0	500m	15					W52		F	F	
36	MRF432	114m	20	2.5		36	4.0	18	500u∅	5.0	500m	15					W52		F	F	
37#	2SA613	119m	15	2.0	#	500m	60	7.0	40	1.0m#	5.0	200	#	200	#	PE	TO66		C	C	
38	2N6411	120m	15	4.0	1.0	40	6.0	25	100u∅	2.0	200	40	180	#	50M#	375m#		B16		C	C
39	2N6414	120m	15	4.0	1.0	60	6.0	40	100u∅	3.0	200m	40	250	#	50M#	625m#		B16		D	D
40	2N6415	120m	15	4.0	1.0	80	6.0	60	100u∅	3.0	200m	40	250	#	40M#	1.0 #		B16		D	D
41	2N6418	120m	15	4.0	1.0	80	6.0	80	100u∅	3.0	200m	40	250	#	40M#	1.0 #		B16		D	D
42	2N6419	120m	15	4.0	1.0	100	6.0	100	100u∅	3.0	200m	40	250	#	40M#	1.0 #		B16		D	D
43#	2SA653	120m	15	1.0	#	150	5.0	120	1.0m#	5.0	1.0	40	200	#	5.0M#		EM	TO66		C	C
44#	2SA748	120m	15	3.0	#	150	5.0	50	1.0u	5.0	1.0	30	220	#	120M		EM	B26		D	D
45#	2SA913	120m	15	3.0	#	150	5.0	150	1.0u	10	150m	65	330	#	120M	1.2		B26		D	D
46#	2SA913A	120m	15	3.0	#	180	5.0	180	200n#	1.0	150m	65	330	#	120M	3.0		B26		D	D
47	BD382	120m	15	3.0	1.0	32	8.0	20	200n#	1.0	500m	80	320	#	800m#	800m#	PL	B16f		B	B
48	BD382A	120m	15	3.0	1.0	32	8.0	20	200n#	1.0	500m	80	320	#	800m#	800m#	PL	B16f		B	B
49	HE908-RT	120m	1.5	5.0	1.0	90	5.0	80	100u∅	4.0	100m	40			2.0M#			TO66		C	C
50	MJE210	120m	1.5	5.0	1.0	40	8.0	25	100n	1.0	2.0	45	180	#	65M#	600m		B6		B	B
51	MJE230	120m	1.5	4.0	1.0	60	7.0	40	100n	1.0	200	40	200	#	50M#	600m	Δ	B6		B	B
52	MJE231	120m	1.5	4.0	1.0	60	7.0	40	100n	1.0	200m	40	150	#	50M#	600m	Δ	B6		B	B
53	MJE232	120m	1.5	4.0	1.0	60	7.0	40	100n	1.0	200m	40	250	#	50M#	600m	Δ	B6		B	B
54	MJE233	120m	1.5	4.0	1.0	80	7.0	60	100n	1.0	200m	40	200	#	50M#	600m	Δ	B6		B	B
55	MJE234	120m	1.5	4.0	1.0	80	7.0	60	100n	1.0	200m	40	150	#	50M#	600m	Δ	B6		B	B
56	MJE235	120m	1.5	4.0	1.0	80	7.0	60	100n	1.0	200m	40	200	#	50M#	600m	Δ	B6		B	B
57	MJE250	120m	1.5	4.0	1.0	80	7.0	80	100n	1.0	200m	40	200	#	40M#	600m	Δ	B6		B	B
58	MJE251	120m	1.5	4.0	1.0	80	7.0	80	100n	1.0	200m	40	120	#	40M#	600m	Δ	B6		B	B
59	MJE252	120m	1.5	4.0	1.0	80	7.0	80	100n	1.0	200m	40	25	#	40M#	60m	Δ	B6		B	B
60	MJE253	120m	1.5	4.0	1.0	100	7.0	100	100n	1.0	200m	40	120	#	40M#	600m	Δ	B6		B	B
61	MJE254	120m	1.5	4.0	1.0	100	7.0	100	100n	1.0	200m	25			40M#	600m	Δ	B6		B	B
62	TIP621	120m	1.5	500m	400m	40	5.0	40	4.0	500m	15	100			3.0M	1.4	DM	B1		B	B
63	TIP62A1	120m	1.5	500m	400m	60	5.0	60	4.0	500m	15	100			3.0M	1.4	DM	B1		B	B
64	TIP62B1	120m	1.5	500m	400m	80	5.0	80	4.0	500m	15	100			3.0M	1.4	DM	B1		B	B
65	TIP62C1	120m	1.5	500m	400m	100	5.0	100	4.0	500m	15	100			3.0M	1.4	DM	B1		B	B
66	2N5100	133m	10	5.0	500m	450	6.0	400	5.0n∅	15	100m	20	200	#	20M#	120		F8		A	A
67	2N6424	133m	20	250m	500m	250	6.0	225	250u∅	10	100m	40	200	#	10M#	10 #		TO66		C	C
68	2N6425	133m	20	250m	500m	325	6.0	300	250u∅	10	100m	40	200	#	10M#	10 #		TO66		C	C
69	MJ3738	133m	20	250m	500m	250	6.0	225	100u∅	10	100m	40	200	#	10M#			TO66		C	C
70	MJ3739	133m	20	250m	500m	325	6.0	300	100u∅	10	100m	40	200	#	10M#			TO66		C	C
71	SRSF4296	133m	20	500m	500m	350	4.0	250	100u	10	50m	50	150	#	5.0M#		EM	TO66		C	C
72	SRSF4297	133m	20	500m	500m	350	4.0	250	100u	10	50m	75	300	#	5.0M#		EM	TO66		C	C
73	SRSF4298	133m	20	500m	500m	500	4.0	350	100u	10	50m	25	75	#	5.0M#		EM	TO66		C	C
74	SRSF4299	133m	20	500m	500m	500	4.0	350	100u	10	50m	75	150	#	5.0M#		EM	TO66		C	C
75	TRSP2006	133m</																			

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX. FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #200 S/a Ser.	# C O D E
						Ic (A)	Ib (A)	Vcbo (V)	Vbeo (V)	Vceo (V)	hFE @ 25°C (V)	hFE (A)								
1#	2SB512	200m	25	J	3.0	1.0	60	8.0	60	30u	3.0	100m	40	70k			D	B17	B	
2#	2SB512A	200m	25	J	3.0	1.0	80	8.0	80	30u	3.0	100m	40	70k			D	B17	B	
3#	2SB513	200m	25	J	3.0	1.0	60	8.0	60	30u	3.0	100m	40	70k			D	B17a	B	
4#	2SB513A	200m	25	J	3.0	1.0	80	8.0	80	30u	3.0	100m	40	70k			D	B17a	B	
5#	2SB546A	200m	25	J	2.0	2.0	200	5.0	150	50u	10	400m	40	5.0M	2.0		D	Y220b	X	
6#	2SB547A	200m	25	J	2.0	2.0	200	5.0	150	50u	10	400m	40	5.0M	2.0		D	Y220a	X	
7#	2SB550	200m	25	J	5.0	1.0	100	8.0	80	100u	5.0	1.0	30	200			ME	T066	C	
8#	2SB551H	200m	25	J	3.0	1.0	50	4.0	50	100u	4.0	1.0	35	200	32M	600m	EM	T066	C	
9#	2SB563	200m	25	J	3.0	1.0	80	5.0	70	100u	2.0	1.0	30	200			EM	T066	C	
10#	2SB630	200m	25	J	2.0	2.0	200	5.0	200	1.0u	10	500m	40	4.0M	2.0		D	Y220b	X	
11#	BD234	200m	25	J	2.0	300m	45	5.0	45	100u	2.0	150m	40	250	3.0M	600m	Et	T126	B	
12#	BD234Z	200m	25	J	2.0	1.0	45	5.0	45	100u	2.0	150m	40		3.0M	600m	Et	B16g	B	
13#	BD236	200m	25	J	2.0	300m	60	5.0	60	100u	2.0	150m	40	250	3.0M	600m	Et	T126	B	
14#	BD236Z	200m	25	J	2.0	1.0	60	5.0	60	100u	2.0	150m	40		3.0M	600m	Et	B16g	B	
15#	BD238	200m	25	J	2.0	300m	100	5.0	80	100u	2.0	150m	40	160	3.0M	600m	Et	T126	B	
16#	BD238Z	200m	25	J	2.0	1.0	80	5.0	80	100u	2.0	150m	40		3.0M	600m	Et	B16g	B	
17#	BUX661	200m	35	J	2.0	1.0	200	6.0	150	10m	5.0	1.0	10	150	20M	2.5	600n	T066	C	
18#	BUX66A1	200m	35	J	2.0	1.0	300	6.0	250	10m	5.0	1.0	10	150	20M	2.5	600n	T066	C	
19#	BUX66B1	200m	35	J	2.0	1.0	350	6.0	300	5.0m	5.0	1.0	10	150	20M	2.5	600n	T066	C	
20#	BUX66C1	200m	35	J	2.0	1.0	400	6.0	350	5.0m	5.0	1.0	10	150	20M	2.5	600n	T066	C	
21#	HSE909-RT	200m	25	J	4.0	1.0	90	4.0	80	100u	2.0	1.5	30		3.0M			T066	C	
22	MJ3583	200m	35	J	1.0	1.0	250	6.0	175	10m	10	500m	40	200	10M	5.0	3.0u	T066	C	
23	MJ3584	200m	35	J	2.0	1.0	375	6.0	250	5.0m	2.0	750m	10	100	10M	750m	3.0u	T066	C	
24	MJ3585	200m	35	J	2.0	1.0	500	6.0	300	5.0m	2.0	1.0	8.0	80	10M	750m	3.0u	T066	C	
25	MJ4240	200m	35	J	2.0	1.0	500	6.0	300	5.0m	2.0	1.0	8.0	80	15M	1.3	500n	T066	C	
26	MJE370	200m	25	J	3.0	2.0	30	4.0	30	100u	1.0	1.0	25					B17d	B	
27#	PN4054	200m	25	J	4.0	1.0	50	4.0	50	100u	2.0	500m	30		800k		PL	B17	C	
28	RCA1E03	200m	35	J	2.0	1.0	200	5.0	175	100u	2.0	300m	30	150	10M			T066	C	
29	SDT3801	200m	35	J	1.0	4.0	60	6.0	60	1.0m	2.0	1.0	25	90	10M			T066	C	
30	SDT3802	200m	35	J	1.0	4.0	80	6.0	80	1.0m	2.0	1.0	25	90	10M			T066	C	
31	SDT3803	200m	35	J	1.0	4.0	60	6.0	60	1.0m	2.0	1.0	50	180	10M			T066	C	
32	SDT3804	200m	35	J	1.0	4.0	60	6.0	60	1.0m	2.0	1.0	50	180	10M			T066	C	
33	SDT3805	200m	35	J	1.0	4.0	60	6.0	60	1.0m	2.0	1.0	50	180	10M			T066	C	
34	SDT3806	200m	35	J	1.0	2.0	40	5.0	40	100u	5.0	5.0	20	80	10M			T066	C	
35	SDT3807	200m	35	J	1.0	2.0	80	5.0	80	100u	5.0	5.0	20	80	10M			T066	C	
38	ST4000Z	200m	300	J	60	80	80	5.0	80	100u	5.0	5.0	20	120	20M	500n	PL	T063	C	
37	ST4000Z1	200m	300	J	60	100	80	5.0	100	100u	5.0	5.0	20	120	20M	500n	PL	T063	C	
38	ST4000Z1	200m	300	J	60	120	80	5.0	120	100u	5.0	5.0	20	120	20M	500n	PL	T063	C	
39	TIP507	200m	2.0	J	2.0	600m	15	5.0	15	100u	4.0	1.0	30	120	50M	750m	PEA	T059	A	
40	TIP514	200m	2.0	J	2.0	150	5.0	150	1.0m	4.0	2.5	30	150	40M		PEA	T066	C		
41	TIP521	200m	2.0	J	2.0	200	5.0	200	1.0m	4.0	1.0	20	100	50M		PEA	T059	C		
42#	MH0811	222m	40	J	1.2	600m	60	5.0	60	5.0u	5.0	500m	30	60	100M		PEA	Y220b	A	
43#	MH0812	222m	40	J	1.2	60	6.0	60	5.0u	5.0	500m	50	120	100M				Y220b		
44#	MH0813	222m	40	J	1.2	60	5.0	60	5.0u	5.0	500m	100	240	100M				Y220b		
45#	MH0821	222m	40	J	1.2	35	5.0	35	5.0u	5.0	500m	30	60	100M				Y220b		
46#	MH0822	222m	40	J	1.2	35	5.0	35	5.0u	5.0	500m	50	120	100M				Y220b		
47#	MH0823	222m	40	J	1.2	35	5.0	35	5.0u	5.0	500m	100	240	100M				Y220b		
48#	MH0831	222m	40	J	1.2	20	5.0	20	5.0u	5.0	500m	20	75	100M				Y220b		
49#	MH0832	222m	40	J	1.2	20	5.0	20	5.0u	5.0	500m	60	120	100M				Y220b		
50#	MH0833	222m	40	J	1.2	20	5.0	20	5.0u	5.0	500m	100	175	100M				Y220b		
51#	MH0834	222m	40	J	1.2	20	5.0	20	5.0u	5.0	500m	150	250	100M				Y220b		
52#	MH0835	222m	40	J	1.2	20	5.0	20	5.0u	5.0	500m	250		100M				Y220b		
53#	2N3199	227m	40	J	3.0	1.5	40	10	40	75u	2.0	1.0	20	60	1.0M	300m		T42c	A	
54	2N3200	227m	40	J	3.0	1.5	60	10	60	75u	2.0	1.0	20	60	1.0M	300m		T42c	A	
55	2N3201	227m	40	J	3.0	1.5	80	10	80	75u	2.0	1.0	20	60	1.0M	300m		T42c	A	
56	2N3205	227m	40	J	2.0	1.0	40	10	40	75u	2.0	500m	20	60	1.0M	800m		T059	A	
57	2N3206	227m	40	J	2.0	1.0	60	10	60	75u	2.0	500m	20	60	1.0M	800m		T059	A	
58	2N3207	227m	40	J	2.0	1.0	100	10	100	75u	2.0	500m	20	60	1.0M	800m		T059	A	
59	2N5344	228m	40	J	1.0	500m	250	5.0	250	100u	5.0	500m	25	150	60M	3.0	200n	T066	C	
60	2N5345	228m	40	J	1.0	500m	300	5.0	300	100u	5.0	500m	25	150	60M	3.0	200n	T066	C	
61	2N6096	228m	40	J	5.0	36	4.0	18	1.0m	5.0	500m	15	60	100M				W52	R	
62#	BDX27-6	228m	40	J	5.0	600m	40	5.0	40	100u	1.0	1.0	40	100	50M			F39		
63#	BDX27-10	228m	40	J	5.0	600m	40	5.0	40	100u	1.0	1.0	63	160	50M			F39		
64#	BDX27-16	228m	40	J	5.0	600m	40	5.0	40	100u	1.0	1.0	100	250	50M			F39		
65#	BDX28-6	228m	40	J	5.0	600m	60	5.0	60	100u	1.0	1.0	40	100	50M			F39		
66#	BDX28-10	228m	40	J	5.0	600m	60	5.0	60	100u	1.0	1.0	63	160	50M			F39		
67#	BDX28-16	228m	40	J	5.0	600m	60	5.0	60	100u	1.0	1.0	100	250	50M			F39		
68#	BDX29-6	228m	40	J	5.0	600m	80	5.0	80	100u	1.0	1.0	40	100	50M			F39		
69#	BDX29-10	228m	40	J	5.0	600m	80	5.0	80	100u	1.0	1.0	63	160	50M			F39		
70#	BDX30-6	228m	40	J	5.0	600m	100	5.0	100	100u	1.0	1.0	40	100	50M			F39		
71#	BDX30-10	228m	40	J	5.0	600m	100	5.0	100	100u	1.0	1.0	63	160	50M			F39		
72	2N5112	229m	34	J	1.0	500m	40	10	40	75u	4.0	500m	15	60	100M	1.8		T059	A	
73	2N5113	229m	34	J	1.0	500m	80	10	80	75u	4.0	500m	15	60	100M	1.8		T059	A	
74	2N5954	232m	40	J	6.0	2.0	90	5.0	85	1.0m	4.0	2.0	20	100	5.0M	333m		T066	C	
75	2N5955	232m	40	J	6.0	2.0	70	5.0	65	2.0m	5.0	2.0	20	100	5.0M	333m		T066	C	
76	2N5956	232m	40	J	6.0	2.0	50	5.0	45	2.0m	4.0	3.0	20	100	5.0M	333m		T066	C	
77	2N6467	232m	23	J	4.0	2.0	110	5.0	110	1.0m	4.0	1.5	15	150	5.0M	1.0		T066	C	
78	2N6468	232m	23	J	4.0	2.0	130													

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE TO C (W/°C)	MAX. FREE AIR @ 25°C (W/°C)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. @ 25°C		BIAS hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# C O D E		
						lc	lb	BVcbo	BVebo	BVceo	lcbo	Vcb	lc	MIN							MAX	
						(A)	(A)	(V)	(V)	(V)	(A)	(V)	(A)	(A)							(A)	
1	2N6106	320m	40	0	\$J	7.0	3.0	80	5.0	70	1.0mΔ	4.0	2.0	30	150	10MΔ	500m		Y220a	T0		
2	2N6107	320m	40	0	\$J	7.0	3.0	80	5.0	70	1.0mΔ	4.0	2.0	30	150	10MΔ	500m		Y220b	D0		
3	2N6108	320m	40	0	\$J	7.0	3.0	60	5.0	50	1.0mΔ	4.0	2.5	30	150	10MΔ	500m		Y220a	T0		
4	2N6109	320m	40	0	\$J	7.0	3.0	60	5.0	50	1.0mΔ	4.0	2.5	30	150	10MΔ	500m		Y220b	D0		
5	2N6110	320m	40	0	\$J	7.0	3.0	40	5.0	30	1.0mΔ	4.0	3.0	30	150	10MΔ	500m		Y220a	T0		
6	2N6111	320m	40	0	\$J	7.0	3.0	40	5.0	30	1.0mΔ	4.0	3.0	30	150	10MΔ	500m		Y220b	D0		
7	2N6124	320m	40	0	\$J	4.0	1.0	45	5.0	45	100u	2.0	1.5	25	100	2.5MΔ	350m		Y220b	D0		
8	2N6125	320m	40	0	\$J	4.0	1.0	60	5.0	60	100u	2.0	1.5	25	100	2.5MΔ	350m		Y220b	D0		
9	2N6126	320m	40	0	\$J	4.0	1.0	80	5.0	80	100u	2.0	1.5	25	80	2.5MΔ	350m		Y220b	D0		
10	2N6475	320m	16	0	\$J	4.0	1.0	110	5.0	110	1.0mΔ	4.0	1.5	15	150	10MΔ	625m		Y220b	D0		
11	2N6476	320m	16	0	\$J	4.0	1.0	130	5.0	130	1.0mΔ	4.0	1.5	15	150	10MΔ	625m		Y220b	D0		
12#	2SA770	320m	40	0	\$J	6.0	3.0	60	6.0	60	1.0m	4.0	1.0	40	400	10MΔ	333m		B26	D0		
13#	2SA771	320m	40	0	\$J	6.0	3.0	80	6.0	80	1.0m	4.0	1.0	40	400	10MΔ	333m		B26	D0		
14#	2SB609	320m	40	0	\$J	4.0	1.0	100	4.0	80	100u	4.0	50m	60	320	10MΔ	900m		T066	C0		
15	40872	320m	40	0	\$J	7.0	3.0	100	5.0	100	1.0m*	4.0	1.0	50	250	10MΔ			Y220b	D0		
16	40874	320m	40	0	\$J	7.0	3.0	50	5.0	70	1.0m*	4.0	2.0	30	150	10MΔ	500m		Y220b	D0		
17	40876	320m	40	0	\$J	7.0	3.0	50	5.0	50	1.0m*	4.0	3.0	30	120	10MΔ	333m		Y220b	D0		
18	41501	320m	40	0	\$J	7.0	3.0	35	3.0	25	30*	4.0	1.0	13	0				Y220b	D0		
19	BD186	320m	40	0	\$J	4.0	2.0	40	5.0	30	100u	2.0	500m	40	#	2.0MΔ	500m		B16	B		
20	BD188	320m	40	0	\$J	4.0	2.0	55	5.0	45	100u	2.0	500m	40	#	2.0MΔ	500m		B16	B		
21	BD190	320m	40	0	\$J	4.0	2.0	70	5.0	60	100u	2.0	500m	40	#	2.0MΔ	500m		B16	B		
22#	BD242T	320m	2.0	0	\$J	3.0	1.0	5.0	5.0	45	300uΔ	4.0	3.0	20	#	3.0MΔ	400m	200n0	D	B1	D	
23#	BD242At	320m	2.0	0	\$J	3.0	1.0	5.0	5.0	60	300uΔ	4.0	3.0	20	#	3.0MΔ	400m	200n0	D	B1	D	
24#	BD242Bt	320m	2.0	0	\$J	3.0	1.0	5.0	5.0	80	300uΔ	4.0	3.0	20	#	3.0MΔ	400m	200n0	D	B1	D	
25#	BD242Ct	320m	2.0	0	\$J	3.0	1.0	100	5.0	100	300uΔ	4.0	3.0	20	#	3.0MΔ	400m	200n0	D	B1	D	
26	BD562	320m	40	0	\$J	3.0	1.0	45	5.0	40	100u	1.0	2.0	60	#	3.0MΔ	500m		B16f	B		
27	BD576	320m	40	0	\$J	3.0	1.0	45	5.0	45	100u	2.0	150m	40	#	3.0MΔ	600m		B16h	D		
28	BD578	320m	40	0	\$J	3.0	1.0	60	5.0	60	100u	2.0	150m	40	#	3.0MΔ	600m		B16h	D		
29	BD580	320m	40	0	\$J	3.0	1.0	80	5.0	80	100u	2.0	150m	30	#	3.0MΔ	600m		B16h	D		
30	BD582	320m	40	0	\$J	3.0	1.0	100	5.0	100	100u	2.0	150m	30	#	3.0MΔ	600m		B16h	D		
31	BD588	320m	40	0	\$J	4.0	1.5	45	5.0	45	100u	2.0	500m	40	#	3.0MΔ	400m		B16h	D		
32	BD588	320m	40	0	\$J	4.0	1.5	60	5.0	60	100u	2.0	500m	40	#	3.0MΔ	400m		B16h	D		
33	BD590	320m	40	0	\$J	4.0	1.5	80	5.0	80	100u	2.0	500m	30	#	3.0MΔ	400m		B16h	D		
34	BD592	320m	40	0	\$J	4.0	1.5	100	5.0	100	100u	2.0	500m	30	#	3.0MΔ	400m		B16h	D		
35#	BD734	320m	2.0	0	\$	4.0	1.0	22	5.0	22	200uΔ	1.0	2.0	50	#	400m	300n0	Δ	B1	D		
36#	BD736	320m	2.0	0	\$	4.0	1.0	32	5.0	32	200uΔ	1.0	2.0	50	#	400m	300n0	Δ	B1	D		
37#	BD738	320m	2.0	0	\$	4.0	1.0	45	5.0	45	200uΔ	1.0	2.0	40	#	400m	300n0	Δ	B1	D		
38#	HSE2010-RT	320m	40	0	\$J			40	5.0	40	50u	4.0	1.0	25	#	500kΔ			B1	B		
39#	HSE2011-RT	320m	40	0	\$J			60	5.0	60	50u	4.0	1.0	25	#	500kΔ			B1	B		
40#	HSE2012-RT	320m	40	0	\$J			80	5.0	80	50u	4.0	1.0	25	#	500kΔ			B1	B		
41	MJE321	320m	40	0	\$J	3.0	1.0	40	5.0	40	300uΔ	4.0	1.0	25	#	3.0MΔ	400m	500n0	B16f	D		
42	MJE32At	320m	40	0	\$J	3.0	1.0	60	5.0	60	300uΔ	4.0	1.0	25	#	3.0MΔ	400m	500n0	B16f	D		
43	MJE32Bt	320m	40	0	\$J	3.0	1.0	80	5.0	80	300uΔ	4.0	1.0	25	#	3.0MΔ	400m	500n0	B16f	D		
44	MJE32Ct	320m	40	0	\$J	3.0	1.0	100	5.0	100	300uΔ	4.0	1.0	25	#	3.0MΔ	400m	500n0	B16f	D		
45	MJE370K	320m	40	0	\$J	3.0	2.0	30	4.0	30	100u	1.0	1.0	25	#	3.0MΔ	400m	500n0	B23	D		
46	MJE371	320m	40	0	\$J	4.0	2.0	40	4.0	40	100u	1.0	1.0	40	#				B16d	B		
47	NSP370	320m	40	0	\$J	3.0	2.0	30	4.0	30	100u	1.0	1.0	25	#			Δ	EMt	Y220b	D	
48	NSP371	320m	40	0	\$J	4.0	2.0	40	4.0	40	100u	1.0	1.0	40	#			Δ	EMt	Y220b	D	
49	NSP586	320m	40	0	\$J	4.0	1.5	45	5.0	45	100u	1.0	1.0	40	#	3.0MΔ			EMt	Y220b	D	
50	NSP588	320m	40	0	\$J	4.0	1.5	60	5.0	60	100u	1.0	1.0	40	#	3.0MΔ			EMt	Y220b	D	
51	NSP590	320m	40	0	\$J	4.0	1.5	80	5.0	80	100u	1.0	1.0	30	#	3.0MΔ			EMt	Y220b	D	
52	NSP4918	320m	40	0	\$J	3.0	1.0	40	5.0	40	100u	1.0	500m	20	100	3.0MΔ			EMt	Y220b	D	
53	NSP4919	320m	40	0	\$J	3.0	1.0	60	5.0	60	100u	1.0	500m	20	100	3.0MΔ			EMt	Y220b	D	
54	NSP4920	320m	40	0	\$J	3.0	1.0	80	5.0	80	100u	1.0	500m	20	100	3.0MΔ			EMt	Y220b	D	
55#	PC200	320m	40	0	\$J	4.0		50	5.0	40	100u	1.0	500m	40	250	3.0MΔ	600m		ME	B19	B	
56#	PC210	320m	40	0	\$J	4.0		60	5.0	60	100u	1.0	500m	40	250	3.0MΔ	600m		ME	B19	B	
57#	PC220	320m	40	0	\$J	4.0		80	5.0	80	100u	1.0	500m	40	250	3.0MΔ	600m		ME	B19	B	
58	PTC162-RT	320m	40	0	\$J	4.0		60	5.0	60	100u	2.0	1.5	25	100	2.0MΔ			B16	B0		
59	RCA1C04	320m	40	0	\$J	4.0	2.0	120	5.0	100	1.0m*	4.0	1.0	50	250	10MΔ	1.0		E	Y220b	D0	
60	RCA1C06	320m	40	0	\$J	7.0	3.0	60	5.0	50	1.0m*	4.0	3.0	20	120	10MΔ	333m		E	Y220b	D0	
61	RCA1C11	320m	40	0	\$J	7.0	3.0	40	5.0	40	10u*	4.0	1.5	50	250	10MΔ	666m		E	Y220b	D0	
62	RCA1C13	320m	40	0	\$J	4.0	2.0	140	5.0	120	100u*	2.0	1.0	40	40	250	10MΔ		E*	Y220b	D0	
63	RCA321	320m	2.0	0	\$J	5.0	1.0	40	5.0	40	300uΔ	4.0	3.0	10	50	#	3.0MΔ	200n0	E	Y220b	X0	
64	RCA32At	320m	2.0	0	\$J	5.0	1.0	60	5.0	60	300uΔ	4.0	3.0	10	50	#	3.0MΔ	200n0	E	Y220b	X0	
65	RCA32Bt	320m	2.0	0	\$J	5.0	1.0	80	5.0	80	300uΔ	4.0	3.0	10	50	#	3.0MΔ	200n0	E	Y220b	X0	
66	RCA32Ct	320m	2.0	0	\$J	5.0	1.0	100	5.0	100	300uΔ	4.0	3.0	10	50	#	3.0MΔ	200n0	E	Y220b	X0	
67#	ST1237	320m	40	0	\$J	4.0	4.0	100	5.0	90	20u	5.0	500m	40	200	10MΔ	500m		DME	B26a	D	
68	TIP321	320m	2.0	0	\$J	3.0	1.0	40	5.0	40	300uΔ	4.0	3.0	10	50	#	3.0MΔ	400m	300n0	DM	B1	B0
69#	TIP321t	320m	2.0	0	\$J	5.0	1.0	40	5.0	40	200uΔ	4.0	3.0	10	50	#	3.0MΔ	400m	200n0	E	Y220b	X0
70	TIP32At	320m	2.0	0	\$J	3.0	1.0	60	5.0	60	300uΔ	4.0	3.0	10	50	#	3.0MΔ	400m	300n0	DM	B1	B0
71#	TIP32At	320m	2.0	0	\$J	5.0	1.0	60	5.0	60	200uΔ	4.0	3.0	10	50	#	3.0MΔ	400m	200n0	E	Y220b	X0
72	TIP32Bt	320m																				

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	# C O D E	
						Ic (A)	Ib (A)	V _{cb} (V)	V _{ce} (V)	V _{ceo} (V)	I _{cb} (A)	V _{cb} (V)							
1	SDT3109†	500m	3.0	∅	∅	10	4.0	120	6.0	120	1.0m#	5.0∅	5.0	30	90 #	30mSΔ	T081	A	
2	SDT3115	500m	87	∅	∅	10		40	6.0	40	1.0u	5.0∅	5.0	20	80	40m	T081	A	
3	SDT3116	500m	87	∅	∅	10		60	6.0	60	1.0u	5.0∅	5.0	20	80	40m	T081	A	
4	SDT3117	500m	87	∅	∅	10		80	6.0	80	1.0u	5.0∅	5.0	20	80	40m	T081	A	
5	SDT3118	500m	87	∅	∅	10		100	6.0	100	1.0u	5.0∅	5.0	20	80	40m	T081	A	
6	SDT3119	500m	87	∅	∅	10		120	6.0	120	1.0u	5.0∅	5.0	20	80	40m	T081	A	
7	ST72015	500m	50 ∅	∅	∅	10		60	7.0	60	1.0u∅	2.0∅	3.0	30	200	30mSΔ	T061	A	
8	ST72016	500m	50 ∅	∅	∅	10		80	7.0	80	2.0u∅	2.0∅	3.0	30	200	30mSΔ	T061	A	
9	ST72017	500m	50 ∅	∅	∅	10		100	7.0	100	2.0u∅	2.0∅	3.0	30	200	30mSΔ	T061	A	
10	TIP519	500m	4.0	∅	∅	8.0	3.0	150	5.0†	150	1.0m#	4.0∅	4.0	30	150 #	40mSΔ	T03	C∅	
11	TIP520	500m	3.5	∅	∅	8.0	3.0	150	5.0†	150	1.0m#	4.0∅	4.0	30	150 #	40mSΔ	T061	A	
12	SCC421	511m	100	∅	∅	10	4.0	4.0	5.0	60	1.0m#	4.0∅	3.0	20	100	40mSΔ	T03	C∅	
13	2N6317†	515m	90 ∅	∅	∅	7.0	2.0	60	5.0†	60	250u#	4.0∅	2.5	20	100 #	4.0mSΔ	T066	C∅	
14	2N6318†	515m	90 ∅	∅	∅	7.0	2.0	80	5.0†	80	250u#	4.0∅	2.5	20	100 #	4.0mSΔ	T066	C∅	
15	BDX92†	515m	90 ∅	∅	∅	8.0		60	5.0	60	100u	2.0∅	3.0	20	#	4.0mSΔ	T03	C∅	
16	BDX94†	515m	90 ∅	∅	∅	8.0		80	5.0	80	100u	2.0∅	3.0	20	#	4.0mSΔ	T03	C∅	
17	BDX96†	515m	90 ∅	∅	∅	8.0		100	5.0	100	100u	2.0∅	3.0	20	#	4.0mSΔ	T03	C∅	
18	BD244†	520m	65 ∅	∅	∅	6.0	3.0	5.0	45	∅	400u	4.0∅	3.0	15		3.0mSΔ	B1	D	
19	BD244A†	520m	65 ∅	∅	∅	6.0	3.0	5.0	60	∅	400u	4.0∅	3.0	15		3.0mSΔ	B1	D	
20	BD244B†	520m	65 ∅	∅	∅	6.0	3.0	5.0	80	∅	400u	4.0∅	3.0	15		3.0mSΔ	B1	D	
21	BD244C†	520m	65 ∅	∅	∅	6.0	3.0	5.0	100	∅	400u	4.0∅	3.0	15		3.0mSΔ	B1	D	
22	RCA42†	520m	2.0	∅	∅	7.0	3.0	40	5.0	40	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	Y220b	X∅	
23	RCA42A†	520m	2.0	∅	∅	7.0	3.0	60	5.0	60	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	Y220b	X∅	
24	RCA42B†	520m	2.0	∅	∅	7.0	3.0	80	5.0	80	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	Y220b	X∅	
25	RCA42C†	520m	2.0	∅	∅	7.0	3.0	100	5.0	100	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	Y220b	X∅	
26	TIP42†	520m	2.0	∅	∅	6.0	3.0	40	5.0†	40	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	B1	B∅	
27	TIP42†	520m	2.0	∅	∅	7.0	3.0	40	5.0	40	400u	4.0∅	3.0	15	150 #	3.0mSΔ	Y220b	X∅	
28	TIP42A†	520m	2.0	∅	∅	6.0	3.0	60	5.0†	60	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	B1	B∅	
29	TIP42A†	520m	2.0	∅	∅	7.0	3.0	60	5.0	60	400u	4.0∅	3.0	15	150 #	3.0mSΔ	Y220b	X∅	
30	TIP42B†	520m	2.0	∅	∅	6.0	3.0	80	5.0†	80	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	B1	B∅	
31	TIP42B†	520m	2.0	∅	∅	7.0	3.0	80	5.0	80	400u	4.0∅	3.0	15	150 #	3.0mSΔ	Y220b	X∅	
32	TIP42C†	520m	2.0	∅	∅	6.0	3.0	100	5.0†	100	700uΔ	4.0∅	3.0	15	75 #	3.0mSΔ	B1	B∅	
33	TIP42C†	520m	2.0	∅	∅	7.0	3.0	100	5.0	100	400u	4.0∅	3.0	15	150 #	3.0mSΔ	Y220b	X∅	
34	BD196	522m	65 ∅	∅	∅	6.0	2.5	40	5.0	30	100u	2.0∅	1.0	30	#	2.0mSΔ	B16g	B	
35	BD198	522m	65 ∅	∅	∅	6.0	2.5	55	5.0	45	100u	2.0∅	1.0	30	#	2.0mSΔ	B16g	B	
36	BD200	522m	65 ∅	∅	∅	6.0	2.5	70	5.0	60	100u	2.0∅	1.0	30	#	2.0mSΔ	B16g	B	
37	MJE105	522m	65 ∅	∅	∅	5.0	2.5	50	4.0	50	100u	2.0∅	2.0	25	100		B16d	B	
38	MJE105K	522m	65 ∅	∅	∅	5.0	2.5	50	4.0	50	100u	2.0∅	2.0	25	100		B23	D	
39	SDT3875	552m	96	∅	∅	20	4.0	40	5.0	40	100u	5.0	10	20	80	10M	T03		
40	SDT3876	552m	96	∅	∅	20	4.0	80	5.0	80	100u	5.0	10	20	80	10M	T03		
41	SDT3877	552m	96	∅	∅	20	4.0	40	5.0	40	100u	5.0	10	20	80	10M	T03		
42	2SB617	560m	70 ∅	∅	∅	6.0		120	5.0	100	50u∅	5.0∅	1.0	40	*	200 #	7.0mSΔ	B33	X∅
43	BD277	560m	70 ∅	∅	∅	7.0	3.0	45	4.0	45	100u	2.0∅	1.7	30	150 #	1.0mSΔ	285m#	Y220b	L
44	BD544	560m	70 ∅	∅	∅	8.0	3.0	40	5.0	40	400u	4.0∅	3.0	40		3.0mSΔ	250m	300n∅	E
45	BD544A	560m	70 ∅	∅	∅	8.0	3.0	60	5.0	60	400u	4.0∅	3.0	40		3.0mSΔ	250m	300n∅	E
46	BD544B	560m	70 ∅	∅	∅	8.0	3.0	80	5.0	80	400u	4.0∅	3.0	40		3.0mSΔ	250m	300n∅	E
47	BD544C	560m	70 ∅	∅	∅	8.0	3.0	100	5.0	100	400u	4.0∅	3.0	40		3.0mSΔ	250m	300n∅	E
48	BD544D	560m	70 ∅	∅	∅	8.0	3.0	120	5.0	120	400u	4.0∅	3.0	40		3.0mSΔ	250m	300n∅	E
49	BC460	570m	10	∅	∅	2.0		50	5.0	40	100n∅	4.0∅	500m	40	250	50mS		PE	T039
50	BC461	570m	10	∅	∅	2.0		75	5.0	60	100n∅	4.0∅	500m	40	250	50mS		PE	T039
51	2N6594†	572m	100 ∅	∅	∅	12	5.0	45	5.0†	40	1.0m#	3.0∅	4.0	15	200 #	2.5mSΔ	375m#	1.5u∅	E
52	BD664	598m	75 ∅	∅	∅	10	5.0	45	5.0	45	1.0mΔ	2.0∅	2.0	20	250		250m		E
53	BD706	598m	75 ∅	∅	∅	12	5.0	45	5.0	45	1.0m†	4.0∅	4.0	20	150		250m		E
54	BD708	598m	75 ∅	∅	∅	12	5.0	60	5.0	60	1.0m†	4.0∅	4.0	15	150		250m		E
55	BD710	598m	75 ∅	∅	∅	12	5.0	80	5.0	80	1.0m†	4.0∅	4.0	15	150		250m		E
56	BD712	598m	75 ∅	∅	∅	12	5.0	100	5.0	100	1.0m†	4.0∅	4.0	15	150		250m		E
57	2N5974	600m	75 ∅	∅	∅	5.0	2.0	60	5.0†	40	1.0mΔ	2.0∅	2.5	20	120 #	2.0mSΔ			E
58	2N5975	600m	75 ∅	∅	∅	5.0	2.0	80	5.0†	60	1.0mΔ	2.0∅	2.5	20	120 #	2.0mSΔ			E
59	2N5976	600m	75 ∅	∅	∅	5.0	2.0	100	5.0†	80	1.0mΔ	2.0∅	2.5	20	120 #	2.0mSΔ			E
60	2N6489	600m	30 ∅	∅	∅	15	5.0	50	5.0†	50	1.0mΔ	4.0∅	5.0	20	150 #	5.0mSΔ	233m#		E
61	2N6490	600m	30 ∅	∅	∅	15	5.0	70	5.0†	70	1.0mΔ	4.0∅	5.0	20	150 #	5.0mSΔ	233m#		E
62	2N6491	600m	30 ∅	∅	∅	15	5.0	90	5.0†	90	1.0mΔ	4.0∅	5.0	20	150 #	5.0mSΔ	233m#		E
63	MJE42†	600m	65 ∅	∅	∅	6.0	2.0	40	5.0	40	700uΔ	4.0∅	3.0	15		2.0mSΔ	250m	500n∅	E
64	MJE42A†	600m	65 ∅	∅	∅	6.0	2.0	60	5.0	60	700uΔ	4.0∅	3.0	15		2.0mSΔ	250m	500n∅	E
65	MJE42B†	600m	65 ∅	∅	∅	6.0	2.0	80	5.0	80	700uΔ	4.0∅	3.0	15		2.0mSΔ	250m	500n∅	E
66	MJE42C†	600m	65 ∅	∅	∅	6.0	2.0	100	5.0	100	700uΔ	4.0∅	3.0	15		2.0mSΔ	250m	500n∅	E
67	PTC166-RT	600m	75 ∅	∅	∅	5.0		100	5.0	80	1.0mΔ	2.0∅	500m	40		2.0mS			E
68	RCA1C08	600m	75 ∅	∅	∅	10	4.0	75	5.0	65	1.0m#	4.0∅	4.0	20	120	5.0mSΔ	250m		E
69	TIP527	600m	4.0	∅	∅	8.0	2.0	200	5.0†	200	1.0m#	4.0∅	4.0	20	100 #	40mSΔ		PE	T03
70	TIP528	600m	3.5	∅	∅	8.0	2.0	200	5.0†	200	1.0m#	4.0∅	4.0	20	100 #	40mSΔ		PE	T061
71	BD246†	625m	3.0	∅	∅	10	3.0	30	5.0	45	400u	4.0∅	1.0	25	#	3.0mSΔ	333m	200n∅	D
72	BD246A†	625m	3.0	∅	∅	10	3.0	50	5.0	60	400u	4.0∅	1.0	25	#	3.0mSΔ	333m	200n∅	D
73	BD246B†	625m	3.0	∅	∅	10	3.0	80	5.0	80	400u	4.0∅	1.0	25	#	3.0mSΔ	333m	200n∅	D
74	BD246C†	625m	3.0	∅	∅	10	3.0	100	5.0	100	400u	4.0∅	1.0	25	#	3.0mSΔ	333m	200n∅	D
75	2SA649	640m	80 ∅	∅	∅	7.0	2.0	150	5.0	100	2.0m∅	5.0∅	3.0	30	#				

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX. FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					MAX. Icbo @ 25°C (A)	hFE			MAX. Vcb @ 25°C (V)	MAX. Vce @ 25°C (V)	f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# C O A D E
					Ic (A)	Ib (A)	Vcbo (V)	Vbebo (V)	Vceo (V)		MIN (A)	MAX (A)	MIN (A)								
1	IR27011	1.0	125	∅	\$J	5.0	2.0	450	5.0	350	1.0m	5.0	4.0	5.0	5.0MΔ	400m	1.2u	D	TO3	C∅	
2	SDT3601	1.0	175	∅	\$J	60	10	40	5.0	40	10u	10	40	10	25M			PL			
3	SDT3602	1.0	175	∅	\$J	60	10	80	5.0	60	10u	10	40	10	25M			PL			
4	SDT3603	1.0	175	∅	\$J	60	10	80	5.0	80	10u	10	40	10	25M			PL			
5	SDT3604	1.0	175	∅	\$J	60	10	100	5.0	100	10u	10	40	10	25M			PL			
6	ST10007†	1.0	150	∅	\$J	30		80	8.0	80	100u∅	10	30	120	20MΔ		500∅	PL	TO63		
7	ST10008†	1.0	150	∅	\$J	30		100	8.0	100	100u∅	10	30	120	20MΔ		500∅	PL	TO63		
8	ST10009†	1.0	150	∅	\$J	30		120	8.0	120	100u∅	10	30	120	20MΔ		500∅	PL	TO63		
9	ST72018	1.0	100	∅	\$	20		40	7.0	40	0.1m∅	5.0	10	200	10MΔ			PE	TO63		
10	ST72019	1.0	100	∅	\$	20		60	7.0	60	0.1m∅	5.0	10	200	10MΔ			PE	TO63		
11	ST72020	1.0	100	∅	\$	20		80	7.0	80	0.1m∅	5.0	10	200	10MΔ			PE	TO63		
12	ST72021	1.0	100	∅	\$	20		100	7.0	100	0.1m∅	5.0	10	200	10MΔ			PE	TO63		
13	TIP361	1.0	3.5	∅	\$J	25	†	5.0	40	†	1.0mΔ	4.0	15	10	50	3.0MΔ		DM	B19	B∅	
14	TIP36A†	1.0	3.5	∅	\$J	25	†	5.0	60	†	1.0mΔ	4.0	15	10	50	3.0MΔ		DM	B19	B∅	
15	TIP36B†	1.0	3.5	∅	\$J	25	†	5.0	80	†	1.0mΔ	4.0	15	10	50	3.0MΔ		DM	B19	B∅	
16	TIP36C†	1.0	3.5	∅	\$J	25	†	5.0	100	†	1.0mΔ	4.0	15	10	50	3.0MΔ		DM	B19	B∅	
17	2N4398†	1.1	200	∅	\$J	30		7.5	40	†	1.0mΔ	4.0	15	15	60	4.0MΔ			F4f	C∅	
18	2N4399†	1.1	200	∅	\$J	30		7.5	60	†	1.0mΔ	4.0	15	15	60	4.0MΔ			F4f	C∅	
19	JAN2N4399†	1.1	200	∅	\$A	30		7.5	60	†	1.0mΔ	2.0	15	15	60	4.0MΔ			TO3	C∅	
20	2N5745†	1.1	200	∅	\$A	20		7.5	80	†	1.0mΔ	2.0	10	15	60	2.0MΔ			F4f	C∅	
21	JAN2N5745†	1.1	200	∅	\$A	20		7.5	80	†	1.0mΔ	2.0	10	15	60	2.0MΔ			TO3	C∅	
22	2N5883†	1.1	200	∅	\$J	25		7.5	60	†	1.0mΔ	4.0	10	20	100	4.0MΔ	66m		TO3	C∅	
23	2N5884†	1.1	200	∅	\$J	25		7.5	80	†	1.0mΔ	4.0	10	20	100	4.0MΔ	66m		TO3	C∅	
24	2N6029	1.1	200	∅	\$J	16		5.0	100	†	2.0mΔ	2.0	8.0	25	100	4.0MΔ			F11a	C∅	
25	2N6030	1.1	200	∅	\$J	16		5.0	120	†	2.0mΔ	2.0	8.0	20	80	4.0MΔ			F11a	C∅	
26	2N6031	1.1	200	∅	\$J	16		5.0	140	†	2.0mΔ	2.0	8.0	15	60	4.0MΔ			F11a	C∅	
27	2N6329	1.1	114	∅	\$J	30		10	60	†	1.0mΔ	4.0	30	6.0	30	3.0MΔ			TO3	C∅	
28	2N6330	1.1	114	∅	\$J	30		10	80	†	1.0mΔ	4.0	30	6.0	30	3.0MΔ			TO3	C∅	
29	2N6331	1.1	114	∅	\$J	30		10	100	†	1.0mΔ	4.0	30	6.0	30	3.0MΔ			TO3	C∅	
30	2N6436	1.1	200	∅	\$J	25		10	100	†	10u	2.0	10	20	80	40MΔ			TO3	C∅	
31	2N6437	1.1	200	∅	\$J	25		10	120	†	10u	2.0	10	20	80	40MΔ			TO3	C∅	
32	JAN2N6437†	1.1	200	∅	\$J	25		10	120	†	10u	2.0	10	25	100	40MΔ			TO3	C∅	
33	2N6438	1.1	200	∅	\$J	25		10	140	†	10u	2.0	10	20	80	40MΔ			TO3	C∅	
34	JAN2N6438†	1.1	200	∅	\$J	25		10	140	†	10u	2.0	10	25	100	40MΔ			TO3	C∅	
35	BD316	1.1	200	∅	\$J	16		5.0	80	†	1.0mΔ	4.0	8.0	25	100	1.0MΔ	125m		TO3	C∅	
36	BD318	1.1	200	∅	\$J	16		5.0	100	†	1.0mΔ	4.0	5.0	25	100	1.0MΔ	125m		TO3	C∅	
37	IR4502	1.1	200	∅	\$J	30		7.5	100	4.0	1.0m	2.0	7.5	25	100	2.0MΔ			F4d	C∅	
38	MJ4502	1.1	200	∅	\$J	30		7.5	100	4.0	1.0m	2.0	7.5	25	100	2.0MΔ			F4d	C∅	
39	MJ15002	1.1	200	∅	\$J	15		5.0	140	5.0	100u#	2.0	4.0	25	150	2.0MΔ	250m		F49a	C∅	
40	PTC172-RT	1.1	200	∅	\$	16			100	7.0	100	2.0	8.0	25	100	1.0MΔ			TO3	C∅	
41	2N5967†	1.2	125	∅	\$J	30		5.0	100	†	500u	10	10	25	120	10MΔ	80m	1.1u	TO63	A∅	
42	JAN2N5967†	1.2	125	∅	\$J	30		5.0	100	†	100u	10	15	25	100	10MΔ	80m	1.1u	TO63	A∅	
43	2N5969†	1.2	187	∅	\$J	30		5.0	100	†	500u	10	10	25	120	10MΔ	80m	1.1u	TO63	A∅	
44	JAN2N5969†	1.2	187	∅	\$J	30		5.0	100	†	100u	10	15	25	100	10MΔ	80m	1.1u	TO63	A∅	
45	2SA907	1.2	150	∅	\$J	15		5.0	100	6.0	1.0m	4.0	5.0	30	180	10MΔ			TO3	C∅	
46	2SA908	1.2	150	∅	\$J	15		5.0	150	6.0	1.0m	4.0	5.0	30	180	10MΔ			TO3	C∅	
47	2SA909	1.2	150	∅	\$J	15		5.0	200	6.0	1.0m	4.0	5.0	30	180	10MΔ			TO3	C∅	
48	2SA971	1.2	150	∅	\$J	15		5.0	150	6.0	100u	4.0	5.0	30	180	10MΔ			TO3	C∅	
49	SDT3901	1.2	220	∅	\$	60		10	40	5.0	10u	10	40	10	40	25M			TO114		
50	SDT3902	1.2	220	∅	\$	60		10	60	5.0	10u	10	40	10	40	25M			TO114		
51	SDT3903	1.2	220	∅	\$	60		10	80	5.0	10u	10	40	10	40	25M			TO114		
52	SDT3904	1.2	220	∅	\$	60		10	80	5.0	10u	10	40	10	40	25M			TO114		
53	2N6377†	1.4	250	∅	\$J	50		20	100	†	50uΔ	4.0	20	30	120	25MΔ	50m	350n	F11a	C∅	
54	2N6378†	1.4	250	∅	\$J	50		20	120	†	50uΔ	4.0	20	30	120	25MΔ	50m	350n	F11a	C∅	
55	JAN2N6378†	1.4	250	∅	\$J	50	†	20	120	†	10u	4.0	20	30	120	30MΔ	60m	500n	TO3	C∅	
56	2N6379†	1.4	250	∅	\$J	50		20	140	†	50uΔ	4.0	20	30	120	25MΔ	50m	350n	F11a	C∅	
57	JAN2N6379†	1.4	250	∅	\$J	50	†	20	140	†	10u	4.0	20	30	120	30MΔ	60m	500n	TO3	C∅	
58	2N6380†	1.4	250	∅	\$J	50		20	100	†	50uΔ	4.0	20	30	120	25MΔ	60m	350n	TO63	A∅	
59	2N6381†	1.4	250	∅	\$J	50		20	120	†	50uΔ	4.0	20	30	120	25MΔ	60m	350n	TO63	A∅	
60	2N6382†	1.4	250	∅	\$J	50		20	140	†	50uΔ	4.0	20	30	120	25MΔ	60m	350n	TO63	A∅	
61	MJ15004	1.4	250	∅	\$J	20		5.0	140	5.0	100u#	2.0	5.0	25	150	2.0MΔ	200m		F49a	C∅	
62	2N6061†	1.5	150	∅	\$J	50		10	100	†	500u	10	20	25	120	10MΔ	55m	1.5u	TO63	A∅	
63	JAN2N6061†	1.5	150	∅	\$J	50		10	100	†	200u	10	30	20	100	10MΔ	55m	1.5u	TO63	A∅	
64	2N6063†	1.5	150	∅	\$J	50			100	†	500u	10	20	25	120	10MΔ	55m	1.5u	TO63	A∅	
65	JAN2N6063†	1.5	150	∅	\$J	50			100	†	200u	10	30	20	100	10MΔ	55m	1.5u	TO63	A∅	
66	2SB530	1.5	80	∅	\$J	8.0			110	5.0	100u	5.0	1.0	40	240			EM	TO3		
67	2SB600	1.6	200	∅	\$J	15		2.0	200	5.0	100u	5.0	2.0	40	200	4.0MΔ	300m		DM	TO3	C∅
68	2N5683	1.7	300	∅	\$S	50		15	60	5.0	2.0m	2.0	25	15	60	2.0MΔ			F4d	C∅	
69	JAN2N5683†	1.7	300	∅	\$S	50		15	60	5.0	2.0m	2.0	25	15	60	2.0MΔ			F6c	C∅	
70	2N5684	1.7	300	∅	\$S	50		15	80	5.0	2.0m	2.0	25	15	60	2.0MΔ			F4d	C∅	
71	JAN2N5684†	1.7	300	∅	\$S	50		15	80	5.0	2.0m	2.0	25	15	60	2.0MΔ			F6c	C∅	
72	ET1550	2.0	150	∅	\$J	7.0		3.0	45		1.0m∅	2.0	3.0	40	250				TO3	C∅	
73	ET1551	2.0	150	∅	\$J	7.0		3.0	60		1.0m∅	2.0	3.0	40	250				TO3	C∅	
74	PP7535	2.0	140	∅	\$	20		10	150	7.0	90	5.0	12	20	100	60MΔ	400m		PE	TO3	C∅
75	PP7536	2.0	140	∅	\$	20		10	120	7.0	75	5.0	10	20	100	60MΔ	400m		PE	TO3	C∅
76	2SA739	2.5																			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. Vcbo @ 25°C (A)		hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	# C O A D E
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo (A)	Ic (A)	MIN	MAX							
1#	2SD339		100		J	10		110	8.0	110	100	2.0	4.0	50	3.0M			D	T03	C	
2#	2SD340		120		J	12		140	8.0	140	100	2.0	5.0	50	3.0M			D	T03	C	
3#	2SD348		50		S	12 #		150	6.0	400	100	5.0	5.0	4.5				D	T03	C	
4#	2SD353		60		S	6.0 #		150	6.0	150	100	5.0	100m	40	8.0M			D	T03	C	
5#	2SD368		50		S	10 #		1.3k	6.0	400	5.0m	5.0	4.0	5.0				PL	T03	C	
6#	2SD369		100		J	10		80	10	60	1.0m	5.0	1.0	30	2.0M		3.0u	D	T03	C	
7#	2SD386		25		S	10 #		200	6.0	120	1.0m	2.0	500m		8.0M			DM	Y220b	D	
8#	2SD386A		25		S	2.0		200	6.0	150	1.0m	2.0	500m		8.0M			DM	Y220b	D	
9#	2SD387		25		S	10 #		200	6.0	120	1.0m	2.0	500m		8.0M			DM	Y220a	X	
10#	2SD387A		25		S	2.0		200	6.0	150	1.0m	2.0	500m		8.0M			DM	Y220a	X	
11#	2SD416		50		S	13 #		1.5k	6.0	400	1.0m	5.0	5.5	3.5				D	T03	C	
12#	2SD424		150		J	15		160	5.0	160	100	5.0	2.0	40	140			DM	T03	C	
13#	2SD425		100		J	12		140	5.0	140	100	5.0	2.0	40	140	6.0M		DM	T03	C	
14#	2SD426		100		J	12	12	120	5.0	120	100	5.0	2.0	40	140	6.0M		DM	T03	C	
15#	2SD427		80		J	8.0		120	5.0	120	100	5.0	1.0	40	140	7.0M		DM	T03	C	
16#	2SD428		60		J	7.0		100	5.0	100	100	5.0	1.0	40	140	7.0M		DM	T03	C	
17#	2SD437W		80		J	20 #		500	6.0	350	100	5.0	2.0	40	200	2.5M		D	T03	C	
18#	2SD526		30		J	4.0	3.0	80	5.0	80	30u	5.0	500m	40	240	10M		DM	Y220b	D	
19#	2SD531		43		J	5.0	1.0	100	8.0	60	2.0u	2.0	100m	45	250	9.0M	50 #	DM	Y220	T	
20#	2SD544		43		J	5.0	1.0	100	8.0	60	2.0u	2.0	100m	45	250	9.0M	50 #	DM	Y220	T	
21#	2SD552		150		J	15	3.0	220	5.0	180	500	5.0	5.0	25	80	4.0M		DM	T03	C	
22#	2SD575		50		S	2.5		1.4k	5.0	600	50	5.0	2.0	2.5				D	T03	C	
23#	2SD575L		50		S	2.5		1.2k	5.0	600	50	5.0	2.0	2.0				D	T03	C	
24#	2SD620		1.0		J	1.5	50m	80	5.0	60	1.0	2.0	1.0m	20		70M	1.0	PE	B7b	B	
25#	2SD640		100		J	7.0	2.0	600	5.0	400	100	5.0	1.0	25	140	3.0M		DM	T03	C	
26#	2SD641		150		J	15	5.0	600	5.0	400	500	5.0	5.0	20	140	4.0M		DM	T03	C	
27#	2SD642		300		J	40	15	600	5.0	400	1.0	5.0	30	10				DM	F44	C	
28	40850		35		J	2.0	1.0	450	6.0	300	1.0	750m	25			1.0		DM	T066	C	
29	40851		45		J	7.0	4.0	450	9.0	350	1.0	1.2	12			750m		EM	T066	C	
30	40852		100		J	7.0	4.0	450	9.0	350	1.0	1.2	12			750m		EM	T03	C	
31	40853		100		J	10	5.0	450	6.0	300	4.0	5.0	10			375m		DM	T03	C	
32	40854		175		J	15	7.0	450	6.0	300	4.0	10	8.0			187m		EM	T03	C	
33#	BC429		1.0		J	1.0		45	45	45	500m	35			100M			EM	B21a	B	
34#	BC430		1.0		J	1.0		45	45	45	150m	50	160		100M			EM	B21a	B	
35#	BD111A		62		J	10		60	5.0	60	1.0m	5.0	500m	40	100	100M		PE	T03	C	
36#	BD533		50		J	4.0	1.0	45	5.0	45	2.0	2.0	25			3.0M		E	Y220a	C	
37#	BD535		50		J	4.0	1.0	60	5.0	60	2.0	2.0	25			3.0M		E	Y220a	C	
38#	BD537		50		J	4.0	1.0	80	5.0	80	2.0	2.0	25			3.0M		E	Y220a	C	
39#	BF456		1.2		J	100m		160	160	160	30m	40			100M			E	B21a	B	
40#	BFT51		2.8		J	400m		30	3.0		75m	50			3.0M			PE	T039	C	
41#	BLW75		60		J	12 #		60	3.0	30	5.0	75m	50			800M		PE	T137	C	
42#	BLX37		4.0		J	400m		30	3.0	16	5.0	75m	50			3.0G			T137	C	
43#	BLX38		7.0		J	800m		30	3.0	16	5.0	150m	50			3.0G			T137	C	
44#	BLX91A		4.0		J	800m		65	33	33						1.2G				C	
45#	BLX92A		6.0		J	2.0		65	33	33						750M				C	
46#	BLX93A		12		J	3.0		65	33	33						800M				C	
47#	BLY47I		40		J	3.0	2.0	100	8.0	75	50	10	30	100	100 #	15M		DM	T03	C	
48#	BLY47A†		40		J	3.0	2.0	100	8.0	75	50	10	30	100	100 #	15M		DM	T066	C	
49#	BLY48†		40		J	3.0	2.0	100	8.0	75	50	10	60	200	200 #	15M		DM	T03	C	
50#	BLY48A†		40		J	3.0	2.0	100	8.0	75	50	10	60	200	200 #	15M		DM	T066	C	
51#	BLY49†		40		J	3.0	2.0	250	8.0	150	50	10	30	100	100 #	15M		DM	T03	C	
52#	BLY49A†		40		J	3.0	2.0	250	8.0	150	50	10	30	100	100 #	15M		DM	T066	C	
53#	BLY50†		40		J	3.0	2.0	250	8.0	150	50	10	60	200	200 #	15M		DM	T03	C	
54#	BLY50A†		40		J	3.0	2.0	250	8.0	150	50	10	60	200	200 #	15M		DM	T066	C	
55#	BLY61		5.0		J	500m	100m	36	4.0	18	100	5.0	250m	10	120	400k		PE	T039	A	
56#	BLY62		11		J	2.0	500m	36	4.0	18	100	5.0	250m	10	120	400k		PE	T0117	GE	
57#	BLY63		17		J	5.0	2.0	36	4.0	18	100	5.0	250m	10	120	400k		PE	T0117	GE	
58#	BSS111		1.2		J						1.0	10m		120	500M			PE	T018	A	
59#	BSS121		1.2		J						1.0	35	10m	120	500M			PE	T018	A	
60	BT3999		5.0		J	5.0	1.0	100	6.0	50	1.0	2.0	1.0n	40	240			PE	C16	C	
61#	BU100A		62		J	10		150	5.0	150	1.0m	2.0	2.0	40	90	100M		PE	T03	C	
62#	BU128		62		J	10		300	5.0	200	1.0m	5.0	1.0	40	120	80M		PE	T03	C	
63#	BU225		10		J	2.0		2.2k	800	800	5.0	1.0				750n		PL	T03	C	
64#	BU326S		60		J	6.0	3.0 #	250	6.0	150	1.0m	5.0	4.0	3.5		20M		PE	T03	C	
65#	BU409		60		J	5.0	1.0	120	6.0	60	10u	2.0	2.0	40	75	100M		PE	Y220	C	
66#	BUY24		15		J	5.0	2.0	120	6.0	60	1.0	5.0	500m	40	150	90M		PE	T03	C	
67#	BUY47		7.0		J	10		150	6.0	120	1.0m	2.0	500m	40	150	90M		PE	T039	C	
68#	BUY48		7.0		J	10		200	6.0	170	1.0m	5.0	500m	40	150	90M		PE	T039	C	
69	HEP75-RT		1.0		J	400m		40	3.5	20	1.0	25			250M			PE	T039	C	
70	HEP240-RT		10		J	500m		300	6.0	300	100	300			115	10M			T066	C	
71	HEP241-RT		40		J	5.0		160	6.0	120	500	160			80	20M			T066	C	
72	HEP243-RT		6.0		J	3.0		60	6.0	40	500	40			60	8.0M			T05	A	
73	HEP244-RT		25		J	500m		300	3.0	300	100	300			80	15M			B16b	B	
74	HEP245-RT		30		J	3.0		60	5.0	40	500	40			60	8.0M			B16b	B	
75	HEP247-RT		150		J	10		70	7.0	50	1.5m	40			60	6.0M			T03	C	
76	HEP701-RT		40		J	3.0		40	5.0	40	100	40			100	8.0M			B16b	B	
77	HEP703-RT		25		J	5.0		70	5.0	60	100	60			85	6.0M			T066	C	
78	HEP704-RT		115		J	15		100	7.0	60	500	100			90	1.0M			T03	C	
79	HEP706-RT		4.0		J	100m		350	6.0	325	1.0	150			25	10M			T05	A	
80	HEP707-RT		125		J	10		400	5.0	325	1.0m	400			65	2.5M			T03	C	
81	HEP712-RT		1.0		J	50m		180	5.0	200	5.0	100			35	150M			T05	A	
82	HEP713-RT		1.0		J	200m		100	5.0	100	1.0	50			35	150M			T05	A	
83	HEP714-RT		1.0		J	1.0		150	5												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG # A D E	C O D E					
						Ic (A)	Ib (A)	BVcbo (V)	BVceo (V)	BVcbo (V)	Icbo @ MAX Vcb @25°C (A)	Vcb (V)								Ic (A)	MIN	MAX		
1#	2SC2055	4.5m	500m			300m		18	4.0	9.0	30uφ	7.0φ	50m	10	180	#	1.7Gs	T092	D					
2	TRS140MP	4.5m	1.0			400m		140	6.0	140	3.0uφ	4.0φ	50m	30		#	50MΔ	T05						
3	TRS160MP	4.5m	1.0			400m		160	6.0	160	3.0uφ	4.0φ	50m	30		#	50MΔ	T05						
4	TRS180MP	4.5m	1.0			400m		180	6.0	180	3.0uφ	4.0φ	50m	30		#	50MΔ	T05						
5	TRS200MP	4.5m	1.0			400m		200	6.0	200	2.0uφ	4.0φ	50m	20		#	50MΔ	T05						
6	TRS225MP	4.5m	1.0			400m		225	6.0	225	3.0uφ	4.0φ	50m	22		#	50MΔ	T05						
7	TRS250MP	4.5m	1.0			400m		250	6.0	250	2.0uφ	4.0φ	50m	20		#	50MΔ	T05						
8	TRS275MP	4.5m	1.0			400m		275	6.0	275	3.0uφ	4.0φ	50m	22		#	50MΔ	T05						
9	TRS301MP	4.5m	1.0			400m		300	6.0	300	2.0uφ	4.0φ	50m	30		#	50MΔ	T05						
10	TRS325MP	4.5m	1.0			400m		325	6.0	325	3.0mφ	4.0φ	50m	22		#	50MΔ	T05						
11	TRS350MP	4.5m	1.0			400m		350	6.0	350	2.0mφ	4.0φ	50m	20		#	50MΔ	T05						
12	TRS375MP	4.5m	1.0			400m		375	6.0	375	3.0mφ	4.0φ	50m	22		#	50MΔ	T05						
13	TRS401MP	4.5m	1.0			400m		400	6.0	400	2.0mφ	4.0φ	50m	30		#	50MΔ	T05						
14	TRS425MP	4.5m	1.0			400m		425	6.0	425	3.0mφ	4.0φ	50m	22		#	50MΔ	T05						
15	TRS451MP	4.5m	1.0			400m		450	6.0	450	2.0mφ	4.0φ	50m	30		#	50MΔ	T05						
16	TRS475MP	4.5m	1.0			400m		475	6.0	475	2.0mφ	4.0φ	50m	22		#	50MΔ	T05						
17	TRS501MP	4.5m	1.0			400m		500	6.0	500	10mφ	4.0φ	25m	30		#	50MΔ	T05						
18	TRS525MP	4.5m	1.0			400m		525	6.0	525	10mφ	4.0φ	25m	22		#	50MΔ	T05						
19	TRS550MP	4.5m	1.0			400m		550	6.0	550	10mφ	4.0φ	25m	20		#	50MΔ	T05						
20	TRS575MP	4.5m	1.0			400m		575	6.0	575	10mφ	4.0φ	25m	22		#	50MΔ	T05						
21	TRS601MP	4.5m	1.0			400m		600	6.0	600	10uφ	4.0φ	25m	30		#	50MΔ	T05						
22#	BSX45	5.0m	5.0	φ	φ	1.0	200m	7.0	4.0	40	30nφ	1.0φ	150m	40	120	#	50MΔ	700m	250nφ	PE AN	T039	A	φ	
23	BSX45Zt	5.0m	5.0	φ	φ	1.0	100m	7.0	4.0	40	10nφ	1.0φ	150m	40	120	#	50MΔ	700m	250nφ	PE AN	T039	A	φ	
24#	BSX46	5.0m	5.0	φ	φ	1.0	200m	7.0	6.0	60	30nφ	1.0φ	150m	40	120	#	50MΔ	700m	250nφ	PE AN	T039	A	φ	
25	BSX46Zt	5.0m	5.0	φ	φ	1.0	100m	7.0	6.0	60	10nφ	1.0φ	150m	40	120	#	50MΔ	700m	250nφ	PE AN	T039	A	φ	
26#	BSX47	5.0m	5.0	φ	φ	1.0	200m	7.0	8.0	80	30nφ	1.0φ	150m	40	120	#	50MΔ	700m	250nφ	PE AN	T039	A	φ	
27#	2SC2056	5.3m	800mφ			600m		18	4.0	9.0	100uφ	7.0φ	100m	10	180	#	800MΔ			PE	T039	A		
28#	2SC2131	5.3m	1.0			600m		40	4.0	18	100uφ	10φ	100m	10	180	#	1.7Gs			PE	T039	A		
29#	2SC776	5.5m	1.0			1.0		75	4.0	75	100uφ	10φ	100m	5.0		#	200MΔ			PE	T039	A		
30#	2SC816	5.5m	1.0			1.0		60	4.0	30	100uφ	6.0φ	100m	55		#	140MΔ			PE	T05	A		
31#	2SC2053	5.5m	600m			300m		40	4.0	17	20uφ	10φ	10m	10	180	#	500MΔ			PE	T092	D		
32#	2T2102	5.5m	1.0			1.0		120	6.0	65	1.0u	10φ	150m	40		#	60MΔ			PE	T05	A		
33#	MRF402	5.6m	1.0			1.0		36	4.0	18	500mφ	5.0φ	250m	5.0		#	60MΔ			PE	T05	A		
34	2N2270	5.7m	1.0	φ	φ	1.0		60	7.0	45	50n	10φ	150m	50	200	#	100MΔ			Δ	T039	A	φ	
35	2N2270S	5.7m	1.0	φ	φ	1.0		60	7.0	45	50n	10φ	150m	50	200	#	100MΔ			Δ	T039	A	φ	
36	2N2405	5.7m	1.0			1.0		120	7.0	90	10nφ	10φ	150m	60	200	#					T05	A	φ	
37	2N2405S	5.7m	1.0			1.0		120	7.0	90	10nφ	10φ	150m	60	200	#					T05	A	φ	
38	2N2987	5.7m	1.0			1.0	200m	95	7.0	80	30nφ	5.0φ	200m	25	75	#	30MΔ				T05	A	φ	
39	2N2988	5.7m	1.0			1.0	200m	155	7.0	100	30nφ	5.0φ	200m	25	75	#	30MΔ				T05	A	φ	
40	2N2989	5.7m	1.0			1.0	200m	95	7.0	80	30nφ	5.0φ	200m	60	120	#	30MΔ				T05	A	φ	
41	2N2990	5.7m	1.0			1.0	200m	155	7.0	100	30nφ	5.0φ	200m	60	120	#	30MΔ				T05	A	φ	
42	2N3418t	5.7mφ	1.0			3.0	1.0	85	8.0	60	500nφ	2.0φ	1.0	20	60	#	40MΔ				T05	A	φ	
43	2N3419t	5.7mφ	1.0			3.0	1.0	125	8.0	80	500nφ	2.0φ	1.0	20	60	#	40MΔ				T05	A	φ	
44	2N3420t	5.7mφ	1.0			3.0	1.0	85	8.0	60	500nφ	2.0φ	1.0	40	120	#	40MΔ				T05	A	φ	
45	2N3421t	5.7mφ	1.0			3.0	1.0	125	8.0	80	500nφ	2.0φ	1.0	40	120	#	40MΔ				T05	A	φ	
46	2N3444t	5.7mφ	1.0			1.0		80	5.0	50	500nφ	1.0φ	500mφ	20	60	#	150MΔ				T05	A	φ	
47	2N3498	5.7m	1.0			500m		100	6.0	100	50nφ	10φ	150m	40	120	#	150MΔ				T05	A	φ	
48	2N3499	5.7m	1.0			500m		100	6.0	100	50nφ	10φ	150m	100	300	#	150MΔ				T05	A	φ	
49	2N3500	5.7m	1.0			300m		150	6.0	150	50nφ	10φ	150m	40	120	#	150MΔ				T05	A	φ	
50	2N3501	5.7m	1.0			300m		150	6.0	150	50nφ	10φ	150m	100	300	#	150MΔ				T05	A	φ	
51	2N3506t	5.7mφ	1.0			3.0		60	5.0	40	1.0mφ	2.0φ	1.5	40	200	#	60MΔ			1.0	30nφ	T05	A	φ
52	2N3507t	5.7mφ	1.0			3.0		80	5.0	50	1.0mφ	2.0φ	1.5	30	150	#	60MΔ			1.0	30nφ	T05	A	φ
53	2N5189t	5.7m	1.0			2.0		60	5.0	35	100u	1.0φ	1.0	15		#	400MΔ				T05	A	φ	
54	2N5262t	5.7m	1.0			2.0		75	5.0	50	1.0uφ	1.0φ	500m	40	φ	#	350MΔ			PE	T039	A	φ	
55	2N5681	5.7m	1.0			1.0	500m	100	4.0	100	1.0u	2.0φ	250m	40	150	#	30MΔ			2.0		T05	A	φ
56	2N5682	5.7m	1.0			1.0	500m	120	4.0	120	1.0u	2.0φ	250m	40	150	#	30MΔ			2.0		T05	A	φ
57	MM1812	5.7m	1.0			100m		175	4.0	175	100nφ	10φ	100m	35	200	#					T05	A	φ	
58	MM2258	5.7m	1.0			500m		120	5.0	120	50nφ	10φ	10m	35	#	#	150MΔ			AN	T05	A	φ	
59	MM2259	5.7m	1.0			300m		175	5.0	175	50nφ	10φ	10m	50	#	#	150MΔ			AN	T05	A	φ	
60	MM2260	5.7m	1.0			300m		175	5.0	175	50nφ	10φ	10m	50	#	#	150MΔ			AN	T05	A	φ	
61	MM3000	5.7m	1.0			200m		5.0	100	*	1.0uφ	10φ	10m	20		#	150MΔ			E	T039	A	φ	
62	MM3001	5.7m	1.0			200m		5.0	150	*	1.0uφ	10φ	10m	20		#	150MΔ			E	T039	A	φ	
63	MM3002	5.7m	1.0			50m		5.0	200	*	5.0uφ	10φ	10m	20		#	150MΔ			E	T039	A	φ	
64	MM3003	5.7m	1.0			50m		5.0	250	*	5.0uφ	10φ	10m	20		#	150MΔ			E	T039	A	φ	
65	MM3008	5.7m	1.0			50m		6.0	120	*	100nφ	10φ	10m	40		#	50k				T039	A	φ	
66	MM3009	5.7m	1.0			400m		6.0	180	*	100nφ	10φ	10m	40		#	50MΔ				T039	A	φ	
67	MRF404	5.7m	1.0			500m		60	3.0	30	10uφ	2.0φ	40m	10		#					T039	A	φ	
68	MS300CE	5.7m	1.0	φ	φ	100m		30	1.0	20	1.0uφ	10φ	5.0m	20		#	4.5Gs				W67	R	φ	
69	MS300JE	5.7m	1.0	φ	φ	100m		30	1.0	20	1.0uφ	10φ	5.0m	20		#	2.0G#				W21	R	φ	
70	MS300TE	5.7m	1.0	φ	φ	100m		30	1.0	20	1.0uφ	10φ	5.0m	20		#	4.5Gs				W5b	C	φ	
71	MS300YE	5.7m	1.0	φ	φ	100m		30	1.0	20	1.0uφ	10φ	5.0m	40		#	2.0G#				W67a	E	φ	
72	MS2110CE	5.7m	1.0	φ	φ	50m		30	1.0	20	1.0uφ	9.0φ	5											

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. hFE		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG #	C O D E
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo @ 25°C (A)	Vcb (V)	Ic (A)									
1	2SC1567	9.6m	1.2	∅	\$J	500m		100	5.0	100	10u	100	150m	65	330	120M\$	800m		PE	TO126	B	
2	2SC1567A	9.6m	1.2	∅	\$A	500m		120	5.0	120	10u	100	150m	65	330	120M\$	800m		PE	TO126	B	
3	JAN2N3418†	10m	1.0	∅	\$A	3.0		85	8.0	60	500n#	2.0	1.0	20	60	40M\$Δ		300n∅	PE	TO5	A	
4	JAN2N3419†	10m	1.0	∅	\$A	3.0		125	8.0	80	500n#	2.0	1.0	20	60	40M\$Δ		300n∅	PE	TO5	A	
5	JAN2N3420†	10m	1.0	∅	\$A	3.0		85	8.0	60	500n#	2.0	1.0	40	120	40M\$Δ		300n∅	PE	TO5	A	
6	JAN2N3421†	10m	1.0	∅	\$A	3.0		125	8.0	80	500n#	2.0	1.0	40	120	40M\$Δ		300n∅	PE	TO5	A	
7	2N5079	10m	1.8	∅	\$S	1.0	200m	60	5.0	30	10n∅	100	150m	100	300	400M\$Δ	1.0		∅	TO18	A	
8	2N5080	10m	1.8	∅	\$S	1.0	200m	60	5.0	30	10u∅	100	150m	200	500	500M\$Δ	1.0		∅	TO18	A	
9	2SC1514	10m	1.2	∅	\$J	100m		300	5.0	300	1.0uΔ	200	200	30	200	80M\$	75		∅	B11	D	
10	2SC1516K†	10m	1.2	∅	\$J	1.5		35	5.0	35	20u∅	2.0	500m	60	320	* 110M\$	500m		PE	B11	D	
11	2SC1517AK†	10m	1.2	∅	\$J	1.0		80	4.0	80	5.0u∅	4.0	50m	40	320	* 110M\$			PE	B11	D	
12	BFY65	10m	1.3	∅	\$J	100m		100	7.0	80	500u	2.0	15m	30		50M\$Δ			PE	TO39	A	
13	ST91054†	10m	1.5	∅	\$J	5.0		125	10	80	20u∅	100	2.0	30	120	# 10M\$Δ		500n∅	PL	TO5		
14	ST91055†	10m	1.5	∅	\$J	5.0		145	10	100	20u∅	100	2.0	30	120	# 10M\$Δ		500n∅	PL	TO5		
15	ST91056†	10m	1.5	∅	\$J	5.0		170	10	120	20u∅	100	2.0	30	120	# 10M\$Δ		500n∅	PL	TO5		
16	2N2991	11m	2.0	∅	\$C	1.0	200m	95	7.0	80	30n\$	5.0	200m	25	75	# 30M\$Δ				T13	A	
17	2N2992	11m	2.0	∅	\$C	1.0	200m	155	7.0	100	30n\$	5.0	200m	25	75	# 30M\$Δ				T13	A	
18	2N2993	11m	2.0	∅	\$C	1.0	200m	95	7.0	80	30n\$	5.0	200m	60	120	# 30M\$Δ				T13	A	
19	2N2994	11m	2.0	∅	\$C	1.0	200m	155	7.0	100	30n\$	5.0	200m	60	120	# 30M\$Δ				T13	A	
20	2N5581†	11m	2.0	∅	\$S	800m		75	6.0	40	10n∅	100	100u	20	20	250M\$Δ	25n			TO46	A	
21	2N5582†	11m	2.0	∅	\$S	800m		75	6.0	40	10n∅	100	100u	35	20	300M\$Δ	25n			TO46	A	
22	JAN2N5660†	11m	2.0	∅	\$A	2.0	500m	250	6.0	200	1.0m	5.0	500m	40	120	# 20M\$Δ		250n∅		TO66	C	
23	JAN2N5661†	11m	2.0	∅	\$A	2.0	500m	400	6.0	300	1.0m	5.0	500m	25	75	# 20M\$Δ		250n∅		TO66	C	
24	2N5836	11m	2.0	∅	\$S	200m		15	3.5	10	10u∅	6.0	50m	25		2.0G\$Δ				TO46	A	
25	2N5837	11m	2.0	∅	\$S	300m		10	3.5	5.0	10u∅	3.0	100m	25		1.7G\$Δ				TO46	A	
26	2N6256	11m	2.0	∅	\$S	400m		36	4.0†	16	500u∅	5.0	50m	20	200				DPL	W53	R	
27	40081	11m	2.0	∅	\$J	250m		2.0	2.0		10u					27M*				TO5	A	
28	HP35812E*	11m	1.6	∅	\$S	125m		30	1.5	25	300u	15	100m	15	150	2.0G#				T125	A	
29	HP35859E*	11m	1.6	∅	\$S	125m		30	1.5	25	300u	15	100m	15	150	2.0G#				W36	R	
30	MRF509	11m	2.0	∅	\$J	400m		55	3.5	30	20uΔ	5.0	50m	30	200	1.0G\$				W66	A	
31	SCA3522	11m	2.0	∅	\$J	250m		70	4.0	40	10u					150M\$			D	TO39	A	
32	2N2239	12m	1.0	∅	\$J	500m		60	8.0	50	10u∅	100	20m∅	20	200	# 160M†				F8	A	
33	2N2952	12m	1.8	∅	\$C	250m	50m	60	5.0	60	100n∅	100	10	30	150	200M\$Δ	3.3			TO18	A	
34	2SC130	12m	1.8	∅	\$J	400m		60			100n∅	100	20mΔ	20	150	160M†			PL	TO8	A	
35	2SC234	12m	1.8	∅	\$J	15		100			100n∅	100	150mΔ	20	150	140M†			EM	TO8	A	
36	2SC236	12m	1.8	∅	\$J	500m		90			100n∅	100	20mΔ	17	100	100M\$			EM	TO8	A	
37	2N1092†	13m	2.0	∅	\$A	500m	200m	60	12	30	500u	4.0	200m	15	75	1.5M†	10	1.2u		TO5	A	
38	2N1644	13m	2.0	∅	\$C	250m		60	5.0	40	100u	100	150m	40	120	50M\$Δ	10			TO5	A	
39	2N3295	13m	2.0	∅	\$J	250m	50m	60	5.0	60	100n∅	100	10m	20	60	200M\$Δ	3.3			TO5	A	
40	2N5280	13m	1.5	∅	\$A	1.0	500m	400	7.0	300	20u∅	100	20m	40	160	15M\$Δ	10			F8	A	
41	2SC22	13m	1.3	∅	\$J	600m		75	5.0	50	2.0u∅	100	150m	20	100	110M\$	2.4		E	TO8	A	
42	2SC23	13m	1.3	∅	\$J	500m		75	5.0	50	5.0u∅	100	150m	20	100	110M\$	2.4		E	TO8	A	
43	2SC24	13m	1.3	∅	\$J	500m		100	5.0	70	5.0u∅	100	150m	20	100	110M\$	2.4		E	TO8	A	
44	2SC916†	13m	2.0	∅	\$J	1.5	#	100	5.5	70	10u∅	1.0	400m	70	∅	1.0G\$	480m	63n∅	PE	TO8	A	
45	2SC1073	13m	2.0	∅	\$J	1.5	#	36	4.0	18	5.0u	1.3	100m	20	70	∅			PE	TO8	A	
46	71T2	13m	2.0	∅	\$J			80	5.0	60	50uΔ	2.0	1.0	30	90	#				F8	A	
47	72T2	13m	2.0	∅	\$J			80	5.0	60	50uΔ	2.0	1.0	75	200	#				F8	A	
48	73T2	13m	2.0	∅	\$J			80	5.0	60	75u	100	200m	30	90	#				F8	A	
49	74T2	13m	2.0	∅	\$J			80	5.0	60	75u	100	200m	75	200	#				F8	A	
50	40885	13m	1.4	∅	TJ	1.0	500m	300	6.0	250	50u∅	100	20m	30	190	21M\$	10		D	B24a	A	
51	40886	13m	1.4	∅	TJ	1.0	500m	350	6.0	300	50u∅	100	20m	30	150	21M\$	10		D	B24a	A	
52	40887	13m	1.4	∅	TJ	1.0	500m	450	6.0	350	20u∅	100	50m	30	150	21M\$	10		D	B24a	A	
53	40888	13m	1.4	∅	TJ	1.0	500m	425	4.0	400	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
54	40889	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
55	40890	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
56	40891	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
57	40892	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
58	40893	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
59	40894	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
60	40895	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
61	40896	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
62	40897	13m	1.4	∅	TJ	1.0	500m	450	4.0	450	10u	100	500m	15	35	20M\$Δ	400n		DM	F8	A	
63	40898	13m	1.4	∅	TJ	1.0																

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					hFE			MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWL #	C L O A D E		
						Ic	Vcbo	Vebo	Vceo	MAX. Icbo @ 25°C (A)	BIAS Vcb (V)	MIN Ic (A)	MAX (A)							f _{ae} (Hz)	
1	HP35831E0pt005*	20m	1.6 ∅	∅	SJ	80m	35 t	1.5	30	100u∅	15∅	15m	15	125	2.0G#			W17	S		
2	HP35850A	20m	2.5 ∅	∅	SJ	125m	30 t	1.5	25	100u∅	15∅	100m	15	125	3.0G#			C23			
3	HP35853B	20m	2.5 ∅	∅	SJ	125m	30 t	1.5	25	100u∅	15∅	100m	15	125	3.0G#			W16	F		
4	HP35853E*	20m	2.5 ∅	∅	SJ	125m	30 t	1.5	25	100u∅	15∅	100m	15	125	3.0G#			W16	F		
5	HP35854B	20m	2.5 ∅	∅	SJ	125m	30 t	1.5	25	100u∅	15∅	100m	15	125	3.0G#			T112	F		
6	HP35854E*	20m	2.5 ∅	∅	SJ	125m	30 t	1.5	25	100u∅	15∅	100m	15	125	3.0G#			T112	F		
7	MM8000	20m	3.5 ∅	∅	SJ	400m	40	3.5	30	20u∆	15∅	50m	30		550M∆			T039	A		
8	MM8001	20m	3.5 ∅	∅	SJ	400m	40	3.5	30	20u∆	15∅	50m	30		700M∆			T039	A		
9	MM8009	20m	1.0	∅	SJ	400m	45 t	3.0	35	100u∆	5.0∅	100m	20		1.0G∆			T039	A		
10	MRF207	20m	3.5 ∅	∅	SS	400m	36 t	4.0	18	100u∆	5.0∅	100m	5.0					T039	A		
11	MRF225	20m	3.5 ∅	∅	SS	250m	36 t	4.0	18	100u∆	5.0∅	100m			225M#			T039	A		
12	MRF517	20m	2.5 ∅	#	SJ	150m	35 t	3.5	20	100u∆	1.0∅	60m	50	150	2.7G∆			∅	T039		
13	MST10	20m	1.0	∅	SA	350m	100m	100	100	3.0u∅	10∅	55m	30	55	40M∆	25		DM	T05		
14	MST15	20m	1.0	∅	SA	350m	100m	150	150	3.0u∅	10∅	55m	30	55	40M∆	25		DM	T05		
15	MST20	20m	1.0	∅	SA	350m	100m	200	200	3.0u∅	10∅	55m	30	55	40M∆	25		DM	T05		
16	MST25	20m	1.0	∅	SA	350m	100m	250	250	3.0u∅	10∅	55m	30	55	40M∆	25		DM	T05		
17	MST30	20m	1.0	∅	SA	350m	100m	300	300	3.0u∅	10∅	55m	30	55	40M∆	25		DM	T05		
18	MST35	20m	1.0	∅	SA	350m	100m	350	350	3.0u∅	10∅	55m	30	55	40M∆	25		DM	T05		
19	MST40	20m	1.0	∅	SA	350m	100m	400	400	4.0u∅	10∅	45m	30	55	40M∆	30		DM	T05		
20	MST45	20m	1.0	∅	SA	350m	100m	450	450	4.0u∅	10∅	45m	30	55	40M∆	30		DM	T05		
21	MST50	20m	1.0	∅	SA	300m	100m	500	500	6.0u∅	10∅	25m	30	55	40M∆	55		DM	T05		
22	MST55	20m	1.0	∅	SA	300m	100m	550	550	6.0u∅	10∅	25m	30	55	40M∆	60		DM	T05		
23	MST60	20m	1.0	∅	SA	300m	100m	600	600	8.0u∅	10∅	25m	30	55	40M∆	60		DM	T05		
24	MST65	20m	1.0	∅	SA	300m	100m	650	650	8.0u∅	10∅	25m	30	55	40M∆	60		DM	T05		
25	MST70	20m	1.0	∅	SA	250m	100m	700	700	10u∅	10∅	25m	30	55	40M∆	65		DM	T05		
26	MST75	20m	1.0	∅	SA	250m	100m	750	750	10u∅	10∅	22m	30	55	40M∆	73		DM	T05		
27	MST80	20m	1.0	∅	SA	200m	50m	800	800	12u∅	10∅	22m	25	50	40M∆	73		DM	T05		
28	MST85	20m	1.0	∅	SA	200m	50m	850	850	12u∅	10∅	20m	25	50	40M∆	80		DM	T05		
29	MST90	20m	1.0	∅	SA	200m	50m	900	900	15u∅	10∅	20m	25	50	40M∆	80		DM	T05		
30	MST95	20m	1.0	∅	SA	150m	50m	950	950	15u∅	10∅	15m	25	50	40M∆	100		DM	T05		
31	MST100	20m	2.0	∅	SJ	500m	1.0k	5.0	1.0k	12u∅	10∅	20m	30	40k	40k	90		D	T05		
32	PT1515	20m	3.0 ∅	∅	SJ	500m	80	4.0	80	10u∅	28∅	100m	15	100	#		PL	T05			
33	PT1559	20m	3.5 ∅	∅	SJ	500m	80	5.0	50	50m∅	28∅	100m	10	#	140M∆	4.0		PL	T05		
34	SD1006	20m	3.5 ∅	∅	SJ	400m	50	5.0	30	100u∆	15∅	50m	30	300	1.8G∆			∅	T039		
35	TIC3539	20m	1.0	∅	SS	400m	40	3.5	30	10u∅	15∅	50m	25	300	1.0G∆	2.0		∅	T039		
36	TIC3540	20m	5.0 ∅	∅	SS	400m	40	3.0	25	20u∅	5.0∅	50m	50	250	1.5G∆			∅	T0117		
37	TIC3540R	20m	5.0 ∅	∅	SS	400m	40	3.0	25	20u∅	5.0∅	50m	50	250	1.5G∆			∅	T0117		
38	2N497	22m	4.0 ∅	∅	SJ		60	8.0	60	10u∅	10∅	200m	12	36		25		ME	T05		
39	2N498	22m	4.0 ∅	∅	SJ		100	8.0	100	10u∅	10∅	200m	12	36		25		ME	T05		
40	2N656	22m	4.0 ∅	∅	SJ		60	8.0	60	10u∅	10∅	200m	30	90		25		ME	T05		
41	2N656S	22m	4.0 ∅	∅	SJ		60	8.0	60	10u∅	10∅	200m	30	90		25		ME	T05		
42	2N657	22m	4.0 ∅	∅	SJ		100	8.0	100	10u∅	10∅	200m	30	90		25		ME	T05		
43	2N657S	22m	4.0 ∅	∅	SJ		100	8.0	100	10u∅	10∅	200m	30	90		25		ME	T05		
44	2N3118	22m	1.0	∅	SS	500m	85	4.0	60	100m∅	28∅	25m	50	275	#	250M∆	5.0	20u∅		T05	
45	2N3119	22m	1.0	∅	SS	500m	100	4.0	80	50m∅	10∅	10m	40	200	#	250M∆	5.0	20u∅		T05	
46	2N3435	22m	1.0	∅	SS	250m	80	4.0	60	50m∅	20∅	10m	50	200	#	140M∆	5.0	20u∅		T05	
47	2N3734T	22m	1.0	∅	SS	1.5	50	5.0	30	200m∅	1.5∅	1.0	30	120	#	300M∆	20	40n∅		T05	
48	2N3734St	22m	1.0	∅	SS	1.5	50	5.0	30	200m∅	1.5∅	1.0	30	120	#	300M∆	20	40n∅		T05	
49	2N3735T	22m	1.0	∅	SS	1.5	75	5.0	50	200m∅	1.5∅	1.0	20	80	#	250M∆	20	40n∅		T05	
50	2N6526	22m	3.9 ∅	∅	SS	500m	50 t	3.5	50	500m∅	5.0∅	50m	15							W24	
51	25C1262	22m	2.8 ∅	∅	SJ	300m	45	3.0	20	1.0u∅	15∅	65m	80	∅	1.7G			PE	T88a		
52	40346V1	22m	4.0	∅	SJ	10m				175	∅	10m	25		10M∆	50		PL	F31		
53	40412V1	22m	4.0	∅	SJ	10m				250	∅	30m	40		10M∆			PL	F31		
54	BF179A	22m	1.7 ∅	∅	SJ	50m	10m	5.0	160	∅					120M∆			DPL	T05		
55	BF179B	22m	1.7 ∅	∅	SJ	50m	10m	5.0	220	∅					120M∆			DPL	T05		
56	BF179C	22m	1.7 ∅	∅	SJ	50m	10m	5.0	250	∅					120M∆			DPL	T05		
57	MM3734T	22m	1.0	∅	SJ	1.5	50	5.0	30	500m∅	1.5∅	1.0	25	100	#	400M∆	25	16n∅	AN	T039	
58	MM3735T	22m	1.0	∅	SJ	1.5	75	5.0	50	500m∅	1.5∅	1.0	20	100	#	400M∆	25	28n∅	AN	T039	
59	MM5189T	22m	1.0	∅	SJ	2.0	60	5.0	40	100u	1.0	1.0	20	35	#	350M∆	1.0	16n∅	AN	T039	
60	MM5262T	22m	1.0	∅	SJ	2.0	75	5.0	50	100u	1.0	100m	35	∅	#	350M∆	1.0	16n∅	AN	T039	
61	MSC80044*	22m		∅	SJ		50 t	3.5	20	5.0	100m	15	20		3.2G∆			AN	T039		
62	MSC80064*	22m		∅	SJ		50 t	3.5	20	5.0	100m	15	20		3.2G∆			AN	T95		
63	PT1558	22m	4.0 ∅	∅	SJ	500m	200m	80	5.0	45	50m∅	28∅	100m	10	100	#	250M∆	4.0		PL	T05
64	2N3309	23m	3.5 ∅	∅	SS	500m	100m	50	3.0	50	100u∅	2.0∅	75	5.0	100	#	300M∆	2.0		PL	T039
65	2N3659	23m	4.0 ∅	∅	SS	500m	250m	220	5.0	170	10m∅	50∅	10m	20		50M∆			PL	T05	
66	25C845	23m	3.5 ∅	∅	SJ	400m		55	3.5	30	1.0u∅	5.0∅	100m	15	200			PL	T05		

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/°C)	MAX. FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		BIAS Ic	MIN	MAX	fae (Hz)	MAX. SAT. RES. (s)	tr (s)	STRUC-TURE	DWG # Y200 s/a T0200 Ser.	C E O D E	
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo (A)	Vcb (V)										Vcb (V)
1	40912	33m	5.8		SJ	3.0	2.0	140	7.0	120	2.0m#	4.0	500m	20	100	800kΔ	2.4		H	F18	C	
2	40913	33m	5.8		SJ	3.0	2.0	170	7.0	150	5.0u#	2.0	1.0	20	120	800kΔ	5.0m		H	F18	C	
3#	BF257Δ	33m	5.0		SJ	100m		160	5.0	160	5.0n#	10	30m	25	60	90MΔ	33		PE	T039	A	
4#	BF258Δ	33m	5.0		SJ	100m		250	5.0	250	5.0n#	10	30m	25		90MΔ	33		PE	T039	A	
5#	BF259Δ	33m	5.0		SJ	100m		300	5.0	300	5.0n#	10	30m	25		90MΔ	33		PE	T039	A	
6#	BFR57	33m	5.0		SJ	100m		160	5.0	160	5.0nΔ	10	30m	25		90MΔ			PE	T039	A	
7#	BFR58	33m	5.0		SJ	100m		250	5.0	250	5.0nΔ	10	30m	25		90MΔ			PE	T039	A	
8#	BFR59	33m	5.0		SJ	100m		300	5.0	300	5.0nΔ	10	30m	25		90MΔ			PE	T039	A	
9#	BFR59	33m	5.0		SJ	150m		300	5.0	300	5.0n	10	50m	25		90MΔ	33		PE	T039	A	
10#	BFT99	33m	5.0		SJ	500m		3.0	20	20	15	1.0m	25			3.0GΔ			PE	T0117	R	
11#	BFX51	33m	6.0		SS	1.0		80	4.0	80	10u	10	100m	15	40	180MΔ	1.8		PL	T05	A	
12	MSC1002*	33m	5.8		SJ	250mf		50	3.5	50	500u#	15	50m	15		1.0G#			E	T96	A	
13	MSC2100*	33m			SJ			40	1.0	15		5.0	100m	20	120	1.6GΔ			E	W77	R	
14	MSC80040*	33m			SJ	250mf		40	3.0	15		5.0	100m	20	120	1.6GΔ			E	T95	R	
15	MSC80090*	33m	5.8		SJ	250mf		50	3.5	50	500u#	15	50m	15	120	1.0G#			E	T95	R	
16	MSC80118	33m	2.0		SJ	250mf		50	3.5	50	500u#	15	50m	15	120	1.0G#			E	W77	F	
17	PE7058	33m	1.2		SJ	2.0		220	7.0	220	100n	20	30m	40	150	90MΔ	50		E	T092	A	
18	PE7059	33m	1.2		SJ	2.0		300	7.0	300	100n	20	30m	40	150	80MΔ	50		E	T092	A	
19#	ZT90	33m	1.0		SJ	1.0		60	6.0	60	10n	10	200m	60	200	300MΔ	3.5		PL	T05	A	
20#	ZT91	33m	1.0		SJ	1.0		120	6.0	100	1.0u	10	200m	40	120	300MΔ	6.0		PL	T05	A	
21#	ZT92	33m	1.0		SJ	1.0		120	6.0	100	1.0u	10	200m	65	200	250MΔ	6.0		PL	T05	A	
22#	ZT93	33m	1.0		SJ	1.0		120	6.0	80	100n	10	150m	40	120	300MΔ	3.3		PL	T05	A	
23#	ZT94	33m	1.0		SJ	1.0		60	6.0	45	1.0u	10	10m	20	#	300MΔ	3.5		PL	T05	A	
24#	ZT95	33m	1.0		SJ	1.0		60	6.0	60	10n	10	350m	30	200	300MΔ	3.4		PL	T05	A	
25#	ZT3440	33m	1.0		SJ	1.0		500m	300	7.0	250	2.0u	10	20m	40	160	20MΔ		Δ	T05	A	
26	2N5334†	34m	6.0		SJ	3.0		500m	60	8.0	60	5.0u	2.0	1.0	30	150	40MΔ		50n	T039	A	
27	2N5335†	34m	6.0		SJ	3.0		500m	80	8.0	80	5.0u	2.0	1.0	30	150	40MΔ		50n	T039	A	
28	2N5336†	34m	6.0		SJ	5.0		1.0	80	6.0	80	1.0u	2.0	2.0	30	120	30MΔ		100n	T039	A	
29	2N5337†	34m	6.0		SJ	5.0		1.0	80	6.0	80	1.0u	2.0	2.0	60	240	30MΔ		100n	T039	A	
30	2N5338†	34m	6.0		SJ	5.0		1.0	100	6.0	100	1.0u	2.0	2.0	30	120	30MΔ		100n	T039	A	
31	2N5339†	34m	6.0		SJ	5.0		1.0	100	6.0	100	1.0u	2.0	2.0	60	240	30MΔ		100n	T039	A	
32#	2SC1797	34m	6.0		SJ	300m		50	3.5	50	200u	10	150m	20	200	30MΔ			E	W77	F	
33#	2SC2065*	34m	6.0		SJ	250m		40	3.0	18	10u	10	80m	20	200	3.2GΔ			E	T136	S	
34#	BFT32	34m	1.0		SA	5.0		80	5.0	60	100n	10	150m	50	300	100MΔ	2.0		PE	T039	A	
35#	BFT33	34m	1.0		SA	5.0		100	5.0	80	100n	10	150m	50	250	100MΔ	2.0		PE	T039	A	
36#	BFT34	34m	1.0		SA	5.0		120	5.0	100	100n	10	150m	50	200	100MΔ	2.0		PE	T039	A	
37	PT6618	34m	6.0		SS	400m		55	3.5	30		1.5	1.0	25	180	60MΔ		100n	T039	A		
38	TIP5011	34m	1.0		SJ	3.0		500m	40	4.0	40	1.0u	1.5	1.0	25	180	60MΔ		100n	T039	A	
39	TIP502†	34m	1.0		SJ	3.0		500m	60	4.0	60	1.0u	1.5	1.0	25	180	60MΔ		100n	T039	A	
40	MRF313	35m	2.5		SS	150m		40	3.0	30	1.0mΔ	10	100m	20	150	2.5GΔ			E	W66	R	
41	MRF313A	35m	2.5		SS	150m		40	3.0	30	1.0mΔ	10	100m	20	150	2.5GΔ			E	T123	R	
42	MRF626	35m	2.5		SS	150m		30	3.5	20	1.0mΔ	10	50m	15	150	2.7MΔ			E	T123	R	
43	MRF627	35m	2.5		SS	150m		30	3.5	20	1.0mΔ	10	50m	15	150	2.7MΔ			E	W66a	R	
44	2N2657†	40m	1.2		SJ	5.0		80	7.0	60	100n	2.0	1.0	40	120	20MΔ		80n	T05	A		
45	2N2658†	40m	1.2		SJ	5.0		100	7.0	80	100n	2.0	1.0	40	120	20MΔ		80n	T05	A		
46	2N2949	40m	6.0		SC	700m		100m	60	3.0	60	100n	2.0	4.0m	50	100	100MΔ			R70	A	
47	2N2950	40m	6.0		SC	700m		100m	60	3.0	60	100n	2.0	4.0m	50	100	100MΔ			T30	A	
48	2N3296	40m	6.0		SC	700m		100m	60	3.0	60	100n	2.0	4.0m	50	50	50MΔ			T30	A	
49	2N3553	40m	7.0		SC	350m		100m	65	4.0	40	1.0m#	5.0	250m	15	150	350MΔ	4.0		T039	A	
50	JAN2N3553	40m	1.0		SJ	1.0		65	4.0	40	200u†	5.0	150m	15	150	50MΔ			T039	A		
51	2N3593	40m	1.0		SC	500m		250m	200	10	200	1.0u	8.0	200m	30	90	15MΔ			T20	Ø	
52	2N3594	40m	1.0		SC	500m		250m	200	10	200	1.0u	8.0	200m	75	150	15MΔ			T20	Ø	
53	2N3916	40m	5.0		SJ	150m		150	5.0	150	1.0m#	10	150m	40	200	50MΔ			F16	T039	A	
54	2N3924	40m	7.0		SS	500m		36	4.0	18	100u	10	100m	40	200	250MΔ			PE	T039	A	
55	2N4349†	40m	7.0		SJ	2.0		65	5.0	40	100u#	1.0	1.0	20	350MΔ	500m	130n	PE	T05	A		
56	2N4350	40m	7.0		SJ	350m		100m	65	4.0	40	100u#	5.0	350m	10	200	300MΔ	2.9		PE	T05	A
57	2N4862	40m	4.0		SJ	2.0		500m	140	8.0	120	100n	5.0	500m	50	150	50MΔ			PE	T046	A
58	2N4863	40m	4.0		SJ	2.0		500m	140	8.0	120	100n	5.0	500m	50	150	50MΔ			PE	T05	A
59	2N5090	40m	4.0		SJ	400m		400m	95	3.5	30	20uΔ	5.0	50m	10	200	500MΔ	10		PE	T060	A
60	2N5102	40m	7.0		SS	3.3		1.0	75	4.0	50	100u#	4.0	500m	10	100	150MΔ			PE	T060	A
61	2N5148	40m	1.0		SJ	2.0		1.0	100	6.0	80	1.0m#	5.0	1.0	30	90	50MΔ			PE	T039	A
62	2N5150	40m	1.0		SJ	2.0		1.0	100	6.0	80	1.0m#	5.0	1.0	70	200	60MΔ			PE	T039	A
63	2N5252	40m	1.0		SS	1.0		250m	300	6.0	300	1.0u	10	100m	40	120	30MΔ	5.0		PE	T039	A
64	2N5253	40m	1.0		SS	1.0		250m	300	6.0	300	1.0u	10	100m	80	250	30MΔ	5.0		PE	T039	A
65	2N6376†	40m	1.0		SS	1.5		75	6.0	40	200n	1.0	500m	30	90	300MΔ	2.5		PE	R169	A	
66#	2SC547	40m	6.0		SJ	3.3		1.0	75	4.0	40	100u#	3.0	150m	10	100	400MΔ	4.0		PE	T039	A
67#	2SC597	40m	6.0		SJ	1.0		65	4.0	40	50u	10	100m	30	180	400MΔ			PE	R179m	A	
68#	2SC911	40m	1.7		SJ	500m		40	4.0	40	50u	10	100m	20	180	800MΔ			PE	W43	R	
69#	2SC911A	40m	1.7		SJ	500m		40	4.0	40	50u	10	100m	20	180	800MΔ			PE	W43	R	
70#	2SC1017	40m	4.0		J	1.0		75	4.0	35	100u	10	100m	10	#	200MΔ			PE	B15a	P	
71#	2SC1018	40m	4.0		J	1.0		75	4.0	35	100u	10	100m	10	#	200MΔ			PE	B15a	P	
72#	2SC1043	40m	6.0		SJ	300m		45	3.0	25	100n	10	100m	20	200	1.8GΔ			E	T136a	S	
73#	2SC1251	40m	7.0		SJ	300m		45	3.0	25	100n	10	50m	20	#	1.8GΔ			E	T136	S	
74#	2SC1530	40m																				

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG #	C O D E
						Ic (A)	Ib (A)	BVcbo (V)	BEVbe (V)	BVceo (V)	Icbo @ 25°C (A)	Vcb (V)									
1#	2SC1355	46m	7.0	0.0	\$J	700m		40	3.5	35	100u	5.0	200m	80	0	1.8G		PE	T129	GE	
2#	2SC1465*	46m	7.0	0.0	\$J	500m		50	3.5	25	250u	5.0	200m	80	0	1.6G		PE	W80	V	
3#	2SC1533*	46m	7.0	0.0	\$J	500m		45	3.5	23	100u	5.0	200m	50	0	1.8G		PE	T129a	GE	
4#	2SC1561*	46m	7.0	0.0	\$J	500m		55	3.5	35	100u	5.0	200m	50	0	1.8G		PE	T129a	GE	
5#	2SC1821*	46m	7.0	0.0	\$J	500m		55	3.5	35	100u	5.0	200m	50	0	1.8G		PE	T129a	GE	
6#	BLX92	46m	6.0	0.0	\$S	700m		65	4.0	33	100u	5.0	100m	10		1.2G	1.7	PE	T84	GE	
7#	HSE904-RT	48m	6.0	0.0	\$J			300	4.0	300	100u	10	50m	30		5.0M			T066	C	
8	2N2485	50m	8.8	0.0	\$S	1.0	100m	120	2.0	120	500u	10	500m	10		100M			T05	A	
9	2N2486	50m	8.8	0.0	\$S	1.0	100m	140	2.0	140	500u	10	500m	10		100M			T05	A	
10	JAN2N2631	50m	8.8	0.0	\$J	1.5		80	4.0	60	100u	10	300m	30	150 #	150M	670m		R179	A	
11	2N2650	50m	8.7	0.0	\$J	1.0	100m	140	2.0	140	500u	10	500m	10		100M			T05	A	
12	2N2876	50m	18	0.0	\$J	2.5		80	4.0	60	100u	10	500m	10		200M		PL	T060	A	
13	2N2911	50m	5.0	0.0	\$C	3.0	1.0	150	10	125	2.0	1.0	20	60	1.0M			T05	A		
14	2N3262†	50m	1.0	0.0	\$J	1.5		100	4.0	80	100n	4.0	500m	40		150M	600m		T039	A	
15	2N3619	50m	7.5	0.0	\$J	2.5	500m	75	4.0	40	25u	5.0	1.0	40	#	200M			R50	A	
16	2N3620	50m	7.5	0.0	\$J	5.0	1.0	75	4.0	40	25u	5.0	1.0	40	#	200M			T27	A	
17	2N3623	50m	7.5	0.0	\$J	2.5	500m	75	4.0	40	1.0u	5.0	1.0	40	#	200M			R50	A	
18	2N3624	50m	7.5	0.0	\$J	5.0	1.0	75	4.0	40	1.0u	5.0	1.0	40	#	200M			T27	A	
19	2N3627	50m	7.5	0.0	\$J	2.5	500m	100	4.0	50	1.0u	5.0	1.0	40	#	200M			R50	A	
20	2N3628	50m	7.5	0.0	\$J	5.0	1.0	100	4.0	50	1.0u	5.0	1.0	40	#	200M			T27	A	
21	2N3675†	50m	8.8	0.0	\$C	3.0	1.0	90	7.0	55	5.0m	1.0	1.0	12	60	1.0M	800m		T05	A	
22	2N3676†	50m	8.8	0.0	\$C	3.0	1.0	90	7.0	90	5.0m	1.0	1.0	12	60	1.0M	800m		T05	A	
23	2N3928†	50m	5.0	0.0	\$J	3.0	500m	90	4.0	40	1.0m	1.5	20	300 #	150M			R179w	A		
24	2N4054	50m	4.0	0.0	\$C	100m		300	7.0	300	100u	10	50m	30	90	15M	67		B15	L	
25	2N4055	50m	4.0	0.0	\$C	100m		250	7.0	250	100u	10	50m	30	90	15M	67		B15	L	
26	2N4056	50m	4.0	0.0	\$C	100m		200	7.0	200	100u	10	50m	30	90	15M	67		B15	L	
27	2N4057	50m	4.0	0.0	\$C	100m		150	7.0	150	100u	10	50m	30	90	15M	67		B15	L	
28	2N4132	50m	7.5	0.0	\$J	600m	100m	90	5.0	80	10u	5.0	200m	10	80 #	200M			T037	A	
29	2N4150†	50m	5.0	0.0	\$J	5.0	2.0	100	5.0	80	100n	5.0	40	120 #	15M			T05	A		
30	JAN2N4150†	50m	1.5	0.0	\$A	10		100	7.0	70	100n	5.0	5.0	40	120 #	15M			T05	A	
31	2N4225†	50m	5.0	0.0	\$J	3.0	50	80	6.0	40	1.0m	5.0	1.0	40	150	150M	3.3		R179w	A	
32	2N4226†	50m	5.0	0.0	\$J	3.0	50	100	6.0	60	1.0m	5.0	1.0	40	150	150M	3.3		R179w	A	
33	2N5237†	50m	5.0	0.0	\$J	3.0	2.0	150	5.0	120	10u	5.0	5.0	40	120 #	15M			T05	A	
34	JAN2N5237†	50m	1.5	0.0	\$A	10		150	7.0	120	100n	5.0	5.0	40	120 #	15M			T05	A	
35	2N5238†	50m	5.0	0.0	\$J	5.0	2.0	200	5.0	170	10u	5.0	5.0	40	120 #	15M			T05	A	
36	JAN2N5238†	50m	1.5	0.0	\$A	10		200	7.0	170	100n	5.0	5.0	40	120 #	15M			T05	A	
37	2N5327†	50m	5.0	0.0	\$J	10	2.0	100	5.0	80	2.0	1.0	100	300	100M	500m			T05	A	
38	JAN2N6265	50m	6.2	0.0	\$J	275m		50	3.5	50	2.0m	5.0	100m	30	120 #	100M			B25	A	
39#	2NJ243E*	50m	7.5	0.0	\$J	600m		35	3.5	20	400u	5.0	200m	50	0	20M		PE	W86	A	
40#	2SC495	50m	5.0	0.0	\$J	800m	800m	70	5.0	50	1.0u	2.0	50m	40	240	100M	1.6	PE	B7	B	
41#	2SC496	50m	5.0	0.0	\$J	800m	800m	40	5.0	30	1.0u	2.0	50m	40	240	100M	1.6	PE	B7	B	
42#	2SC582	50m	4.0	0.0	\$J	100m		300	3.0	300	100m	10	50m	30	150	20M		PE	T066	S	
43#	2SC1039	50m	7.5	0.0	\$J	250m		40	3.0	20	100u	10	100m	15	200	2.0G		PE	T136	S	
44#	2SC1042	50m	7.5	0.0	\$J	250m		40	3.0	20	100u	10	100m	15	200	2.0G		PE	T136	S	
45#	2SC1593	50m	7.5	0.0	\$J	250		40	3.0	20	100u	10	100m	15	200 #	2.0G		PE	T136	S	
46#	2SD1837	50m	7.5	0.0	\$J	600m		35	3.5	20	400u	5.0	200m	50	0	20M	100	PE	W16a	F	
47#	2SD156	50m	4.0	0.0	\$J	100m		200	3.0	200	10m	10	50m	20	250 *	20M	100	PE	T066	D	
48#	2SD157	50m	4.0	0.0	\$J	100m		300	3.0	300	10m	10	50m	20	250 *	20M	100	PE	T066	D	
49	40264	50m	4.0	0.0	\$	100m	100m	300	3.0	300	100u	10	50m	30	150	25M			F14	A	
50	40347	50m	1.0	0.0	\$J	1.5	500m	60	7.0	40	1.0u*	4.0	450m	25	100	2.2		D	T05	A	
51	40347L	50m	1.0	0.0	\$J	1.5	500m	60	7.0	40	1.0u*	4.0	450m	25	100	2.2		D	T05	A	
52	40347S	50m	1.0	0.0	\$J	1.5	500m	60	7.0	40	1.0u*	4.0	450m	25	100	2.2		D	T039	A	
53	40348	50m	1.0	0.0	\$J	1.5	500m	90	7.0	65	1.0u*	4.0	300m	30	125	2.5		D	T05	A	
54	40348L	50m	1.0	0.0	\$J	1.5	500m	90	7.0	65	1.0u*	4.0	300m	30	125	2.5		D	T05	A	
55	40348S	50m	1.0	0.0	\$J	1.5	500m	90	7.0	65	1.0u*	4.0	300m	30	125	2.5		D	T039	A	
56	40349	50m	1.0	0.0	\$J	1.5	500m	160	7.0	140	1.0u*	4.0	150m	30	125	3.3		D	T05	A	
57	40349L	50m	1.0	0.0	\$J	1.5	500m	160	7.0	140	1.0u*	4.0	150m	30	125	3.3		D	T05	A	
58	40349S	50m	1.0	0.0	\$J	1.5	500m	160	7.0	140	1.0u*	4.0	150m	30	125	3.3		H	T039	A	
59#	BF469	50m	1.8	0.0	\$J	100m		250	5.0	250	20	25m	50		60M	800m		PE	T0126	B	
60#	BF471	50m	2.0	0.0	\$J	100m		300	5.0	300	20	25m	50		60M	800m		PE	T0126	B	
61	D40C3	50m	1.3	#	\$S	1.0 #		13	3.0	0	20u	5.0	200m	90k		75M			100	0	
62	D40D11	50m	1.3	#	\$S	1.0		5.0	3.0	30	100n	2.0	100m	50	150	200M	1.0		25n	0	
63	D40D21	50m	1.3	#	\$S	1.0		5.0	3.0	30	100n	2.0	100m	120	360	200M	1.0		25n	0	
64	D40D31	50m	1.3	#	\$S	1.0		5.0	3.0	30	100n	2.0	100m	290		200M	1.0		25n	0	
65	D40D41	50m	1.3	#	\$S	1.0		5.0	3.0	45	100n	2.0	100m	150	360	200M	1.0		25n	0	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	Tj	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Vcb @ 25°C (A)	hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG Y200 s/a Y2000 Ser.	# C O D E
						Ic (A)	Vcbo (V)	Vbeo (V)	Vbvc (V)	Icbo (A)		MIN (A)	MAX (A)						
1	2N6197	57m	10	SS	1.0	60	4.01	35	2.0mst									T91	R
2	2N6202	57m	10	SS	500m	60	4.01	33	2.0mst									T91	R
3	2N6206	57m	10	SS	500m	50	4.01	30	2.0mst									T93	R
4	2N6366	57m	10	SS	1.0	36	4.01	18	5.0mst	5.0	250m	5.0	50	50MΔ				T0102	A
5	2SC691	57m	8.6	SJ	500m	60	4.0	40	200u	10	100m	10	180	150MΔ		PE	T59b	R	
6	2SC778	57m	2.5	SJ	2.0	80	4.0	40	10u	10	100m	10	#	400MΔ		PE	F19	R	
7	2SC1011	57m	1.0	SJ	750m	40	3.0	20	100u	10	100m	5.0	#	500MΔ		PE	T0131	R	
8	40385L	57m	1.0	SJ	1.0	450	7.0	350	20u	10	20m	40	160		10		T05	A	
9	40385S	57m	1.0	SJ	1.0	450	7.0	350	20u	10	20m	40	160		10		T039	A	
10	40390	57m	3.5	SJ	1.0	500m	300	7.0	250	50u	20m	40	160	15MΔ			F31	A	
11	40446	57m	1.0	SJ	1.5		2.5		10u					27M*		DPL	F16	A	
12	40582	57m	1.0	SJ	1.5		2.5		10u					27M*		DPL	F16	A	
13	40584	57m	1.2	SA	2.0	1.0	4.0	4.0	10u*	4.0	300m	70	350			PL	T05	A	
14	40594L	57m	1.2	SA	2.0	1.0	4.0	4.0	95	4.0	300m	70	350				T05	A	
15	40594S	57m	1.2	SA	2.0	1.0	4.0	4.0	95	4.0	300m	70	350				T039	A	
16	B3-8	57m	1.0	SJ	1.0		3.0	14						175M#			W54	R	
17	B3-12	57m	1.0	SJ	1.0		4.0	18						175M#			T91	R	
18	B3-28	57m	1.0	SJ	1.0		4.0	35						175M#			T91	R	
19	BF257	57m	5.0	SJ	1.0		160	5.0	160	50m	10	30m	25	30MΔ	33m		T039	A	
20	BF258	57m	5.0	SJ	1.0		250	5.0	250	50m	10	30m	25	30MΔ	33m		T039	A	
21	BF259	57m	5.0	SJ	1.0		300	5.0	300	50m	10	30m	25	30MΔ	33m		T039	A	
22	BFQ38	57m	5.7	SJ	1.0	500m	300	5.0	250	20u	5.0	50m	25	10MΔ	15		T039	A	
23	BFQ39	57m	5.7	SJ	1.0	500m	300	5.0	300	20u	5.0	50m	25	10MΔ	15		T039	A	
24	BFQ40	57m	5.7	SJ	1.0	500m	450	5.0	350	20u	5.0	50m	25	10MΔ	15		T039	A	
25	BSS151	57m	1.0	SJ	2.0	1.0	100	7.0	75	50u	4.0	500m	40	50MΔ	80n	PE	T039	A	
26	BSS161	57m	1.0	SJ	2.0	1.0	100	7.0	75	50u	4.0	500m	40	50MΔ	80n	PE	T039	A	
27	C2-8Z	57m	1.0	SJ	1.0		3.0	14						470M#			W54	R	
28	C3-12	57m	1.0	SJ	1.0		4.0	17						470M#			T91	R	
29	C3-28	57m	1.0	SJ	1.0		4.0	33						400M#			T91	R	
30	CD2035*	57m	1.0	SJ	500m		4.01	50									T75g	R	
31	CD2087*	57m	1.0	SJ	500m		4.01	50									T75g	R	
32	D3-28	57m	1.0	SJ	500m		4.0	30						960M#			T93	R	
33	HEPS3010-RT†																		
34	MRF231	57m	10	SS	4.0	70	5.0	60	100u	2.0	250m	20	100	40MΔ	250m	100n	T039	A	
35	PT2620	57m	10	SS	1.0	36	4.01	18	500u	5.0	350m	5.0	100	90M#			T93b	R	
36	PT2620A	57m	10	SS	1.0	400m	85	4.0	45	100m	20	350m	30	700MΔ	7.5	PL	T05	A	
37	PT2640	57m	10	SS	1.0	400m	85	4.0	45		20	350m	30	700MΔ	7.5		T05	A	
38	PT2660	57m	10	SS	1.2		70	4.0	40	50m	10	350m	30	400MΔ	7.5	PL	T05	A	
39	PT2670†	57m	10	SS	1.0		100	4.0	60	10u	12	100m	20	150MΔ		PL	T039	A	
40	PT3502	57m	10	SS	1.0	750m	60	3.0	40	100u	20	50	15	100MΔ			T05	R	
41	PT3503	57m	10	SS	1.0	750m	40	2.0	25	100u	12	50m	15	100MΔ			T59	R	
42	RC1A1A15	57m	10	SS	1.0	500m	5.0	100	10u	10	10m	20	100	15MΔ	100		T039	A	
43	SCA3523-2	57m	10	SS	1.5		70	3.5	40	10u				100MΔ			F8	A	
44	SCA3523-3	57m	10	SS	1.5		70	3.5	40	10u				100MΔ			T13	A	
45	SCA3523A2	57m	10	SS	1.5		70	3.5	40	10u				100MΔ			F8	A	
46	SCA3523A3	57m	10	SS	1.5		70	3.5	40	10u				100MΔ			T13	A	
47	ST1105	57m	2.0	SS	1.0	500m	100	6.0	100	3.0u	10	75m	30	30MΔ			F8	A	
48	ST1205	57m	2.0	SS	1.0	500m	200	6.0	200	3.0u	10	60m	30	30MΔ			F8	A	
49	ST1305	57m	2.0	SS	1.0	500m	300	6.0	300	3.0u	10	55m	30	30MΔ			F8	A	
50	ST1405	57m	2.0	SS	1.0	500m	400	6.0	400	3.0u	10	45m	30	30MΔ			F8	A	
51	ST1505	57m	2.0	SS	1.0	500m	500	6.0	500	3.0u	10	35m	30	30MΔ			F8	A	
52	ST1605	57m	2.0	SS	1.0	500m	600	6.0	600	4.0u	10	25m	30	30MΔ			F8	A	
53	ST1705	57m	2.0	SS	1.0	500m	700	6.0	700	4.0u	10	20m	30	30MΔ			F8	A	
54	TR12005	57m	2.0	SS	3.0	1.0	200	4.0	200	10u	10	500m	15	35	20MΔ		F8	A	
55	TRS25X	57m	10	SS	1.0	500m	300	12	250	100u	10	20m	1.6k	30k	50MΔ		T05	A	
56	TRS30X	57m	10	SS	1.0	500m	400	12	300	100u	10	20m	2.5k	32k	50MΔ		T05	A	
57	TRS35X	57m	10	SS	1.0	500m	450	12	350	100u	10	20m	1.6k	30k	50MΔ		T05	A	
58	TRS3742	57m	2.0	SS	1.0	500m	300	7.0	300	200n	10	30m	20	50M			F8	A	
59	TRS4926	57m	2.0	SS	1.0	500m	200	7.0	200	100n	10	30m	20	50M			F8	A	
60	TRS4927	57m	2.0	SS	1.0	500m	250	7.0	250	100n	10	30m	20	50M			F8	A	
61	MSC80186*	58m					50	3.5	20	5.0	100m	15	20	3.2GΔ			T95	R	
62	MSC80196*	58m					50	3.5	20	5.0	100m	15	20	3.2GΔ			W77	F	
63	2N6524	59m	10	SS	1.2		40	3.01	40	1.2m	5.0	250m	15				W24	A	
64	2N6528	59m	10	SS	1.2		50	3.51	50	1.2m	5.0	250m	15				W24	A	
65	2N5152	60m	10	SS	2.0	1.0	100	6.01	80	1.0m	5.0	2.5	30	90	60MΔ		T039	A	
66	2N5154	60m	10	SS	2.0	1.0	100	6.01	80	1.0m	5.0	2.5	70	200	70MΔ		T039	A	
67	3TX615	60m	11	J	500m	100m	50	4.0	50	100u	5.0	200m	10	150	500MΔ		PL	T060	A
68	2003*	60m	11	SJ	500m		4.0	50						2.7G					
69	2702	60m	10	SS	500m		4.0	50						3.0G					
70	3003	60m	10	SS	500m		4.0	50						1.0G					
71	D10P	60m	11	SJ	1.0		4.0	50						1.0G					
72	DM10P	60m	11	SJ	1.0		4.0	50						1.0G					
73	KS6105†	60m	11	SJ	1.5	300m	60	4.5	60	500u	5.0	1.0	20	400M†		15n	PE	T039	A
74	KS6106†	60m	11	SJ	1.5	300m	40	4.5	40	500u	5.0	1.0	20	400M†		15n	PE	T039	A
75	KS6107†	60m	11	SJ	2.0	500m	60	4.5	60	500u	5.0	1.0	15	200M†		15n	PE	T037	A
76	KS6108†	60m	11	SJ	2.0	500m	40	4.5	40	500u	5.0	1.0	15	200M†		20n	PE	T037	A
77	40666	62m	11	SJ	500m		65	4.0	40	100u	5.0	200m	10	500MΔ	4.0			T060	A
78	2SC1791	63m	11	SJ	1.0		45	4.0	23	500u	10	500m	15	10GΔ				T59d	S
79	2SC1212	64m	10	SJ	1.0		50	4.0	50	5.0u	4.0	50m	60	160MΔ	1.5			B7a	B
80	2SC1212A	64m	10	SJ	1.0		80	4.0	80	5.0u	4.0	50m	60	160MΔ	1.5			B7a	B
81	2SC1368	64m	8.0	SJ	1.5		25	5.0	25	20u	2.0	500m	35	180MΔ	500m			B7a	B
82	D40E1	64m	1.6	SJ	2.0		5.0	30	100n	2.0	100m	50		230MΔ	1.0	130n		B15b	F
83	D40E5	64m	1.6	SJ	2.0		5.0	60	100n	2.0	100m	50		230MΔ	1.0	130n		B15b	F
84	D40E7	64m	1.6	SJ	2.0		5.0	80	100n	2.0	100m	50		230MΔ	1.0	130n		B15b	F
85	2N4440	65m	11	SJ	1.5	200m	65	4.0	40	100u	5.0	125m	10	200	400MΔ	4.0		T060	A
86	2N1068†	66m	10	SS	1.5	500m	60	12	30										

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX. FREE AIR @ 25°C (W/C)	Pc	M T A X E M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. I _{ceo} @ 25°C (A)	BIAS hFE			f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	C O D E		
						I _c (A)	I _b (A)	V _{cb0} (V)	V _{be0} (V)	V _{ce0} (V)		MIN	MAX	MAX. V _{cb} (V)							MAX. V _{cb} (V)	MAX. I _c (A)
1	TRS3255LP	66m	2.0	2.0	3A	400m	50m	325	3.0	325	10uφ	4.0φ	25m	30	φ	50k	80		F8			
2	TRS3505	66m	2.0	2.0	3A	400m	50m	350	3.0	350	2.0uφ	4.0φ	50m	22	φ	50k	36		F8			
3	TRS3505LP	66m	2.0	2.0	3A	400m	50m	350	3.0	350	10uφ	4.0φ	25m	30	φ	50k	80		F8			
4	TRS3605S	66m	2.0	2.0	3A	400m	50m	420	5.0	360	2.0uφ	8.0φ	200m	25	φ	50MΔ	30	DM	F8			
5	TRS3755	66m	2.0	2.0	3A	400m	50m	375	6.0	375	3.0uφ	4.0φ	50m	20	#	50k	38		F8			
6	TRS3755LP	66m	2.0	2.0	3A	400m	50m	375	3.0	375	10uφ	4.0φ	25m	30	φ	50k	80		F8			
7	TRS4005	66m	2.0	2.0	3A	400m	50m	400	6.0	400	2.0uφ	4.0φ	50m	30	#	50k	30		F8			
8	TRS4015	66m	2.0	2.0	3A	400m	50m	400	6.0	400	2.0uφ	4.0φ	50m	22	φ	50k	36		F8			
9	TRS4015LP	66m	2.0	2.0	3A	400m	50m	400	3.0	400	10uφ	4.0φ	25m	30	φ	50k	80		F8			
10	TRS4015S	66m	2.0	2.0	3A	400m	50m	480	5.0	400	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
11	TRS4255	66m	2.0	2.0	3A	400m	50m	425	6.0	425	3.0uφ	4.0φ	50m	30	φ	50k	30		F8			
12	TRS4255LP	66m	2.0	2.0	3A	400m	50m	425	3.0	425	10uφ	4.0φ	25m	30	φ	50k	80		F8			
13	TRS4505	66m	2.0	2.0	3A	400m	50m	450	6.0	450	2.0uφ	4.0φ	50m	22	φ	50k	36		F8			
14	TRS4505LP	66m	2.0	2.0	3A	400m	50m	450	3.0	450	10uφ	4.0φ	25m	30	φ	50k	80		F8			
15	TRS4755	66m	2.0	2.0	3A	400m	50m	475	6.0	475	2.0uφ	4.0φ	50m	30	#	50MΔ	30		F8			
16	TRS4755LP	66m	2.0	2.0	3A	400m	50m	475	3.0	475	10uφ	4.0φ	25m	30	φ	50k	80		F8			
17	TRS4805S	66m	2.0	2.0	3A	400m	50m	580	5.0	480	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
18	TRS5015	66m	2.0	2.0	3A	400m	50m	500	6.0	500	2.0uφ	5.0φ	50m	22	φ	50k	30		F8			
19	TRS5205S	66m	2.0	2.0	3A	400m	50m	625	5.0	520	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
20	TRS5255	66m	2.0	2.0	3A	400m	50m	525	6.0	525	2.0uφ	5.0φ	25m	22	φ	50k	72		F8			
21	TRS5405S	66m	2.0	2.0	3A	400m	50m	650	5.0	540	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
22	TRS5505	66m	2.0	2.0	3A	400m	50m	550	6.0	550	10uφ	5.0φ	25m	30	φ	50MΔ	60		F8			
23	TRS5755	66m	2.0	2.0	3A	400m	50m	575	6.0	575	2.0uφ	5.0φ	25m	22	φ	50k	72		F8			
24	TRS5805S	66m	2.0	2.0	3A	400m	50m	700	5.0	580	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
25	TRS6015	66m	2.0	2.0	3A	400m	50m	600	6.0	600	10uφ	5.0φ	25m	20	φ	50MΔ	60	DM	F8			
26	TRS6205S	66m	2.0	2.0	3A	400m	50m	750	5.0	620	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
27	TRS6505	66m	2.0	2.0	3A	400m	50m	650	6.0	650	10uφ	5.0φ	25m	25	#	50k	60		F8			
28	TRS6605S	66m	2.0	2.0	3A	400m	50m	800	5.0	660	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
29	TRS7015	66m	2.0	2.0	3A	400m	50m	700	6.0	700	10uφ	5.0φ	25m	25	#	50k	60		F8			
30	TRS7015S	66m	2.0	2.0	3A	400m	50m	850	5.0	700	10uφ	10φ	100m	20	φ	50MΔ	60	DM	F8			
31	TRS7505	66m	2.0	2.0	3A	400m	50m	750	6.0	750	10uφ	5.0φ	25m	25	#	50k	60		F8			
32	TRS8015	66m	2.0	2.0	3A	400m	50m	800	5.0	800	10uφ	5.0φ	25m	25	#	50k	60		F8			
33	2N1085	67m	1.0	1.0	3S	2.0	.20	80	5.0	50	50m	5.0	50	40	120	10k†	6.0		T05			
34	2N6390	67m#	8.3	φ	3S	1.0		50	3.5†	50	2.0m#	10φ	50m	20	120			PE	W24	AC		
35#	25C1405	67m	10	φ	3S	750m		36	4.0	18	50uφ	10φ	100m	40	φ			PE	T0131	R		
36#	25C1620	67m	10	φ	3S	600m		36	3.0	18	100uφ	13φ	100m	10	200			PE	T0131	R		
37#	25C1804	67m	10	φ	3S	1.0		47	4.0	47	200uφ	25φ	100m	10	180	#	1.2G\$	PE				
38#	25C1808	67m	10	φ	3S	1.0		35	3.5	17	100uφ	10φ	100m	10	180	#	1.2G\$	PE				
39#	25C2145	67m	10	φ	3S	2.0		35	4.0	18	500uφ	10φ	100m	20	180	#	500M\$	PE				
40	2850-11	67m	1.2	φ	3A	5.0		100	5.0	80	100n\$	1.0φ	50m	25	50	φ	40M\$	250m	50n	PL	T05	Aφ
41	2850-31	67m	1.5	φ	3A	5.0		100	5.0	80	100n\$	1.0φ	50m	25	50	φ	40M\$	250m	50n	PL	T32	Aφ
42	2851-11	67m	1.2	φ	3A	5.0		100	5.0	80	100n\$	1.0φ	50m	25	50	φ	40M\$	400m	50n	PL	T05	Aφ
43	2851-31	67m	1.5	φ	3A	5.0		100	5.0	80	100n\$	1.0φ	50m	25	50	φ	40M\$	400m	50n	PL	T32	Aφ
44	2852-11	67m	1.2	φ	3A	5.0		100	5.0	80	100n\$	1.0φ	50m	15	25	φ	30M\$	400m	60n	PL	T05	Aφ
45	2852-31	67m	1.5	φ	3A	5.0		100	5.0	80	100n\$	1.0φ	50m	15	25	φ	30M\$	400m	60n	PL	T32	Aφ
46	2853-11	67m	1.2	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	1.0	40	#	85	φ	40M\$	50n	PL	T05	Aφ
47	2853-31	67m	1.5	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	1.0	40	#	85	φ	40M\$	50n	PL	T32	Aφ
48	2854-11	67m	1.2	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	50m	50	90	φ	50M\$	40n	PL	T05	Aφ	
49	2854-31	67m	1.5	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	50m	50	90	φ	50M\$	40n	PL	T32	Aφ	
50	2855-11	67m	1.2	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	50m	25	50	φ	40M\$	50n	PL	T05	Aφ	
51	2855-31	67m	1.5	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	50m	25	50	φ	40M\$	50n	PL	T32	Aφ	
52	2856-11	67m	1.2	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	50m	15	25	φ	30M\$	60n	PL	T05	Aφ	
53	2856-31	67m	1.5	φ	3A	5.0		60	5.0	40	100n\$	1.0φ	50m	15	25	φ	30M\$	60n	PL	T32	Aφ	
54	PT3986	67m	1.5	φ	3S	5.0	1.0	100	5.0	60	100n\$φ	1.0φ	1.0	40		50M	250m		PL	T05	H	
55	PT4992	67m	1.5	φ	3S	5.0	1.0	100	8.0	80	100n\$φ	2.0φ	1.0	40	120	20M	500m	80n	PL	T05	A	
56	2N5423	68m	12	φ	3C	2.0		36	4.0	18	1.0uφ	2.0φ	1.0	20	70	300M\$	500m		PE	T060	Aφ	
57	2N5645	68m	12	φ	3S	1.0		36	4.0	18	500uφ	5.0φ	500m	15		400M\$Δ			PE	T72h	R	
58	2N6080	68m	12	φ	3S	1.0		36	4.0	18	250uφ	5.0φ	50m	5.0					PE	T72h	R	
59#	25C891	68m	10	φ	3S	600m		40	4.0	20	5.0uφ	1.0φ	100	15	#	600M\$Δ			PE	F19d	Sφ	
60#	25C2118	68m	10	φ	3S	1.4		35	3.5	17	1.0mφ	5.0φ	1.0	10	#	200	#		PE	F17		
61	SD1095	68m	12	φ	3J	1.0		36	4.0	18	2.0m	5.0φ	100m	10				PE	T72g	R		
62	2SD439	69m	8.0	φ	3J	1.2		20	5.0	18	1.0uφ	2.0φ	500m	60	320	150M\$			PE	T0126	B	
63#	2SD600	69m	8.0	φ	3J	1.0		100	5.0	100	1.0uφ	5.0φ	50m	60	320	130M\$			PE	T0126	B	
64#	2SD600K	69m	8.0	φ	3J	1.0		100	5.0	100	1.0uφ	5.0φ	50m	60	320	130M\$			PE	T0126	B	
65	MRF5175	69m	1.0	φ	3S	1.0		60	4.0†	30	500uφ	5.0φ	250m	10		400M#			PE	T90	R	
66	PT8635	69m	12	φ	3S	600m		60	3.5	30												
67#	25C1089	70m	7.0	φ	3J	150m		30	4.0	30	100u	10φ	50m	35	#	180	#	70M\$		PE†	B15a	P
68#	2SD204	71m	9.0	φ	3J	700m		60	5.0	45	3.0uφ	2.0φ	300m	40	#	200	#		PE	T05	Aφ	
69#	BC365	72m	1.0	φ	TJ	2.0		50	4.0	45	100nφ	1.0φ	50m	80		150M\$	1.6		AN	B18b	Aφ	
70	BC368	72m	1.0	φ	TJ	2.0		80	4.0	80	100nφ	1.0φ	50m	80		150M\$	1.6		AN	B18b	Aφ	
71	BC367	72m	1.0	φ	TJ	2.0		40	4.0	30	100nφ	1.0φ	50m	80		150M\$	1.6		AN	B18b	Aφ	
72	MPSU01	72m	1.0	φ	TJ	2.0		40	4.0	30	100nφ	1.0φ	10m	55	#	50M\$Δ						

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/°C)	MAX. FREE AIR @ 25°C (W/°C)	Pc	M T	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# E O D	C A D E
						Ic (A)	Ib (A)	Vcbo (V)	Vbeo (V)	Vcvo (V)	Icbo @ 25°C (A)	Vcb (V)									
1	NSD128	83m	1.7	∅	SJ	250m		180	5.0	180	50n∅	5.0∅	10m	50	500	100M∅		PLT	Y202a	A	
2	NSD129	83m	1.7	∅	SJ	250m		225	5.0	225	50n∅	5.0∅	10m	50	500	100M∅		PLT	Y202a	A	
3	NSD131	83m	1.7	∅	SJ	200m		250	7.0	250	100n∅	5.0∅	30m	30	90	50M∅		PLT	Y202a	A	
4	NSD132	83m	1.7	∅	SJ	200m		250	7.0	250	100n∅	10∅	30m	60	180	50M∅		PLT	Y202a	A	
5	NSD133	83m	1.7	∅	SJ	200m		300	7.0	300	100n∅	10∅	30m	30	90	50M∅		PLT	Y202a	A	
6	NSD134	83m	1.7	∅	SJ	200m		300	7.0	300	100n∅	10∅	30m	60	180	50M∅		PLT	Y202a	A	
7	NSD135	83m	1.7	∅	SJ	200m		375	7.0	375	100n∅	10∅	30m	30				PLT	Y202a	A	
8	NSD3439	83m	10	∅	SJ	2.0	1.0	450	6.0	350	500u#	10∅	20m	40	160	15MΔ		PLT	Y202a	A	
9	NSD3440	83m	10	∅	SJ	2.0	1.0	300	6.0	250	500u#	10∅	20m	40	160	15MΔ		PLT	Y202a	A	
10	NSD6178	83m	10	∅	SJ	2.0	500m	80	5.0	75	500m	2.0∅	500m	40	250	50MΔ		PLT	Y202a	A	
11	NSD6179	83m	10	∅	SJ	2.0	500m	60	5.0	50	500m	2.0∅	500m	40	250	50MΔ		PLT	Y202a	A	
12	NSDU01	83m	1.7	∅	SJ	5.0		40	5.0	30	100n∅	1.0∅	10m	55	#	50M∅Δ		PL	Y202a	A∅	
13	NSDU01A	83m	1.7	∅	SJ	5.0		50	5.0	40	100n∅	1.0∅	10m	55	#	50M∅Δ		PL	Y202a	A∅	
14	NSDU05	83m	1.7	∅	SJ	5.0		60	5.0	60	100n∅	1.0∅	50m	80	#	50M∅Δ		PL	Y202a	A∅	
15	NSDU06	83m	10	∅	SJ	2.0	500m	80	4.0	80	100n	1.0∅	250m	50		50MΔ		PLT	Y202a	A	
16	NSDU07	83m	10	∅	SJ	2.0	500m	100	4.0	100	100n	1.0∅	250m	50		50MΔ		PLT	Y202a	A	
17	NSDU10	83m	10	∅	SJ	2.0	1.0	300	8.0	300	200n∅	10∅	30m	40		60MΔ		PLT	Y202a	A	
18	NSE180	83m	10	∅	SJ	3.0	500m	60	5.0	40	100n	1.0∅	100m	50	250	50MΔ		PLT	Y202a	D	
19	NSE181	83m	10	∅	SS	3.0	500m	80	5.0	60	100n	1.0∅	100m	50	250	50MΔ		PLT	Y202a	D	
20	2N5945	85m	15	∅	SS	800m		36	4.0	16	1.0m∅	5.0∅	200m	20					T90	R	
21	2N5995	85m	15	∅	SS	1.5		36	3.5	14	2.5mΔ							T78	R		
22	MRF818	85m	15	∅	SS	1.5		36	4.0	16	1.0m∅	5.0∅	200m	20	200	900M#			T90	R	
23	MRF823	85m	15	∅	SS	1.5		36	4.0	16	1.0m∅	5.0∅	200m	20	150			W30	S		
24	SD1135	85m	15	∅	SS	1.7		36	4.0	16	1.0m∅	5.0∅	500m	20				T90	R		
25	2N5589	86m	15	∅	SS	600m		36	4.0	18	1.0m∅	5.0∅	100m	5.0		200M∅Δ			T71c	R	
26	2N5636	86m	15	∅	SS	1.5		60	4.0	35	1.0m∅	5.0∅	200m	5.0		450M∅Δ			T71b	R	
27	2N5641	86m	15	∅	SS	1.0		65	4.0	35	1.0m∅	5.0∅	100m	5.0		300M∅Δ			T71b	R	
28	# 2SC2078	86m	10	∅	SJ	3.0	#	80	5.0	75	100∅	5.0∅	500m	25	200	150M∅		PE	Y220b	D	
29	# 2SD612	86m	10	∅	SJ	2.0		25	5.0	25	1.0u∅	2.0∅	500m	60	320	100M∅		PE	TO126	B	
30	# 2SD612K	86m	10	∅	SJ	2.0		35	5.0	35	1.0u∅	2.0∅	500m	60	320	100M∅		PE	TO126	B	
31	PT600	86m	13	∅	SJ	2.0		60	4.0	45	1.0u∅	12∅	1.0	15	45	# 210M∅	2.0	PL	T08	A	
32	PT601	86m	13	∅	SJ	2.0		60	4.0	45	1.0u∅	12∅	1.0	30	90	# 210M∅	2.0	PL	T08	A	
33	PT612	86m	2.0	∅	SJ	2.0		75	5.0	60	500u∅	28∅	350m	7.5	75	# 60M∅Δ		PL	T08	A	
34	RF2084	86m	15	∅	SJ	800m		36	4.0	16	1.0m	5.0∅	200m	20				PE	T90	R	
35	SD1145	86m	15	∅	SJ	800m		36	4.0	16	1.0m	5.0∅	200m	20				PE	T90	R	
36	2N1709	87m	2.0	∅	SS	2.0		75	4.0	30	100∅	28∅	350m	7.5	75	# 150M∅Δ	5.0		T08	A∅	
37	2N1710	87m	2.0	∅	SS	2.0		60	3.0	30	50∅	28∅	350m	4.0	100	# 150M∅Δ	5.0		T08	A∅	
38	2N5947	91m	16	∅	SS	400m		40	3.5	30	100∅	28∅	75m	25	250	1.1G∅Δ	1.7m		T81	R	
39	# 2SC1590	91m	13	∅	SJ	1.2		36	4.0	18	1.0m	10∅	500m	15	200	350M∅			W64	D	
40	# 2SC1306	96m	12	∅	SJ	3.0	#	65	4.0	65	100∅	10∅	500m	40	150	# 300M∅	600m#	Et	Y220b	D	
41	# 2SC2092*	96m	12	∅	SJ	3.0		75	4.0	75	100∅	10∅	500m	30	150	# 250M∅	600m#	DE	Y220b	B	
42	# GT200	96m	12	∅	SJ	2.0		80	4.0	80	1.0uΔ	5.0∅	1.0	30	150	# 150M∅	500m	PE	Y220b	D	
43	2N1072†	100m	2.0	∅	SJ	2.0	2.0	75	6.0	30	1.0m	5.0∅	750mΔ	20		70M∅	2.6	100n∅	Δ	T038	A∅
44	JAN2N1072†	100m	2.0	∅	SJ	2.0		75	6.0	30	100n∅	5.0∅	750m	20		70M∅	2.7	100n∅	Δ	T038	A
45	2N2036†	100m	10	∅	SS	3.0	1.0	80	10	60	150u†	4.0∅	2.0	20	60	1.0M∅Δ	500m	1.0u∅	Δ	T037	A∅
46	2N2631	100m	8.8	∅	SS	1.5		80	4.0	60	100n∅					200M∅		PL	T039	A∅	
47	2N2697†	100m	10	∅	SS	5.0	500m	80	8.0	60	100n∅	2.0∅	1.0	40	120	# 20M∅Δ			T9	B∅	
48	2N2698†	100m	10	∅	SS	5.0	500m	100	8.0	80	100n∅	2.0∅	1.0	40	120	# 20M∅Δ			T9	B∅	
49	2N2781	100m	15	∅	SJ	2.0		75	5.0	75	500u∅	28∅	350m	7.5	75	# 140M∅Δ	5.0	PL	T08	A	
50	2N2782	100m	15	∅	SJ	2.0		100	5.0	100	500u∅	28∅	350m	7.5	75	# 140M∅Δ	5.0	PL	T08	A	
51	2N2783	100m	15	∅	SJ	2.0		100	5.0	100	500u∅	28∅	350m	7.5	75	# 140M∅Δ	5.0	PL	T08	A	
52	2N2874	100m	15	∅	SJ	2.0		75	4.0	75	100∅	28∅	350m	7.5	75	# 140M∅Δ	5.0	PL	T08	A	
53	JAN2N2876	100m	17	∅	SS	2.5		80	4.0	60	100n∅	10∅	300m	30	150	# 150M∅Δ	400m		T31	A	
54	2N3229	100m	18	∅	SS	2.5		105	4.0	60	100n∅	1.0∅	2.5	5.0		150M∅Δ	400m		T31	A	
55	2N4040	100m	18	∅	SS	1.0	300m	60	4.0	40	200u∅	5.0∅	100m	10	80	400M∅Δ	2.0		TO117	R	
56	2N4041	100m	18	∅	SS	1.0	300m	60	4.0	40	200u∅	5.0∅	100m	10	80	400M∅Δ	2.0		TO117	R	
57	2N6408	100m	12	∅	SJ	2.0	1.0	80	6.0	60	500uΔ	2.0∅	100m	50	250	# 50M∅Δ	1.0	#	B16	D∅	
58	2N6409	100m	12	∅	SJ	2.0	1.0	100	6.0	80	500uΔ	2.0∅	100m	50	250	# 50M∅Δ	1.0	#	B16	D∅	
59	# 2NJ244B*	100m	15	∅	SJ	1.5		35	3.5	20	1.0m∅	5.0∅	500m	50	∅			PE	W86	C	
60	# 2NJ244E*	100m	15	∅	SJ	1.5		35	3.5	20	1.0m∅	5.0∅	500m	50	∅			PE	W86	A	
61	# 2SC106†	100m	15	∅	SJ	1.5	1.5	60	5.0	60	3.0m	12∅	200m	7.5	20	∅ 100M∅	3.0	25m	T08	C∅	
62	# 2SC680	100m	12	∅	SJ	2.0	1.0	200	6.0	120	10m#	10∅	200m	60	240			PE	TO66	C∅	
63	# 2SC680A	100m	12	∅	SJ	2.0	1.0	200	6.0	140	10m#	10∅	200m	45	180			PE	TO66	C∅	
64	# 2SC1040	100m	15	∅	SJ	1.2		45	3.0	25	500u∅	10∅	1.0	15	# 250	# 400M∅Δ		E	T59d	S	
65	# 2SC1059	100m	8.0	∅	SJ	150m		300	4.0	300	#	10∅	50m	30	160	20M∅		E	TO66	C∅	
66	# 2SC1176	100m	15	∅	SJ	1.0		40	4.5	18	100u∅	10∅	100m	10	#	450M∅		PE	TO117		
67	# 2SC1409	100m	12	∅	SJ	2.0	1.0	200	6.0	120	10m#	4.0∅	50m	35	200	*	3.0	D	B17a	D	
68	# 2SC1410	100m	12	∅	SJ	2.0	1.0	200	6.0	120	10m#	4.0∅	50m	35	200	*	3.0	D	B17	D	
69	# 2SC1569	100m	12	∅	SJ	150m	150m	300	5.0	300	1.0u∅	10∅	50m	40	170	100M∅	10	D	B26a	D	
70	# 2SC1722	100m	12	∅	SJ	200m		300	5.0	300	100n∅	4.0∅	50m	50	300	80M∅	40	D	B17	D	
71	# 2SC1838	100m	15	∅	SJ	1.5		1.0m	5.0∅												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					MAX. Vcb @25°C		BIAS hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #/s/a TO200 Ser.	C O D E
					Ic (A)	Ib (A)	Vcbo (V)	Vbeo (V)	Vceo (V)	Icbo (A)	Vcb (V)	Ic (A)	MIN						
1	MJE220	120m	1.5	\$J	4.0	1.0	60	7.0	40	100n	1.0z	200m	40	200	50MΔ	600m	Δ	B6	B
2	MJE221	120m	1.5	\$J	4.0	1.0	60	7.0	40	100n	1.0z	200m	40	150	50MΔ	600m	Δ	B6	B
3	MJE222	120m	1.5	\$J	4.0	1.0	60	7.0	40	100n	1.0z	200m	25	150	50MΔ	600m	Δ	B6	B
4	MJE223	120m	1.5	\$J	4.0	1.0	80	7.0	60	100n	1.0z	200m	40	200	50MΔ	600m	Δ	B6	B
5	MJE224	120m	1.5	\$J	4.0	1.0	80	7.0	60	100n	1.0z	200m	40	150	50MΔ	600m	Δ	B6	B
6	MJE225	120m	1.5	\$J	4.0	1.0	80	7.0	60	100n	1.0z	200m	25	150	50MΔ	600m	Δ	B6	B
7	MJE240	120m	1.5	\$J	4.0	1.0	80	7.0	80	100n	1.0z	200m	40	200	40MΔ	600m	Δ	B6	B
8	MJE241	120m	1.5	\$J	4.0	1.0	80	7.0	80	100n	1.0z	200m	40	120	40MΔ	600m	Δ	B6	B
9	MJE242	120m	1.5	\$J	4.0	1.0	80	7.0	80	100n	1.0z	200m	25	150	40MΔ	600m	Δ	B6	B
10	MJE243	120m	1.5	\$J	4.0	1.0	100	7.0	100	100n	1.0z	200m	40	120	40MΔ	600m	Δ	B6	B
11	MJE244	120m	1.5	\$J	4.0	1.0	100	7.0	100	100n	1.0z	200m	25	150	40MΔ	600m	Δ	B6	B
12	MJE2050	120m	1.5	\$J	5.0		4.0	45			1.0z	1.8	50				Δ	B6	B
13	MJE3439	120m	15	\$J	300m	150m	450	5.0	350	20u	10z	20m	30		15MΔ	10		B16	B
14	MJE3440	120m	15	\$J	300m	150m	350	5.0	250	20u	10z	20m	40	160	15MΔ	10		B16	B
15	TIP611	120m	1.5	\$J	500m†	400m	40	5.0†	40	300uΔ	4.0z	500m	15	100	3.0MΔ	1.4	#	B1	A
16	TIP61A1	120m	1.5	\$J	500m†	400m	60	5.0†	60	300uΔ	4.0z	500m	15	100	3.0MΔ	1.4	#	B1	A
17	TIP61B1	120m	1.5	\$J	500m†	400m	80	5.0†	80	300uΔ	4.0z	500m	15	100	3.0MΔ	1.4	#	B1	A
18	TIP61C1	120m	1.5	\$J	500m†	400m	100	5.0†	100	300uΔ	4.0z	500m	15	100	3.0MΔ	1.4	#	B1	A
19	2N3138	125m	20	\$S	2.0	200m	65	1.0	65	100u	10z	1.0	10		10MΔ			T24	
20	2N3139	125m	20	\$S	2.0	200m	140	1.0	140	100u	10z	1.0	10		10MΔ			T24	
21	2N3140	125m	20	\$S	2.0	200m	65	1.0	65	100u	10z	1.0	10		10MΔ			T24	
22	2N3141	125m	20	\$S	2.0	200m	140	1.0	140	100u	10z	1.0	10		10MΔ			T24	
23	2SC1501	125m	10	\$J	100m	300	5.0	300		100u	10z	10m	30		55M			T0126	B
24	2SC1792	125m	22	\$J	2.0	45	4.0	23		1.0m	10z	500m	15	250	800M			T59d	S
25	2SC2085	125m	10	\$J	150m#	300	5.0	300		100u	10z	10m	30		55M	50		B25	D
26	MJ2251	125m	10	\$J	500m		6.0	225		100u	10z	50m	25	200	10MΔ			T066	C
27	MJ2252	125m	10	\$J	500m		6.0	300		100u	10z	50m	25	200	10MΔ			T066	C
28	ST15008	125m	125	\$J	4.0	8.0	125	12	80	10u	5.0z	40	10		10MΔ	60m		T063	
29	2N3927	128m	23	\$S	3.0		36	4.0	18	250u	5.0z	500m	80		200MΔ			T060	A
30	2SC488	128m	16	\$J	3.0		140	5.0	110	3.0m	5.0z	500m	20		10M			T066	A
31	2SC489	128m	16	\$J	3.0	3.0	100	5.0	80	120u	5.0z	500m	20	200	1.0G	500m		T066	C
32	2SC1337A	130m	20	\$J	2.0		35	4.5	17	200u	10z	100m	10	180	10G			T0129	R
33	2N3632	131m	23	\$C	3.0	400m	65	4.0	40	500u	5.0z	250m	10	150		1.0		T060	A
34	2N3733	131m	23	\$C	1.0	400m	65	4.0	40	500u	5.0z	250m	10	150	250MΔ	1.0		T060	A
35	2N5215	131m	23	\$C	1.0	500m	70	4.0	70	500u	5.0z	500m	10	80	400M	500m		T060	A
36	40307	131m	23	\$J	3.0		65	4.0	40	250nΔ	5.0z	300m	10					T060	A
37	40665	131m	23	\$J	1.0		65	4.0	40	250nΔ	5.0z	300m	10					T060	A
38	SDT61131	131m	23	\$J	10	4.0	65	4.0	40		5.0z	5.0	10		350MΔ	2.0		T060	A
39	SDT61141	131m	23	\$J	10	4.0	65	4.0	40		5.0z	5.0	10		350MΔ	2.0		T060	A
40	SDT61151	131m	23	\$J	10	4.0	65	4.0	40		5.0z	5.0	10		350MΔ	2.0		T060	A
41	2N1718	133m	2.0	\$J	750m	750m	90	6.0	60	1.0u	5.0z	200m	20	60	16MΔ			T13	A
42	2N1719	133m	2.0	\$J	750m	750m	150	6.0	100	1.0u	5.0z	200m	20	60	16MΔ			T13	A
43	2N1720	133m	2.0	\$J	750m	750m	90	6.0	60	1.0u	5.0z	200m	40	120	16MΔ			T13	A
44	2N1721	133m	2.0	\$J	750m	750m	150	6.0	100	1.0u	5.0z	200m	40	120	16MΔ			T13	A
45	2N2196	133m	2.0	\$C	1.0	500m	80	8.0	60	75u	10z	200m	30	90				F8	A
46	2N2197	133m	2.0	\$C	1.0	500m	80	8.0	60	75u	10z	200m	30	90				F8	A
47	2N2849-3	133m	10	\$S	3.0	1.0	100	5.0	80	100n	1.0z	1.0	100	300	80M	400m	100n	T13	
48	2N2850-3	133m	10	\$S	3.0	1.0	100	5.0	80	100n	1.0z	1.0	120	40	60M	250m	100n	T13	
49	2N2851-3	133m	10	\$S	3.0	1.0	100	5.0	80	100n	1.0z	1.0	120	40	60M	400m	100n	T13	
50	2N2852-3	133m	10	\$S	3.0	1.0	100	5.0	80	100n	1.0z	1.0	20	60	40M	400m	100n	T13	
51	2N2853-3	133m	10	\$S	3.0	1.0	60	5.0	40	100n	1.0z	1.0	40	40	80M	500m	100n	T13	
52	2N2854-3	133m	10	\$S	3.0	1.0	60	5.0	40	100n	1.0z	1.0	100	300	80M	400m	100n	T13	
53	2N2855-3	133m	10	\$S	3.0	1.0	60	5.0	40	100n	1.0z	1.0	40	120	60M	400m	100n	T13	
54	2N2856-3	133m	10	\$S	3.0	1.0	60	5.0	40	100n	1.0z	1.0	20	60	40M	400m	100n	T13	
55	2N2995	133m	15	\$C	1.0	500m	120	10	100	50u	30z	30m	30		10MΔ			T20a	A
56	2N3738	133m	20	\$J	250m	500m	250	6.0	225	100u	10z	100m	40	200	10MΔ	10		T066	C
57	2N3739	133m	20	\$J	250m	500m	325	6.0	300	100u	10z	100m	40	200	10MΔ	10		T066	C
58	2N3766	133m	20	\$J	1.0	2.5	100	6.0	60	100u	10z	500m	40	160	10MΔ	2.5		T066	C
59	2N3767	133m	20	\$J	1.0	2.5	100	6.0	80	100u	10z	500m	40	160	10MΔ	2.5		T066	C
60	2N1101	133m	10	\$A	1.0	500m	500	6.0	400	5.0m	10z	100m	15	250	50MΔ	20		F8	A
61	2N6391	133m	16	\$S	2.5	50	3.5†	50		3.0m	10z	200m	20	120				W24	AC
62	2SC92	133m	20	\$J	2.0	100	50	5.0	50	100u	10z	350m	10	100	190M	2.0		T08	
63	2SC93	133m	20	\$J	2.0	80	50	45	100u	10z	350m	10	100	190M	2.0		T08		
64	2SC94	133m	20	\$J	2.0	100	50	50	100u	10z	350m	10	100	190M	2.0		T08		
65	2SC15A	133m	20	\$J	150m	150m	300	5.0	300	100u	10z	50m	40	170	100M	4.0		T066	C
66	2SC51	133m	20	\$J	3.0	65	4.0	40	40	250u	10z	300m	10		350M	2.0		T060	
67	2SC551	133m	20	\$J	3.0	65	4.0	40	40	250u	10z	300m	10		400M	2.0		T060	
68	2SC585	133m	20	\$J	3.0	65	4.0	40	40	12u	28z	200m	30		400M	2.0		T68	A
69	2SC591	133m	20	\$J	4.5	100	4.0	250	100u	10z	150m	10	70	150M	1.6		T08	A	
70	2SC600	133m	20	\$J	3.0	65	4.0	40	40	12u	28z	200m	30		400M	2.0		T68	A
71	2SC636	133m	20	\$J	3.0	65	4.0	40	40	5.0u	10z	500m	20	200	400M			T060	
72	2SC638	133m	20	\$J	3.0	65	4.0	40	40	20u	14z	1.0	20		400M			T68	A
73	2SC975A	133m	20	\$J	1.5	40	5.0	40	40	100u	10z	100m	15	180	1.2G			T68	A
74	2SC1075	133m	20	\$J	4.0	36	4.0	18	10	10u	13z	400m	20	60	800M			T98	V
75	2SC1337	133m	20	\$J	2.0	35	4.5	17	200u	10z	100m	10	180	1.0G			T129		
76	2SC1414	133m	20	\$J	2.0	40	3.5	35	400u	5.0z	1.0	80		1.5G			T129	GE	
77	2SC1525*	133m	20	\$J	2.0	50	3.5	30	400u	5.0z	1.0	50		800M			T129a	GE	
78	2SC1967	133m	20	\$J	2.0														

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Vcb @ 25°C		hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # s/a TO200 Ser.	# C O A D E
						Ic (A)	Ib (A)	BVcbo (V)	BVcbo (V)	BVcbo (V)	Icbo (A)	Vcb (V)	MIN	MAX						
1	2N5488-1†	154m	1.2	5.0	1.0	150	8.0	100	100	100	5.0	5.0	15	40M	2.0	55ut	PE	T05		
2	2N5488-3†	154m	1.5	5.0	1.0	150	8.0	100	100	100	5.0	5.0	15	40M	2.0	55ut	PE	T32		
3	2N5552-4†	154m	1.5	10	2.0	120	8.0	80	80	200	5.0	10	30	40M	1.0	70ut	PE	T20		
4	2N4864	160m	16	2.0	500m	140	8.0	120	100	100	5.0	500m	50	150 #	50M	500m		T066	CØ	
5	2N5655	160m	20	2.0	250m	275 †	6.0†	250	100	100	100	100m	30	250	10M	10m		B16	BØ	
6	2N5656	160m	20	2.0	500m	325 †	6.0†	300	100	100	100	100m	30	250	10M	10m		B16	BØ	
7	2N5657	160m	20	2.0	500m	375 †	6.0†	350	100	100	100	100m	30	250	10M	10m		B16	BØ	
8#	2SC508	160m	20	2.0	4.0	180	5.0	180	120	5.0	4.0	20	40	25M	500m		DM	T066	CØ	
9#	2SC779	160m	20	2.0	1.0	300	6.0	250	100	5.0	100m	30	80			ME	T066			
10#	2SC782	160m	20	2.0	1.5	300	5.0	300	100	5.0	100m	30	250	10M	1.8		DM	T066	CØ	
11#	2SC783	160m	20	2.0	1.5	200	5.0	200	100	5.0	100m	30	250	10M	1.8		DM	T066	CØ	
12#	2SC840	160m	20	2.0	1.0 #	100	5.0	60	5.0	3.0	1.0	30		50M	750m		DM	T066	CØ	
13#	2SC840A	160m	20	2.0	1.0 #	150	5.0	100	5.0	3.0	1.0	30		50M	750m		DM	T066	CØ	
14#	2SC1104	160m	20	2.0	700m	300	5.0	300	100	5.0	400m	40	200			ME	T066	CØ		
15#	2SC1304	160m	20	2.0	500m	300	5.0	300	100	5.0	100m	50	200		5.0	D	T066	CØ		
16#	2SC1418	160m	20	2.0	50	4.0	50	50	100	4.0	1.0	35	320 *	5.0M	866m	D	B17a	D		
17#	2SC1419	160m	20	2.0	50	4.0	50	50	100	4.0	1.0	35	320 *	5.0M	866m	D	B17	D		
18#	2SC1450	160m	20	2.0	1.2 #	150	5.0	150	30	5.0	100m	30	150			DM	T066	CØ		
19#	2SC1683	160m	20	2.0	500m	200	5.0	150	50	5.0	400m	60	200	150M	2.0			B17	D	
20#	2SC1816	160m	16	2.0	4.0	100	6.0	60	1.0	2.0	100m	28	252	140M		E	Y220b	D		
21#	2SC1945	160m	20	2.0	6.0	80	5.0	40	1.0	2.0	100m	20	180			PE†	B26	C		
22#	2SC1969	160m	20	2.0	6.0	60	5.0	25	100	1.2	10m	10	180			PE†	B26	DØ		
23#	2SD90	160m	20	2.0	3.0	30	10	20	4.0	1.0	20	40			D	F5b	C			
24#	2SD91	160m	20	2.0	3.0	60	10	40	4.0	1.0	20	40			D	F5b	C			
25#	2SD92	160m	20	2.0	3.0	100	10	55	4.0	1.0	20	40			D	F5b	C			
26#	2SD93	160m	20	2.0	3.0	150	10	70	4.0	1.0	20	40			D	F5b	C			
27#	2SD94	160m	20	2.0	3.0	200	10	80	4.0	1.0	20	40			D	F5b	C			
28#	2SD288	160m	20	2.0	2.0	80	5.0	55	50	5.0	500m	40	250 #			DM	B17	DØ		
29#	2SD289	160m	20	2.0	2.0	80	5.0	55	50	5.0	500m	40	250 #			DM	B17	DØ		
30#	2SD381	160m	20	2.0	1.5	140	5.0	120	1.0	5.0	300m	40	250 #			E	Y220b	DØ		
31#	2SD382	160m	20	2.0	1.5	140	5.0	120	1.0	5.0	300m	40	250 #			E	Y220a	DØ		
32#	2SD401	160m	20	2.0	2.0	200	5.0	150	50	5.0	400m	40	200			ME	Y220b	DØ		
33#	2SD402	160m	20	2.0	2.0	200	5.0	150	50	5.0	400m	40	200			ME	Y220a	DØ		
34#	2SD608	160m	20	2.0	1.5	160	5.0	160	1.0	5.0	300m	40	200 #	45M	2.0 #	E	Y220b	XØ		
35	BD157	160m	20	2.0	500m†	250m	275 †	5.0†	250	100	100	50m	30	240			†	T0126	B	
36	BD157	160m	20	2.0	500m†	250m	275 †	5.0†	250	100	100	50m	30	240			†	B16	B	
37	BD158	160m	20	2.0	500m†	250m	325 †	5.0†	300	100	100	50m	30	240			†	T0126	B	
38	BD158	160m	20	2.0	500m†	250m	325 †	5.0†	300	100	100	50m	30	240			†	B16	B	
39	BD159	160m	20	2.0	500m†	250m	375 †	5.0†	350	100	100	50m	30	240			†	T0126	B	
40	BD159	160m	20	2.0	500m†	250m	375 †	5.0†	350	100	100	50m	30	240			†	B16	B	
41#	BD165	160m	20	2.0	1.5	500m	45	5.0	45	100	2.0	150m	40		3.0M	1.0	†	T0126	BØ	
42	BD165	160m	1.2	2.0	1.5	500m	45	5.0	45	100	2.0	150m	40		6.0M	1.0 #	†	B16f	B	
43#	BD167	160m	20	2.0	1.5	500m	60	5.0	60	100	2.0	150m	40		3.0M	1.0	†	T0126	BØ	
44	BD167	160m	1.2	2.0	1.5	500m	60	5.0	60	100	2.0	150m	40		6.0M	1.0 #	†	B16f	B	
45#	BD169	160m	20	2.0	1.5	500m	80	5.0	80	100	2.0	150m	40		3.0M	1.0	†	T0126	BØ	
46	BD169	160m	1.2	2.0	1.5	500m	80	5.0	80	100	2.0	150m	40		6.0M	1.0 #	†	B16f	B	
47	BD171	160m	20	2.0	500m	250m	100	5.0	90	100	100	50m	40	60	6.0M	1.0 #	†	B16	B	
48	BD172	160m	20	2.0	500m	250m	130	5.0	120	100	100	50m	40	60	6.0M	1.0 #	†	B16	B	
49	BD173	160m	20	2.0	500m	250m	170	5.0	160	100	100	50m	40	60	6.0M	1.0 #	†	B16	B	
50	BD232	160m	20	2.0	500m	250m	5.0	300	100	5.0	50m	25	150		6.6	†	B16f	B		
51	MJE720	160m	1.2	2.0	1.5	500m	40	5.0	40	500	1.0	150m	40		1.0		†	B16c	B	
52	MJE721	160m	1.2	2.0	1.5	500m	60	5.0	60	500	1.0	150m	40		1.0		†	B16c	B	
53	MJE722	160m	1.2	2.0	1.5	500m	80	5.0	80	500	1.0	150m	40		1.0		†	B16c	B	
54#	MRF321*	160m	27	2.0	1.1	60	4.0	33	1.0	5.0	500m	20	80	400M				T144	B	
55	PT2044	160m	20	2.0	5.0	2.0	50	8.0	30	100	5.0	1.0	20		100M		PE	B15b	B	
56	PT2045	160m	20	2.0	5.0	2.0	65	8.0	45	100	5.0	1.0	20		100M		PE	B15b	B	
57	PT2046	160m	20	2.0	5.0	2.0	80	8.0	60	100	5.0	1.0	20		100M		PE	B15b	B	
58	PT2047	160m	20	2.0	5.0	2.0	100	8.0	80	100	5.0	1.0	20		100M		PE	B15b	B	
59	ST11506	160m	20	2.0	1.0	100m	150	5.0	150	100	5.0	50m	30		10M		PL	T066		
60	ST12006	160m	20	2.0	1.0	100m	200	5.0	200	100	5.0	50m	30		10M		PL	T066		
61	ST12506	160m	20	2.0	1.0	100m	250	5.0	250	100	5.0	50m	30		10M		PL	T066		
62	ST13006	160m	20	2.0	1.0	100m	300	5.0	300	100	5.0	50m	30		10M		PL	T066		
63	ST13007	160m	20	2.0	1.0	100m	300	5.0	300	50	5.0	50m	30		20M		PL	T066		
64	ST14006	160m	20	2.0	1.0	100m	400	5.0	400	100	5.0	50m	30		10M		PL	T066		
65	ST14007	160m	20	2.0	1.0	100m	400	5.0	400	50	5.0	50m	30		20M		PL	T066		
66	ST15006	160m	20	2.0	1.0	100m	500	5.0	500	100	5.0	50m	30		10M		PL	T066		
67	ST15007	160m	20	2.0	1.0	100m	500	5.0	500	50	5.0	50m	30		20M		PL	T066		
68	ST16006	160m	20	2.0	1.0	100m	600	5.0	600	100	5.0	50m	30		10M		PL	T066		
69	ST16007	160m	20	2.0	1.0	100m	600	5.0	600	50	5.0	50m	30		20M		PL	T066		
70	ST17006	160m	20	2.0	1.0	100m	700	5.0	700	100	5.0	50m	25		10M		PL	T066		
71	ST17007	160m	20	2.0	1.0	100m	700	5.0	700	50	5.0	50m	30		20M		PL	T066		
72	ST18006	160m	20	2.0	1.0	100m	800	5.0	800	100	5.0	50m	25		10M		PL	T066		
73	TIP63	160m	20	2.0	500m	300m	350	5.0	300	100	100	50m	30	240	15M	2.4	300nØ	B1	B	
74	TIP64	160m	20	2.0	500m	300m	400	5.0	350	100	100	50m	30	240	15M	2.4	300nØ	B1	B	
75#	2SC1565	165m	10	2.0	250m	150	5.0	150	30	30	100	60					PL	T0126	B	
76	2N2948	166m	25	2.0	1.5	500m	40	2.0	40	1.0	2.0	400m	2.5	100 #	100M	500m		T03	CØ	
77	2N3818	166m	25	2.0	1.0	60	4.0	60	40	1.0	2.0	400m	5.0	50	150M			T080	A	
78	2N4273	166m	25	2.0	1.5	175	9.0	140	100	1.0	1.0	20	140 #	10M						

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc MAX (W)	M T A E M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG #	C O D E		
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo @ 25°C (A)	BIAS									MIN	MAX
												Vcb (V)	Ic (A)									
1	2N4998	200m#	30 ∅	∅	∅	2.0	1.0	100	6.0	80	1.0m#	5.0 ∅	1.0	30	90 #	50MΔ		T059	A	A		
2	2N5000	200m#	30 ∅	∅	∅	2.0	1.0	100	6.0	80	1.0m#	5.0 ∅	1.0	70	200 #	60MΔ		T059	A	A		
3	2N5016	200m#	30 ∅	∅	∅	4.5	1.5	65	4.0	30		4.0 ∅	500m	10	200	500MΔ		T060	A	G		
4	2N50831	200m	35 ∅	∅	∅	10	2.0	120	6.0	60	1.0m#	2.0 ∅	2.0	40	120 #	50MΔ		T059	C	C		
5	2N50841	200m	35 ∅	∅	∅	10	2.0	120	6.0	60	1.0m#	2.0 ∅	2.0	100	300 #	80MΔ		T059	C	C		
6	2N50851	200m	35 ∅	∅	∅	10	2.0	150	6.0	80	1.0m#	2.0 ∅	2.0	40	120 #	50MΔ		T059	C	C		
7	2N52021	200m	35 ∅	∅	∅	4.0	2.0	100	6.0	75 ∅	10m#	1.2 ∅	4.0	10	100	60MΔ	300m	400n	T066	C	A	
8	2N53261	200m	20 ∅	∅	∅	5.0	1.0	100	6.0	80	1.0m#	1.0 ∅	1.0	50	150 #	80MΔ		150n	T059	A	C	
9	2N56601	200m	20 ∅	∅	∅	1.0	200m	250	6.0	200	1.0u#	5.0 ∅	500m	40	120 #	20MΔ		250n	T066	A	C	
10	2N56611	200m	20 ∅	∅	∅	1.0	200m	400	6.0	300	1.0u#	5.0 ∅	500m	25	75 #	20MΔ		250n	T066	C	R	
11	2N5700	200m	35 ∅	∅	∅	3.0		40	4.0	18	2.0mΔ	10 ∅	50m	15					T0129	C	R	
12	2N5701	200m	35 ∅	∅	∅	3.0		40	4.0	18	2.5mΔ	10 ∅	50m	15					T0129	C	R	
13	JAN2N5919A	200m	2.6	∅	∅	3.0		4.5	4.0	30	5.0m	4.0 ∅	500m	10	200 #	500MΔ			T104	R	A	
14	2N5938S	200m	2.5	∅	∅	3.0		3.0	4.0	50	100u\$	3.0 ∅	1.0	30	150 #	150MΔ			T126	A	A	
15	2N61781	200m	10 ∅	∅	∅	2.0	1.0	100	4.0	100		4.0 ∅	500m	30	130 #	50MΔ	1.0	80n	B24	A	A	
16	2N61791	200m	10 ∅	∅	∅	2.0	1.0	75	5.0	75		4.0 ∅	500m	40	250 #	50MΔ	1.6	80n	B24	A	A	
17	2N65001	200m#	20 ∅	∅	∅	3.0	3.0	120	7.0	110 #		2.0 ∅	3.0	15	60 #	60MΔ	500m#	400n	T066	A	C	
18#	2NJ245B*	200m	30 ∅	∅	∅	3.0		35	3.5	20	2.0m ∅	5.0 ∅	1.0	50 ∅					W86	C	R	
19#	2SC690	200m	30 ∅	∅	∅	3.0		60	5.0	40	500u ∅	10 ∅	100m	10	180 #	200M\$			PE	T98	B	
20#	2SC825	200m	30 ∅	∅	∅	3.0		300	6.0	300	20u ∅	10 ∅	500m	20	250	15M\$			D	T066	C	
21#	2SC830H	200m	25 ∅	∅	∅	3.0		100	4.0	55	100u ∅	4.0 ∅	1.0	30 *	200 *				D	T066	C	
22#	2SC8331	200m	25 ∅	∅	∅	2.0		450	6.0	300	100u ∅	10 ∅	100m	40	80		1.2		DM	T066	C	
23#	2SC1031	200m	30 ∅	∅	∅	3.0		300	6.0	300	5.0m ∅	10 ∅	500m	30	300 #				ME	T066	C	
24#	2SC1055HT	200m	25 ∅	∅	∅	7.0	2.5	130	6.0	80	200u	4.0 ∅	5.0	30	140		333m		D	T066	C	
25#	2SC1060	200m	25 ∅	∅	∅	3.0		50	4.0	50	100u ∅	4.0 ∅	1.0	35	320	8.0M\$	500m		D	T066	C	
26#	2SC1061	200m	25 ∅	∅	∅	3.0		50	4.0	50	100u ∅	4.0 ∅	1.0	35	320	8.0M\$	500m		D	T066	C	
27#	2SC1061K1	200m	25 ∅	∅	∅	3.0		50	4.0	50	100u ∅	4.0 ∅	1.0	35	320 *	6.0M\$	500m	300n	D	T066	C	
28#	2SC1076	200m	30 ∅	∅	∅	6.0 #		36	4.0	18	30u	13 ∅	600m	15	50 ∅	800M\$			PE	T98	B	
29#	2SC1190	200m	30 ∅	∅	∅	5.0 #		36	4.0	18	100u	13 ∅	400m	10	50 ∅	600M\$			PE	T98	B	
30#	2SC1206B	200m	30 ∅	∅	∅	2.0		45	4.0	45	1.0m ∅	25 ∅	100m	10	180 #	1.5G\$			PE	T98	B	
31#	2SC1307	200m	25 ∅	∅	∅	8.0 #		70	4.0	70	20u ∅	10 ∅	2.0	20	150 #	180M\$	250m#		ET	Y220b	D	
32#	2SC1338	200m	30 ∅	∅	∅	3.0		35	4.5	17	500u ∅	10 ∅	100m	10	180 #	1.0G\$			PE	T0129	Y	
33#	2SC1591	200m	25 ∅	∅	∅	2.5		36	4.0	18	2.0m ∅	10 ∅	1.0	15	200	200M\$			E	W64	D	
34#	2SC1669	200m	1.5	∅	∅	1.5	1.5 ∅	150	5.0	150	20u ∅	10 ∅	500m	40	240	6.0M\$	3.0		DM	B26	D	
35#	2SC1805	200m	30 ∅	∅	∅	2.0		45	4.0	45	1.0m ∅	25 ∅	100m	10	180 #	1.0G\$			PE	T066	C	
36#	2SC1929	200m	25 ∅	∅	∅	1.0 #		300	6.0	270	10u	5.0 ∅	100m	35	330	80M\$	4.0		PL	B17	D	
37#	2SC2043	200m	25 ∅	∅	∅	4.0		70	5.0	70	10u ∅	5.0 ∅	500m	50 ∅		220M\$			PE	Y220b	D	
38#	2SC2094	200m	25 ∅	∅	∅	3.5		40	4.5	17	2.0m ∅	10 ∅	100m	10	180 #	500M\$			PE	W96	V	
39#	2SD103	200m	30 ∅	∅	∅	3.0	1.0	80	10	50	20u ∅	5.0 ∅	500m	30	300	1.0M\$		3.0u ∅	D	T066	C	
40#	2SD129	200m	25 ∅	∅	∅	3.0		90	10	80	1.0m ∅	5.0 ∅	1.0	30	200			D	T066	A	C	
41#	2SD130	200m	25 ∅	∅	∅	3.0	3.0 ∅	90	10	50	1.0m ∅	5.0 ∅	500m	30	200 *	1.0M\$	500m		D	T066	A	
42#	2SD158	200m	30 ∅	∅	∅	1.0		200	3.0	200	20u ∅	10 ∅	500m	20	250 *	15M\$	6.0		D	T066	A	
43#	2SD159	200m	30 ∅	∅	∅	1.0		300	3.0	300	20u ∅	10 ∅	500m	20	250 *	15M\$	6.0		D	T066	A	
44#	2SD226	200m	25 ∅	∅	∅	2.0	1.0 #	40	10	40	30u ∅	3.0 ∅	1.0	20	90	25k	700m		D	T066	C	
45#	2SD226A	200m	25 ∅	∅	∅	2.0	1.0 #	60	10	60	30u ∅	3.0 ∅	1.0	20	90	25k	700m		D	T066	C	
46#	2SD226B	200m	25 ∅	∅	∅	2.0	1.0 #	80	10	80	30u ∅	3.0 ∅	1.0	20	90	25k	700m		D	T066	C	
47#	2SD234	200m	1.5	∅	∅	3.0	3.0 ∅	80	10	50	100u ∅	5.0 ∅	500m	40	240	1.0M\$	400m		D	B26a	D	
48#	2SD235	200m	1.5	∅	∅	3.0	3.0 ∅	50	10	40	100u ∅	5.0 ∅	500m	40	240	1.0M\$	1.0		D	B26a	D	
49#	2SD2511	200m	30 ∅	∅	∅	2.0		200	5.0	200	5.0u ∅	10 ∅	500m	100 ∅		2.0	2.5u	DM	T066	C	C	
50#	2SD284	200m	25 ∅	∅	∅	5.0		120	5.0	40	200u ∅	5.0 ∅	1.0	30	80	20M\$	200m#		EM	F12b	C	
51#	2SD297	200m	25 ∅	∅	∅	3.0		150	7.0	80	500u ∅	2.0 ∅	2.0	30	200 #		500m		Δ	T066	C	
52#	2SD312	200m	25 ∅	∅	∅	1.0 #		800	6.0	600	1.0m	10 ∅	600m	25				D	T03	C	B	
53#	2SD317	200m	25 ∅	∅	∅	3.0 #	1.0	60	8.0	60	30u ∅	3.0 ∅	1.0	30	160 *	25k	500m		ME	B17	C	
54#	2SD317A	200m	25 ∅	∅	∅	3.0 #	1.0	80	8.0	80	30u ∅	3.0 ∅	1.0	30	160 *	25k	500m		ME	B17	C	
55#	2SD318	200m	25 ∅	∅	∅	3.0 #	1.0	60	8.0	60	30u ∅	3.0 ∅	1.0	30	160 *	25k	500m		ME	B17a	B	
56#	2SD318A	200m	25 ∅	∅	∅	3.0 #	1.0	80	8.0	80	30u ∅	3.0 ∅	1.0	30	160 *	25k	500m		ME	B17a	B	
57#	2SD365	200m	25 ∅	∅	∅	3.0		60	5.0	60	30u ∅	3.0 ∅	1.0	30	160 *	70k	500m		ME	B17	D	
58#	2SD365A	200m	25 ∅	∅	∅	3.0		80	5.0	80	30u ∅	3.0 ∅	1.0	30	160 *	70k	500m		ME	B17	D	
59#	2SD366	200m	25 ∅	∅	∅	3.0		60	5.0	60	30u ∅	3.0 ∅	1.0	30	160 *	70k	500m		ME	B17a	D	
60#	2SD366A	200m	25 ∅	∅	∅	3.0		80	5.0	80	30u ∅	3.0 ∅	1.0	30	160 *	70k	500m		ME	B17a	D	
61#	2SD389	200m	25 ∅	∅	∅	3.0		60	8.0	60	30u ∅	3.0 ∅	1.0	30	160	25k	500m		D	B17	D	
62#	2SD389A	200m	25 ∅	∅	∅	3.0		80	8.0	80	30u ∅	3.0 ∅	1.0	30	160	25k	500m		D	B17	D	
63#	2SD390	200m	25 ∅	∅	∅	3.0		60	8.0	60	30u ∅	3.0 ∅	1.0	30	160	25k	500m		D	B17a	D	
64#	2SD390A	200m	25 ∅	∅	∅	3.0		80	8.0	80	30u ∅	3.0 ∅	1.0	30	160	25k	500m		D	B17a	D	
65#	2SD401A	200m	25 ∅	∅	∅	2.0		200	5.0	150	50u ∅	10 ∅	400m	40 *	200 #	5.0M\$	2.0		D	Y220b	X	
66#	2SD402A	200m	25 ∅	∅	∅	2.0		200	5.0	150	50u ∅	10 ∅	400m	40 *	200 #	5.0M\$	2.0		D	Y220b	A	
67#	2SD4221	200m	30 ∅	∅	∅	4.0		250	6.0	200	100u ∅	5.0 ∅	3.0	20	∅	3.0M\$	400m	1.3u	ME	T066	C	
68#	2SD4231	200m	30 ∅	∅	∅	4.0		250	6.0	200	100u ∅	5.0 ∅	3.0	20	∅	3.0M\$	400m	1.0u	DPL	T066	C	
69#	2SD5181	200m	30 ∅	∅	∅	4.0		220	6.0	2												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	2	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M A E X P	ABSOLUTE MAX. RATINGS @25°C						MAX. hFE			f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	# C O A D E		
						I _c (A)	I _b (A)	BV _{ceo} (V)	BV _{ebo} (V)	BV _{ceo} (V)	BIAS			MIN @25°C							MAX	
											I _{cb} @ MAX V _{cb} @25°C (A)	V _{cb} (V)	I _c (A)									
1		2N6372	228m\$	22	0	6.0	2.0	90	5.0	90	1.0mΔ	4.0	2.0	20	100	4.0MΔ		T066	C0			
2		2N6373	228m\$	22	0	6.0	2.0	70	5.0	70	1.0mΔ	4.0	2.5	20	100	4.0MΔ		T066	C0			
3		2N6374	228m\$	22	0	6.0	2.0	50	5.0	50	1.0mΔ	4.0	3.0	20	100	4.0MΔ		T066	C0			
4		2N2828	229m\$	40	0	3.0	1.0	80	10	60	50mΔ	4.0	500m	20	60	1.0MΔ	800m	1.5u	D	T25		
5		2N4128	229m\$	40	0	4.0	1.0	60	4.0	40	1.0mΔ	5.0	200m	10	80	200MΔ	500m			T0117		
6		2N2339	230m\$	40	0	2.5	1.0	60	6.0	40	3.0mΔ	4.0	300m	20	80		500m			T057		
7		2N5775	230m\$	40	0	3.0	500m	65	3.5	35	5.0mΔ	5.0	100m	10	150					F21		
8		2N6465	232m\$	23	0	4.0	2.0	110	5.0	110	1.0mΔ	4.0	1.5	15	150	5.0MΔ	750m#			T066		
9		2N6466	232m\$	23	0	4.0	2.0	130	5.0	130	1.0mΔ	4.0	1.5	15	150	5.0MΔ	750m#			T066		
10		RC531	232m\$	40	0	5.0	1.0	40	5.0	40	500Δ	4.0	3.0	10	50	3.0MΔ		400n	E	T066		
11		RC531A	232m\$	40	0	5.0	1.0	60	5.0	60	500Δ	4.0	3.0	10	50	3.0MΔ		400n	E	T066		
12		RC531B	232m\$	40	0	5.0	1.0	80	5.0	80	500Δ	4.0	3.0	10	50	3.0MΔ		400n	E	T066		
13		RC531C	232m\$	40	0	5.0	1.0	100	5.0	100	500Δ	4.0	3.0	10	50	3.0MΔ		400n	E	T066		
14#		2SC1178A	233m\$	35	0	5.0		40	4.5	18	2.0m	10	200m	10	180	450M			PE	T0117		
15#		2SC1605A	233m\$	35	0	5.0		35	4.5	17	500Δ	10	100m	10	180	500M			PE	T0117		
16#		2SC1729	233m\$	35	0	3.5		35	4.0	17	1.0m	10	100m	10	180	500M			PE			
17		2N4921	238m\$	30	0	1.0	1.0	40	5.0	40	100Δ	1.0	500m	20	100	3.0MΔ				B16		
18		2N4922	238m\$	30	0	1.0	1.0	60	5.0	60	100Δ	1.0	500m	20	100	3.0MΔ				B16		
19		2N4923	238m\$	30	0	1.0	1.0	80	5.0	80	100Δ	1.0	500m	20	100	3.0MΔ				B16		
20#		BD2391	238m\$	2.0	0	1.0	400m	5.0	45	200Δ	4.0	200m	40	#	3.0MΔ	700m	300n	D	B1	D		
21#		BD239A1	238m\$	2.0	0	1.0	400m	5.0	60	200Δ	4.0	200m	40	#	3.0MΔ	700m	300n	D	B1	D		
22#		BD239B1	238m\$	2.0	0	1.0	400m	5.0	80	200Δ	4.0	200m	40	#	3.0MΔ	700m	300n	D	B1	D		
23#		BD239C1	238m\$	2.0	0	1.0	400m	5.0	100	200Δ	4.0	200m	40	#	3.0MΔ	700m	300n	D	B1	D		
24		D44C11	238m\$	1.6	0	4.0		5.0	30	10Δ	1.0	1.0	10		50M		100n	↑		B22		
25		D44C21	238m\$	1.6	0	4.0		5.0	30	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
26		D44C31	238m\$	1.6	0	4.0		5.0	30	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
27		D44C41	238m\$	1.6	0	4.0		5.0	45	10Δ	1.0	1.0	10		50M		100n	↑		B22		
28		D44C51	238m\$	1.6	0	4.0		5.0	45	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
29		D44C61	238m\$	1.6	0	4.0		5.0	45	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
30		D44C71	238m\$	1.6	0	4.0		5.0	60	10Δ	1.0	1.0	10		50M		100n	↑		B22		
31		D44C81	238m\$	1.6	0	4.0		5.0	60	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
32		D44C91	238m\$	1.6	0	4.0		5.0	60	10Δ	1.0	2.0	20		50M		100n	↑		B22		
33		D44C10	238m\$	1.6	0	4.0		5.0	80	10Δ	1.0	1.0	10		50M		100n	↑		B22		
34		D44C11	238m\$	1.6	0	4.0		5.0	80	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
35		D44C12	238m\$	1.6	0	4.0		5.0	80	10Δ	1.0	200m	40	120	50M		100n	↑		B22		
36		TIP291	238m\$	2.0	0	1.0	400m	40	5.0	40	300Δ	4.0	1.0	15	75	3.0MΔ	500n	DM		B1	B0	
37		TIP29A1	238m\$	2.0	0	1.0	400m	60	5.0	60	300Δ	4.0	1.0	15	75	3.0MΔ	500n	DM		B1	B	
38		TIP29B1	238m\$	2.0	0	1.0	400m	80	5.0	80	300Δ	4.0	1.0	15	75	3.0MΔ	500n	DM		B1	B	
39		TIP29C1	238m\$	2.0	0	1.0	400m	100	5.0	100	300Δ	4.0	1.0	15	75	3.0MΔ	500n	DM		B1	B	
40		RCA291	239m\$	2.0	0	3.0	1.0	40	5.0	40	300Δ	4.0	1.0	15	150	3.0MΔ	400n	Et		Y220b	X0	
41		RCA29A1	239m\$	2.0	0	3.0	1.0	60	5.0	60	300Δ	4.0	1.0	15	150	3.0MΔ	400n	Et		Y220b	X0	
42		RCA29B1	239m\$	2.0	0	3.0	1.0	80	5.0	80	300Δ	4.0	1.0	15	150	3.0MΔ	400n	Et		Y220b	X0	
43		RCA29C1	239m\$	2.0	0	3.0	1.0	100	5.0	100	300Δ	4.0	1.0	15	150	3.0MΔ	400n	Et		Y220b	X0	
44#		2SC789	240m\$	30	0	4.0	4.0	70	5.0	60	30Δ	5.0	500m	40	240	3.0MΔ	500m	2.0	DM		B26	
45#		2SC1466	240m\$	30	0	3.0	1.0	450	4.0	360	1.0m	5.0	1.5	4.0	16	10M	660m	2.0	DM		F6h	C
46#		2SC1467	240m\$	30	0	3.0	1.0	500	4.0	400	1.0m	5.0	1.5	4.0	12	10M	660m	2.0			F6h	C
47#		2SC1793	240m\$	42	0	4.0		45	4.0	23	2.0m	10	500m	15	250	300kΔ			E		T59d	S
48#		2SC1826	240m\$	30	0	4.0	1.0	80	6.0	60	1.0m	4.0	1.0	40	400	10M	500m	1.2u			B26	D0
49#		2SC1827	240m\$	30	0	4.0	1.0	100	6.0	80	1.0m	4.0	1.0	40	400	10M	500m	1.2u			B26	D0
50#		2SC1983	240m\$	30	0	3.0	1.0	80	6.0	60	100Δ	4.0	500m	500	3.0k	15M	500m	1.6u			B26c	D0
51#		2SC1984	240m\$	30	0	3.0	1.0	100	6.0	80	100Δ	4.0	500m	500	2.0k	15M	500m		DM		B26c	D0
52#		2SD477	240m\$	30	0	2.0	200	6.0	150	1.0Δ	4.0	50m	60	320	*	4.0			D		B17a	B
53#		2SD478	240m\$	30	0	2.0	200	6.0	150	1.0Δ	4.0	50m	60	320	*	4.0			D		B17	B
54#		2SD546	240m\$	30	0	1.0	800	6.0	500	300Δ	10	20m	40	200	*	7.0M	6.0		DM		T066	B
55#		2SD570	240m\$	30	0	4.0	70	5.0	70	30Δ	5.0	500m	40	240		10M	300m		DM		B17	B
56#		2SD578	240m\$	30	0	2.0	180	6.0	140	1.0Δ	4.0	50m	60	320	*	4.0			D		B17	B
57#		2SD578A	240m\$	30	0	2.0	180	6.0	160	1.0Δ	4.0	50m	60	320	*	4.0			D		B17	B
58#		2SD712	240m\$	30	0	4.0	100	5.0	100	30Δ	5.0	500m	55	300		570m		PE			B26	B
59#		BD175	240m\$	30	0	3.0	1.0	45	5.0	45	100Δ	2.0	1.0	15	#	3.0MΔ	800m#		↑		B16	B
60#		BD177	240m\$	30	0	3.0	1.0	60	5.0	60	100Δ	2.0	1.0	15	#	3.0MΔ	800m#		↑		B16	B
61#		BD179	240m\$	30	0	3.0	1.0	80	5.0	80	100Δ	2.0	1.0	15	#	3.0MΔ	800m#		↑		B16	B
62#		BD633	240m\$	2.0	0	2.0	300m	45	5.0	45	200Δ	2.0	1.0	25		600m	300n	Δ		B1	D	
63#		BD635	240m\$	2.0	0	2.0	300m	60	5.0	60	200Δ	2.0	1.0	25		600m	300n	Δ		B1	D	
64#		BD637	240m\$	2.0	0	2.0	300m	100	5.0	80	200Δ	2.0	1.0	25		600m	300n	Δ		B1	D	
65		MJE291	240m\$	30	0	1.0	400m	40	5.0	40	300Δ	4.0	1.0	15		3.0MΔ	700m				B16f	D
66		MJE29A1	240m\$	30	0	1.0	400m	60	5.0	60	300Δ	4.0	1.0	15		3.0MΔ	700m				B16f	D
67		MJE29B1	240m\$	30	0	1.0	400m	80	5.0	80	300Δ	4.0	1.0	15		3.0MΔ	700m				B16f	D
68		MJE29C1	240m\$	30	0	1.0	400m	100	5.0	100	300Δ	4.0	1.0	15		3.0MΔ	700m				B16f	D
69		MJE340K	240m\$	30	0	500m		3.0	300	100Δ	10	50m	30	240				↑			B23	D
70		MJE341K	240m\$	30	0	500m	250m	175	3.0	150	300Δ	10	50m	25	200	15MΔ		↑			B23	D
71		MJE344K	240m\$	30	0	500m	250m	200	5.0	200	100Δ	10	50m	30	300	15MΔ		↑			B23	D
72		MJE2360	240m\$	30	0	500m	250m	375	6.0	350	100Δ	10	50m	25	200	10M		↑			B23	D
73		MJE2361	24																			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. @ 25°C		BIAS		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	# C O D E	
					Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo (A)	MAX. Vcb (V)	Vcb (V)	Ic (A)									MIN
1#	2SC1968	266m	40	∅	∅	5.0		35	4.0	17	500∅	10	100m	10	#	180	#	800m		PE		
2	SDT6001	266m	40	∅	∅	5.0		100	5.0	50	1.0∅	5.0	1.0	10	#	120	#	30M	1.0	PL	T24	A∅
3	SDT6011	266m	40	∅	∅	5.0		80	8.0	40	1.0∅	5.0	1.0	20	#	60	#	30M	500m	PL	T24	A∅
4	SDT6012	266m	40	∅	∅	5.0		100	8.0	80	1.0∅	5.0	1.0	20	#	60	#	30M	500m	DPL	T24	A∅
5	SDT6013	266m	40	∅	∅	5.0		80	8.0	40	1.0∅	5.0	1.0	40	#	120	#	30M	500m	PL	T24	A∅
6	SDT6014	266m	40	∅	∅	5.0		100	8.0	80	1.0∅	5.0	1.0	40	#	120	#	30M	500m	PL	T24	A∅
7	SDT6015	266m	40	∅	∅	5.0		80	8.0	40	1.0∅	5.0	1.0	100	#	100	#	30M	500m	PL	T24	A∅
8	SDT6016	266m	40	∅	∅	5.0		100	8.0	80	1.0∅	5.0	1.0	100	#	100	#	30M	500m	PL	T24	A∅
9	SDT6031	266m	40	∅	∅	5.0		500m	60	5.0	40	1.0∅	5.0	1.0	20	#	60	30M	PL	T24	A∅	
10	2N1647	267m	40	∅	∅	3.0		80	6.0	80	#	100∅	10	500m	15	45	3.0M	3.0	Δ	T11	A∅	
11	2N1648	267m	40	∅	∅	3.0		120	6.0	120	100∅	10	500m	15	45	3.0M	3.0		T11	A∅	A∅	
12	2N1650	267m	40	∅	∅	3.0		120	6.0	120	100∅	10	500m	30		2.0M	3.0		T11	A∅	A∅	
13	2N2020	267m	40	∅	∅	2.0		150	6.0	125	100∅	10	500m	40	90	3.0M	6.0	Δ	T11	C∅	A∅	
14	2N2021	267m	40	∅	∅	2.0		200	6.0	140	100∅	10	500m	40	90	3.0M	6.0	Δ	T11	C∅	A∅	
15	2N2632t	267m	20	∅	∅	5.0		500m	90	80	60	100∅	2.0	1.0	40	120	#	20M	80n	Δ	T25c	A∅
16	2N2633t	267m	20	∅	∅	5.0		500m	120	80	80	100∅	2.0	1.0	40	120	#	20M	80n	Δ	T25c	A∅
17	2N2634t	267m	20	∅	∅	5.0		500m	150	80	100	100∅	2.0	1.0	40	120	#	20M	80n	Δ	T25c	A∅
18#	2SC1338A	267m	40	∅	∅	4.0		35	4.5	17	500∅	10	100m	10	180	#	1.0G		PE	TO129		
19#	2SC1968A	267m	40	∅	∅	5.0		35	4.0	17	500∅	10	100m	10	#	800m		PE			GE	
20#	2SD362	270m	40	∅	∅	8.0	#	150	8.0	100	20	5.0	5.0	30	120	#			PE	TO66	C∅	
21#	2SD470B	272m	15	∅	∅	1.5		1.6k	5.0	700	30∅	5.0	1.0	2.0	6.0			2.5	1.3u#	EM	TO66	C
22	MRF835	276m	50	∅	∅	4.0		36	4.0	16	5.0m	5.0	1.0	10							W30	AD
23	40613	277m	1.8	∅	∅	4.0		2.0	5.0	25	2.0	4.0	1.0	30	120				H	B17a	T	A∅
24	40618	277m	1.8	∅	∅	4.0		2.0	5.0	30	2.0	4.0	1.0	30	120				H	B17a	T	A∅
25	40621	277m	1.8	∅	∅	4.0		2.0	5.0	32	5.0n	4.0	1.5	25	100				H	B17a	T	A∅
26	40622	277m	1.8	∅	∅	4.0		2.0	5.0	40	5.0u*	4.0	1.5	25	100				H	B17a	T	A∅
27	40629	277m	1.8	∅	∅	4.0		2.0	5.0		5.0u*	4.0	1.0	20	70				H	B17a	T	A∅
28	40630	277m	1.8	∅	∅	4.0		2.0	5.0		5.0u*	4.0	1.5	20	70				H	B17a	T	A∅
29	SPT3439	280m	5.0	∅	∅	5.0		1.0	500	7.0	400	20∅	10	200	20			20M			TO3	
30	2N5773	285m	5.0	∅	∅	5.0m	150m	65	3.5	35	2.0m	5.0	50m	20	200						TO117	R
31	2N5848	285m	5.0	∅	∅	3.5		48	4.0	24	1.0m	5.0	1.2	3.0							T72h	R
32	2N5994	285m	35	∅	∅	5.0		65	3.5	30	5.0m	5.0	1.2								T78	R
33	2N5996	285m	35	∅	∅	5.0		36	3.5	18	5.0m	5.0	1.2								T78	R
34	40631	285m	1.8	∅	∅	4.0		2.0	5.0		5.0u*	4.0	2.0	20	70		800k	5.0	H	B17a	T	
35	41504	285m	36	∅	∅	4.0		2.0	4.0	35	5.0m*	4.0	1.0	25					H	Y220b	X∅	
36	B25-12	285m	50	∅	∅	4.0		4.0	4.0	18		4.0	1.0				175M		H	T91	R	
37	B25-28	285m	50	∅	∅	5.0		4.0	4.0	35		4.0	1.0				175M		H	T91	R	
38#	BD433	285m	36	∅	∅	4.0	↑	1.0	22	5.0	22	100∅	5.0	10m	40	#	3.0M	250m	E	TO126	B	
39#	BD435	285m	36	∅	∅	4.0	↑	1.0	32	5.0	32	100∅	5.0	10m	40	#	3.0M	250m	E	TO126	B	
40#	BD437	285m	36	∅	∅	4.0	↑	1.0	45	5.0	45	100∅	5.0	10m	30	#	3.0M	300m	E	TO126	B	
41#	BD439	285m	36	∅	∅	4.0	↑	1.0	60	5.0	60	100∅	5.0	10m	20	#	3.0M	400m	E	TO126	B	
42#	BD441	285m	36	∅	∅	4.0	↑	1.0	80	5.0	80	100∅	5.0	10m	15	#	3.0M	400m	E	TO126	B	
43	C25-12	285m	50	∅	∅	4.0		4.0	4.0	17		4.0	1.0				470M				T91	R
44	CD1803*	285m	50	∅	∅	5.0	↑	36	4.0	17		4.0	1.0								T75g	R
45	MRF233	285m	50	∅	∅	3.5		36	4.0	18	1.0m	5.0	1.0	5.0			90M				T93b	R
46	MRF401	285m	50	∅	∅	3.3		36	4.0	30		5.0	1.0	20			30M				T93b	R
47	RCA1A01	285m	5.0	∅	∅	1.0		500m	4.0	70	1.0u	4.0	10m	40	200		120M	9.3	DPL	TO39	A∅	
48	RCA1A06	285m	5.0	∅	∅	1.0		500m	75	40	75	10u*	4.0	150m	50	250		120M	5.3	DPL	TO39	A∅
49	RCA1A07	285m	5.0	∅	∅	1.0		50m	50	30	40	10u*	4.0	3.0m	50	250		120M	5.0	DPL	TO39	A∅
50	RCA1A17	285m	5.0	∅	∅	1.0		500m	60	50	90	10u	4.0	10m	40	200		120M	9.3	DPL	TO39	A∅
51	RCA29ASDHT	285m	36	∅	∅	4.0		1.0	60	5.0	60	300u	4.0	200m	40	#	800k	700m	DH	Y220b	X∅	
52	RCA29BSDHT	285m	36	∅	∅	4.0		1.0	80	5.0	80	300u	4.0	200m	40	#	800k	700m	DH	Y220b	X∅	
53	RCA29SDHT	285m	36	∅	∅	4.0		1.0	40	5.0	40	300u	4.0	200m	40	#	800k	700m	DH	Y220b	X∅	
54	RCA31ASDHT	285m	36	∅	∅	4.0		1.0	60	5.0	60	300u	4.0	1.0	25	#	800k	400m	DH	Y220b	X∅	
55	RCA31BSDHT	285m	36	∅	∅	4.0		1.0	80	5.0	80	300u	4.0	1.0	25	#	800k	400m	DH	Y220b	X∅	
56	RCA31SDHT	285m	36	∅	∅	4.0		1.0	40	5.0	40	300u	4.0	1.0	25	#	800k	400m	DH	Y220b	X∅	
57	RCA3054	285m	36	∅	∅	4.0		2.0	90	7.0	55	300u	4.0	500m	25	100	#	800k	400m	H	Y220b	X
58	S10-12*	285m	50	∅	∅	4.0	↑		50	4.0	18	1.0m	5.0	100m	10		100M				W52c	R
59	2N5690	286m	50	∅	∅	5.0		60	4.0	30		10	100m	10							TO128	R
60	2N6199	286m	50	∅	∅	5.0		60	4.0	35	10m	5.0	100m	10							T91	R
61	2N6233t	286m	50	∅	∅	5.0		2.0	250	6.0	225	100∅	5.0	1.0	25	125		20M	5.0	500n	TO66	C∅
62	2N6234t	286m	50	∅	∅	5.0		2.0	300	6.0	275	100∅	5.0	1.0	25	125		20M	5.0	500n	TO66	C∅
63	2N6235t	286m	50	∅	∅	5.0		2.0	350	6.0	325	100∅	5.0	1.0	25	125		20M	5.0	500n	TO66	C∅
64	2N6261	286m	50	∅	∅	4.0		2.0	90	7.0	80	500u	4.0	1.5	25	100	#	30k			TO66	C∅
65	2N6264	286m	50	∅	∅	3.0		2.0	170	7.0	150	1.0m	4.0	1.0	20	60	#	2.0M	500m		TO66	C∅
66	MRF209	286m	50	∅	∅	4.0		36	4.0	18	500u	5.0	500m	5.0							T93a	R
67	2N5293	288m	36	∅	∅	4.0		2.0	80	7.0	75	100m	4.0	500m	30	120		800k	555m		Y220a	T∅
68	2N5294	288m	36	∅	∅	4.0		2.0	80	7.0	75	100m	4.0	500m	30	120		800k	555m		Y220a	T∅
69	2N5295	288m	36	∅	∅	4.0		2.0	60	5.0	50	100m	4.0	1.0	30	120		800k	555m		Y220a	T∅
70	2N5296	288m	36	∅	∅	4.0		2.0	60	5.0	50	100m	4.0	1.0	30	120		800k	555m		Y220a	T∅
71	2N5297	288m	36	∅	∅	4.0		2.0	80	5.0	70	1										

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Vcbo @ 25°C		hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	L C O A D E	
						Ic (A)	Ib (A)	Vcbo (V)	VVebo (V)	VVceo (V)	Icbo (A)	Vcbo (V)	MIN	MAX							
1	RCA1C12	320m	4.0	∅	∅	4.0	2.0	140	5.0	120	100u*	2.0	1.0	40	250	4.0MΔ	400n#	500n∅	DM	B1	D∅
2	RCA311	320m	2.0	∅	∅	5.0	1.0	40	5.0	40	200uΔ	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
3	RCA31At	320m	2.0	∅	∅	5.0	1.0	60	5.0	60	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
4	RCA31Bt	320m	2.0	∅	∅	5.0	1.0	80	5.0	80	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
5	RCA31Ct	320m	2.0	∅	∅	5.0	1.0	100	5.0	100	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
6	#S1236	320m	4.0	∅	∅	4.0	∅	100	5.0	90	20u∅	5.0	500m	40	200	10MΔ	500m	500m	DME	B26a	D∅
7	TIP31t	320m	2.0	∅	∅	3.0	1.0	40	5.0	40	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	500n∅	DM	B1	D∅
8	TIP31Zt	320m	2.0	∅	∅	5.0	1.0	40	5.0	40	200u∅	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
9	TIP31At	320m	2.0	∅	∅	3.0	1.0	60	5.0	60	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	500n∅	DM	B1	B∅
10	TIP31AZt	320m	2.0	∅	∅	5.0	1.0	60	5.0	60	200u∅	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
11	TIP31Bt	320m	2.0	∅	∅	3.0	1.0	80	5.0	80	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	500n∅	DM	B1	B∅
12	TIP31BZt	320m	2.0	∅	∅	5.0	1.0	80	5.0	80	200u∅	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
13	TIP31Ct	320m	2.0	∅	∅	3.0	1.0	100	5.0	100	300uΔ	4.0	3.0	10	50	3.0MΔ	400n#	500n∅	DM	B1	B∅
14	TIP31CZt	320m	2.0	∅	∅	5.0	1.0	100	5.0	100	200u∅	4.0	3.0	10	50	3.0MΔ	400n#	400n∅	Et	Y220b	X∅
15	TIP47t	320m	2.0	∅	∅	1.0	1.0	350	5.0	250	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
16	TIP47Zt	320m	1.8	∅	∅	1.0	1.0	350	5.0	250	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
17	TIP48t	320m	2.0	∅	∅	1.0	1.0	400	5.0	300	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
18	TIP48Zt	320m	1.8	∅	∅	1.0	1.0	400	5.0	300	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
19	TIP49t	320m	2.0	∅	∅	1.0	1.0	450	5.0	350	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
20	TIP49Zt	320m	1.8	∅	∅	1.0	1.0	450	5.0	350	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
21	TIP50t	320m	2.0	∅	∅	1.0	1.0	500	5.0	400	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
22	TIP50Zt	320m	1.8	∅	∅	1.0	1.0	500	5.0	400	1.0mΔ	10	300m	30	150	5.0MΔ	200n#	200n∅	Et	Y220b	X∅
23	2N5614	330m#	5.0	∅	∅	5.0	2.0	80	6.0	60	1.0m#	5.0	2.5	70	200	70MΔ	300n#	300n∅	DM	T03	C∅
24	2N5616	330m#	5.0	∅	∅	5.0	2.0	100	6.0	80	1.0m#	5.0	2.5	30	90	60MΔ	300n#	300n∅	DM	T03	C∅
25	2N5618	330m#	5.0	∅	∅	5.0	2.0	100	6.0	80	1.0m#	5.0	2.5	70	200	70MΔ	300n#	300n∅	DM	T03	C∅
26	2N5620	330m#	5.0	∅	∅	5.0	2.0	120	6.0	100	1.0m#	5.0	2.5	30	90	60MΔ	300n#	300n∅	DM	T03	C∅
27	2SC2132	330m∅	50	∅	∅	9.0	∅	35	4.0	17	1.0m∅	10	1.0	20	180	1.0GΔ	∅	∅	PE	W96	V∅
28	40464	330m	40	∅	∅	5.0	1.0	35	4.0	35	250u	1.0	2.0	30	170	2.0MΔ	1.0	200n∅	E	T03	C∅
29	40465	330m	40	∅	∅	5.0	1.0	40	4.0	40	100u	1.0	2.0	50	170	2.0MΔ	1.0	200n∅	E	T03	C∅
30	40466	330m	40	∅	∅	5.0	1.0	50	4.0	50	100u	1.0	2.0	50	170	2.0MΔ	1.0	200n∅	E	T03	C∅
31	40873	330m	40	∅	∅	7.0	3.0	60	5.0	70	1.0m*	4.0	2.0	30	150	4.0MΔ	500m	500m	E	Y220b	D∅
32	MRF5177	330m	58	∅	∅	4.0	1.0	60	4.0	35	2.0m∅	5.0	100m	10	100	10MΔ	∅	∅	E	W91	C R
33	MRF5177A	330m	58	∅	∅	4.0	1.0	60	4.0	35	2.0m∅	5.0	100m	10	100	10MΔ	∅	∅	E	T93e	C R
34	SDT7B01	330m	53	∅	∅	10	∅	80	5.0	60	1.0u	5.0	5.0	40	120	60M	120m	120m	DPL	T0111	G
35	SDT7B02	330m	53	∅	∅	10	∅	100	5.0	80	1.0u	5.0	5.0	40	120	60M	120m	120m	DPL	T0111	G
36	SDT7B03	330m	53	∅	∅	10	∅	120	5.0	100	1.0u	5.0	5.0	40	120	60M	120m	120m	DPL	T0111	G
37	SDT7B04	330m	53	∅	∅	10	∅	140	5.0	120	1.0u	5.0	5.0	40	120	60M	120m	120m	DPL	T0111	G
38	SDT7B05	330m	53	∅	∅	10	∅	80	5.0	60	1.0u	5.0	5.0	20	60M	120m	120m	DPL	T0111	G	
39	SDT7B06	330m	53	∅	∅	10	∅	100	5.0	80	1.0u	5.0	5.0	20	60M	120m	120m	DPL	T0111	G	
40	SDT7B07	330m	53	∅	∅	10	∅	120	5.0	100	1.0u	5.0	5.0	20	60M	120m	120m	DPL	T0111	G	
41	SDT7B08	330m	53	∅	∅	10	∅	140	5.0	120	1.0u	5.0	5.0	20	60M	120m	120m	DPL	T0111	G	
42	SDT4941	330m	53	∅	∅	5.0	∅	225	8.0	200	5.0	1.0	20	60	60M	400m	400m	DPL	T0111	G	
43	SDT4942	330m	53	∅	∅	5.0	∅	250	8.0	225	5.0	1.0	20	60	60M	400m	400m	DPL	T0111	G	
44	SDT4943	330m	53	∅	∅	5.0	∅	275	8.0	250	5.0	1.0	20	60	60M	400m	400m	DPL	T0111	G	
45	SDT4944	330m	53	∅	∅	5.0	∅	300	8.0	275	5.0	1.0	20	60	60M	400m	400m	DPL	T0111	G	
46	SDT4945	330m	53	∅	∅	5.0	∅	325	8.0	300	5.0	1.0	20	60	60M	400m	400m	DPL	T0111	G	
47	2N1069t	333m	50	∅	∅	4.0	1.3	60	9.0	45	1.0m	4.0	1.5	10	50	1.2M†	2.0	1.8u	D	T03	C∅
48	2N1070t	333m	50	∅	∅	4.0	1.3	60	9.0	45	1.0m	4.0	1.5	10	50	1.2M†	670m	1.8u	D	T03	C∅
49	2N1470	333m	30	∅	∅	3.0	∅	60	3.0	60	5.0m	5.0	1.0	15	60	1.0M†	3.0	3.0	D	T03	C∅
50	2N3744t	333m#	30	∅	∅	5.0	500m	60	7.0	40	100n∅	5.0	1.0	20	60	30MΔ	120n	120n	DM	T53	G
51	2N3745t	333m#	30	∅	∅	5.0	500m	80	8.0	60	100n∅	5.0	1.0	20	60	30MΔ	120n	120n	DM	T53	G
52	2N3746t	333m#	30	∅	∅	5.0	500m	100	8.0	80	100n∅	5.0	1.0	20	60	30MΔ	120n	120n	DM	T53	G
53	2N3747t	333m#	30	∅	∅	5.0	500m	60	7.0	40	100n∅	5.0	1.0	40	120	40MΔ	80n	80n	DM	T53	G
54	2N3748t	333m#	30	∅	∅	5.0	500m	80	8.0	60	100n∅	5.0	1.0	40	120	40MΔ	80n	80n	DM	T53	G
55	2N3749t	333m#	30	∅	∅	5.0	500m	100	8.0	80	100n∅	5.0	1.0	40	120	40MΔ	80n	80n	DM	T53	G
56	2N3750t	333m#	30	∅	∅	5.0	500m	60	7.0	40	100n∅	5.0	1.0	100	300	50MΔ	80n	80n	DM	T53	G
57	2N3751t	333m#	30	∅	∅	5.0	500m	80	8.0	60	100n∅	5.0	1.0	100	300	50MΔ	80n	80n	DM	T53	G
58	2N3752t	333m#	30	∅	∅	5.0	500m	100	8.0	80	100n∅	5.0	1.0	100	300	50MΔ	80n	80n	DM	T53	G
59	JAN2N3996t	333m#	2.0	Δ	∅	5.0	∅	100	8.0	80	5.										

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
(2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		MIN	MAX	f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a T0200 Ser.	# C O A D E		
						Ic	Ib	BVcbo	BVebo	BVceo	l _{ceo} @ 25°C (A)	h _{FE} (A)										
1	JAN2N2150	400m\$	30	30	SA	2.0	2.0	150	8.0	100	100u#	5.0	1.0	20	60	10MΔ			T21	AQ		
2	2N2151	400m\$	30	30	SA	2.0	1.0	125	8.0	80	5.0u#	5.0	1.0	40	120	10MΔ			T0111	AQ		
3	JAN2N2151	400m\$	30	30	SA	2.0	2.0	150	8.0	100	100u#	5.0	1.0	40	120	10MΔ			T21	AQ		
4	2N2811	400m	70	70	SJ	10	2.0	80	8.0	60	100m∅	5.0	5.0	20	60	15MΔ	100m	200n∇	PL	T29		
5	2N2812	400m	70	70	SJ	10	2.0	80	8.0	60	100m∅	5.0	5.0	40	120	15MΔ	100m	200n∇	PL	T29		
6	2N2813	400m	70	70	SJ	10	2.0	120	8.0	80	100m∅	5.0	5.0	20	60	15MΔ	100m	200n∇	PL	T29		
7	2N2814	400m	70	70	SJ	10	2.0	120	8.0	80	100m∅	5.0	5.0	40	120	15MΔ	100m	150m∇	PL	T29		
8	2N3220	400m	2.0	2.0	SC	2.0	1.0	100	8.0	80	10u#	5.0	1.0	20	60	10MΔ	1.3			T47		
9	2N3221	400m	2.0	2.0	SC	2.0	1.0	100	8.0	80	10u#	5.0	1.0	40	120	10MΔ	1.3			T47		
10	2N3222	400m	2.0	2.0	SC	2.0	1.0	80	8.0	60	10u#	5.0	1.0	20	60	10MΔ	1.3			T47		
11	2N3223	400m	2.0	2.0	SC	2.0	1.0	80	8.0	60	10u#	5.0	1.0	40	120	10MΔ	1.3			T47		
12	2N3543	400m∅	60	60	SC	5.0	5.0	65	4.0	60	0.1m#	5.0	4.5	10	80	150MΔ	22			T03		
13	2N3850†	400m\$	30	30	SC	5.0	500m	100	5.0	80	100m#	1.0	1.0	50	150	20MΔ		150n∇		T059		
14	2N3851†	400m\$	30	30	SC	5.0	500m	100	5.0	80	100m#	1.0	1.0	30	90	20MΔ		150n∇		T059		
15	2N3852†	400m\$	30	30	SC	5.0	500m	60	5.0	40	100m#	1.0	1.0	50	150	20MΔ		150n∇		T059		
16	2N3853†	400m\$	30	30	SC	5.0	500m	60	5.0	40	100m#	1.0	1.0	30	90	20MΔ		150n∇		T059		
17	2N3950	400m	70	70	SC	3.3		65	4.0	35	10m#									T060		
18	2N4131	400m	60	60	SJ	5.0	1.0	90	4.0	80	10u∅	5.0	1.0	10	80	150MΔ				T03		
19	2N4932	400m	70	70	SJ	3.3	1.0	50	4.0	25	5.0	1.0	10	100	100MΔ					T060		
20	2N4933	400m	70	70	SJ	3.3	1.0	70	4.0	35	5.0	1.0	10	100	100MΔ					T060		
21	2N5070	400m	70	70	SJ	3.3	1.0	65	4.0	30	10m∅	5.0	3.0	10	100	100MΔ				T060		
22	2N5071	400m	70	70	SJ	3.3	1.0	65	4.0	30	10m∅	5.0	3.0	10	100	100MΔ				T060		
23	JAN2N5071	400m	2.6	2.6	SJ	3.0	10	40	4.0	35	5.0m	5.0	3.0	15	100					T060		
24	2N5074	400m	70	70	SJ	3.0	300m	200	6.0	200	1.0m#	5.0	500m	30	110	40MΔ	670m				T059	
25	2N5075	400m	70	70	SJ	3.0	300m	200	6.0	200	1.0m#	5.0	500m	90	250	40MΔ	670m				T059	
26	2N5076	400m	70	70	SJ	3.0	300m	250	6.0	250	1.0m#	5.0	500m	30	110	40MΔ	670m				T059	
27	2N5077	400m	70	70	SJ	3.0	300m	250	6.0	250	1.0m#	5.0	500m	90	250	40MΔ	670m				T059	
28	2N5468	400m\$	40	40	SJ	3.0	1.0	500	8.0	400	1.0mΔ	5.0	3.0	15	60	2.5MΔ					T066	
29	2N5469	400m\$	40	40	SJ	3.0	1.0	700	8.0	400	1.0mΔ	5.0	3.0	15	60	2.5MΔ					T066	
30	2N5490	400m	50	50	SJ	7.0	3.0	60	5.0	50	5.0mΔ	4.0	2.0	20	100		455m				T220b	
31	2N5491	400m	50	50	SJ	7.0	3.0	60	5.0	50	5.0mΔ	4.0	2.0	20	100		455m				T220a	
32	2N5492	400m	50	50	SJ	7.0	3.0	75	5.0	65	5.0mΔ	4.0	2.5	20	100		455m				T220b	
33	2N5493	400m	50	50	SJ	7.0	3.0	75	5.0	65	5.0mΔ	4.0	2.5	20	100		455m				T220a	
34	2N5494	400m	50	50	SJ	7.0	3.0	60	5.0	50	5.0mΔ	4.0	3.0	20	100		455m				T220b	
35	2N5495	400m	50	50	SJ	7.0	3.0	60	5.0	50	5.0mΔ	4.0	3.0	20	100		455m				T220a	
36	2N5496	400m	50	50	SJ	7.0	3.0	90	5.0	80	5.0mΔ	4.0	3.5	20	100		285m				T220b	
37	2N5497	400m	50	50	SJ	7.0	3.0	90	5.0	80	5.0mΔ	4.0	3.5	20	100		285m				T220a	
38	2N5591	400m	70	70	SS	4.0		36	4.0	18	1.0m∅	5.0	500m	5.0	50	200MΔ					T72h	
39	2N5707	400m	70	70	SS	4.0		70	4.0	50	5.0m#	5.0	100m	5.0	50	50MΔ					T0128	
40	2N5714	400m	70	70	SS	8.0		60	4.0	40	1.0m∅	10	10m	10							F21	
41	2N5776	400m	70	70	SS	6.0	1.0	65	4.0	35	10m#	5.0	200m	10	150						F21	
42	2N5939s	400m\$	2.0	2.0	SJ	10	4.0	80	5.0	80	500u#	4.0	5.0	40	200						T0111	
43	2N5940s	400m\$	2.0	2.0	SJ	10	4.0	70	5.0	70	500u#	4.0	5.0	40	200						T0111	
44	2N6129	400m	50	50	SJ	7.0	3.0	40	5.0	40	100u#	4.0	2.5	20	100						T220b	
45	2N6130	400m	50	50	SJ	7.0	3.0	60	5.0	60	100u#	4.0	2.5	20	100						T220b	
46	2N6131	400m	50	50	SJ	7.0	3.0	80	5.0	80	100u#	4.0	2.5	20	100						T220b	
47	2N6477	400m\$	20	20	SJ	2.5	1.0	140	5.0	140	2.0mΔ	4.0	1.0	25	150		800m#				T220b	
48	2N6478	400m\$	20	20	SJ	2.5	1.0	160	5.0	160	2.0mΔ	4.0	1.0	25	150		800m#				T220b	
49	2N6495†	400m	70	70	SJ	10	5.0	150	5.0	80	100u#	3.0	1.0	10	60	25MΔ	150m#	350n∇				T066
50#	2SC41	400m	50	50	SJ	5.0	1.5	150	6.0	100	60m	10	1.0	12	92	20M†	2.0		ME		T03	
51#	2SC519A†	400m	50	50	SJ	7.0	7.0	130	5.0	110	1.0m∅	5.0	1.0	20		20M†	400m	200n	DM		T03	
52#	2SC520A†	400m	50	50	SJ	7.0	7.0	100	5.0	80	1.0m∅	5.0	1.0	30		20M†	400m	200n	DM		T03	
53#	2SC521A†	400m	50	50	SJ	7.0	7.0	70	5.0	50	1.0m∅	5.0	1.0	30		20M†	400m	200n	DM		T03	
54#	2SC558	400m	50	50	SJ	5.0	5.0	250	5.0	250	1.0m∅	5.0	5.0	20	40	20M†	400m	200n	DM		T03	
55#	2SC642	400m	50	50	SJ	1.0	1.0	1.1k	5.0	700	10u#	15	150m	30	160	2.0M†	13		DME		T03	
56#	2SC642A	400m	50	50	SJ	1.0	1.0	1.5k	5.0	800	10u#	15	150m	30	160	2.0M†	13		DME		T03	
57#	2SC643	400m	50	50	SJ	2.5		1.1k	5.0	1.1k	10u#	15	2.0	7.0		2.0M†	5.5		DME		T03	
58#	2SC643A	400m	50	50	SJ	2.5	2.5	1.5k	5.0	1.5k	10u#	15	2.0	5.0		2.0M†	750m		DME		T03	
59#	2SC665H	400m	50	50	SJ	7.0		130	6.0	80	200u	5.0	5.0	30	130		200m		D		F6h	
60#	2SC681	400m	50	50	SJ	6.0		200	5.0	70	15m#						400m	1.0u#	D		F6h	
61#	2SC681A	400m	50	50	SJ	6.0		250	5.0	80	15m#						300m	1.0u#	D		F6h	
62#	2SC935	400m	50	50	SJ	2.5		300	5.0	300			8.0	14					D		T03	
63#	2SC940	400m∅	50	50	SJ	5.0		200	7.0	90	2.0m∅	5.0	5.0	15	120			MEΔ			T03	
64#	2SC1004	400m	50	50	SJ	500m	500m∅	1.1k	5.0	700	10u	15	150m	30	160	2.0M†	21		DME		T03	
65#	2SC1004A	400m	50	50	SJ	500m	500m∅	1.5k	5.0	800	10u	15	150m	30	160	2.0M†	21		DME		T03	
66#	2SC1021	400m	60	60	SJ	6.0		60	5.0	40	2.0m∅	10	100m	5.0	#	500M†			PE†		T79	
67#	2SC1022	400m	60	60	SJ	6.0		60	5.0	40	2.0m∅	10	100m	5.0	#	500M†			PE†		T79	
68#	2SC1030	400m	50	50	SJ	6.0		150	6.0	80	1.0m∅	5.0	1.0	35	*	200	*	10M†	300m			T03
69#	2SC1101	400m∅	50	50	SJ	1.0		1.1k	5.0	500	1.0m∅	15	500m	30	120			ME				T03
70#	2SC1172	400m	50	50	SJ	6.0		1.5k	5.0	600	10u∅	10	2.0	10	20		3.0M†	1.2		DME		T03
71#	2SC1172A	400m	50	50	SJ	6.0	6.0	1.5k	5.0	600	10u∅	10	2.0	10	20		3.0M†	1.0u#		DME		T03
72#	2SC1172B	400m	50	50	SJ	7.0	7.0	1.5k	5.0	600	10u∅	10	2.0	10	20		3.0M†	1.0u#		DME</		

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	2	TYPE No.	1	MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					MAX. @25°C		BIAS hFE		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	C O D E			
								Ic	Ib	BVcbo	BVcbo	BVcvo	Icbo @25°C (A)	Vcb @25°C (V)	Ic	Vcb									Ic	MIN	MAX
1		SDT7015	500m	50	50	10	10	2.0	2.0	100	5.0	80	1.0	5.0	5.0	40	120	15MΔ			PL	T061	Ø				
2		SDT7016	500m	50	50	10	10	2.0	2.0	100	5.0	80	1.0	5.0	5.0	40	120	15MΔ			PL	T061	Ø				
3		SDT7017	500m	50	50	10	10	2.0	2.0	60	5.0	40	1.0	5.0	5.0	100	#	15MΔ			PL	T061	Ø				
4		SDT7018	500m	50	50	10	10	2.0	2.0	80	5.0	60	1.0	5.0	5.0	100	#	15MΔ			PL	T061	Ø				
5		SDT7019	500m	50	50	10	10	2.0	2.0	100	5.0	80	1.0	5.0	5.0	100	#	15MΔ			PL	T061	Ø				
6		SDT7140	500m	87	87	10	10	2.0	2.0	120	8.0	100	1.0	5.0	5.0	40	120	50M			PL	T061	Ø				
7		SDT7141	500m	87	87	10	10	2.0	2.0	200	8.0	150	1.0	5.0	5.0	40	120	50M			PL	T061	Ø				
8		SDT7150	500m	87	87	10	10	2.0	2.0	140	8.0	120	500n	5.0	5.0	20	60	50M			PL	T061	Ø				
9		SDT7151	500m	87	87	10	10	2.0	2.0	170	8.0	150	500n	5.0	5.0	20	60	50M			PL	T061	Ø				
10		SDT7152	500m	87	87	10	10	2.0	2.0	220	8.0	200	500n	5.0	5.0	20	60	50M			PL	T061	Ø				
11		SDT7154	500m	87	87	10	10	2.0	2.0	140	8.0	120	500n	5.0	5.0	40	120	50M			PL	T061	Ø				
12		SDT7155	500m	87	87	10	10	2.0	2.0	170	8.0	150	500n	5.0	5.0	40	120	50M			PL	T061	Ø				
13		SDT7156	500m	87	87	10	10	2.0	2.0	220	8.0	200	500n	5.0	5.0	40	120	50M			PL	T061	Ø				
14		SDT7801	500m	50	50	10	10	5.0	5.0	225	7.0	200	1.0	5.0	5.0	20	60	30MΔ	100m		PL	T061	Ø				
15		SDT7802	500m	50	50	10	10	5.0	5.0	250	7.0	225	1.0	5.0	5.0	20	60	30MΔ	100m		PL	T061	Ø				
16		SDT7803	500m	50	50	10	10	5.0	5.0	275	7.0	250	1.0	5.0	5.0	20	60	30MΔ	100m		PL	T061	Ø				
17		SDT7804	500m	50	50	10	10	5.0	5.0	325	7.0	300	1.0	5.0	5.0	20	60	30MΔ	100m		PL	T061	Ø				
18		SDT7805	500m	50	50	10	10	5.0	5.0	350	7.0	325	1.0	5.0	5.0	20	60	30MΔ	100m		PL	T061	Ø				
19		SDT7806	500m	50	50	10	10	5.0	5.0	150	5.0	150	1.0	5.0	5.0	10	#	5.0	5.0		PL	T50a	A				
20		SDT7807	500m	50	50	10	10	5.0	5.0	200	5.0	200	1.0	5.0	5.0	15	#	5.0	5.0		PL	T50a	A				
21		SDT7808	500m	50	50	10	10	5.0	5.0	250	5.0	250	1.0	5.0	5.0	15	#	5.0	5.0		PL	T50a	A				
22		SDT7809	500m	50	50	10	10	5.0	5.0	300	5.0	300	1.0	5.0	5.0	15	#	5.0	5.0		PL	T50a	A				
23		SDT9301	500m	87	87	10	10	7.5	7.5	40	6.0	40	5.0	4.0	1.0	15		1M	1.0		DPL	T03	CØ				
24		SDT9302	500m	87	87	10	10	7.5	7.5	60	6.0	60	5.0	4.0	1.0	15		1M	1.0		DPL	T03	CØ				
25		SDT9303	500m	87	87	10	10	7.5	7.5	80	6.0	80	5.0	4.0	1.0	15		1M	1.0		DPL	T03	CØ				
26		SDT9304	500m	87	87	10	10	7.5	7.5	40	6.0	40	5.0	4.0	2.0	15		1M	500m		DPL	T03	CØ				
27		SDT9305	500m	87	87	10	10	7.5	7.5	60	6.0	60	5.0	4.0	2.0	15		1M	500m		DPL	T03	CØ				
28		SDT9306	500m	87	87	10	10	7.5	7.5	80	6.0	80	5.0	4.0	2.0	15		1M	500m		DPL	T03	CØ				
29		SDT9307	500m	87	87	10	10	7.5	7.5	40	6.0	40	5.0	4.0	3.0	15		1M	330m		DPL	T03	CØ				
30		SDT9308	500m	87	87	10	10	7.5	7.5	60	6.0	60	5.0	4.0	3.0	15		1M	330m		DPL	T03	CØ				
31		SDT9309	500m	87	87	10	10	7.5	7.5	80	6.0	80	5.0	4.0	3.0	15		1M	330m		DPL	T03	CØ				
32		SPT46241	500m	87	87	10	10	2.0	2.0	400	7.0	350	1.0	5.0	2.0	30	100	#	50MΔ	214m#	500n	T03	CØ				
33		SPT46251	500m	87	87	10	10	2.0	2.0	450	7.0	400	1.0	5.0	2.0	30	100	#	50MΔ	214m#	500n	T03	CØ				
34		SSP32001	500m	50	50	20	#	7.0	8.0	200	5.0	5.0	5.0	5.0	5.0	45	150	30MΔ	100m	150n	PL	T061	Ø				
35		SSP32011	500m	50	50	20	#	7.0	8.0	200	5.0	5.0	5.0	5.0	5.0	45	150	30MΔ	100m	150n	PL	T061	Ø				
36		ST86020	500m	50	50	5.0	#	125	10	80	10.0	10	3.0	3.0	2.0	120	10M	400m	2.0u	P	P	T061	Ø				
37		ST86021	500m	50	50	5.0	#	145	10	100	10.0	10	3.0	3.0	2.0	120	10M	400m	2.0u	P	P	T061	Ø				
38		ST86022	500m	50	50	5.0	#	170	10	120	10.0	10	3.0	3.0	2.0	120	10M	400m	2.0u	P	P	T061	Ø				
39		UPT5311	500m	50	50	5.0	#	200	5.0	150	10*	5.0	5.0	1.0	25	#	30MΔ	333m#	200n	PL	T03	CØ					
40		UPT5321	500m	50	50	5.0	#	250	5.0	200	10*	5.0	5.0	1.0	25	#	30MΔ	333m#	200n	PL	T03	CØ					
41		UPT5331	500m	50	50	5.0	#	300	5.0	250	10*	5.0	5.0	1.0	25	#	30MΔ	333m#	200n	PL	T03	CØ					
42		UPT5341	500m	50	50	5.0	#	350	5.0	300	10*	5.0	5.0	1.0	25	#	30MΔ	333m#	200n	PL	T03	CØ					
43		UPT5351	500m	50	50	5.0	#	400	5.0	300	10*	5.0	5.0	1.0	25	#	30MΔ	333m#	200n	PL	T03	CØ					
44		UPT7311	500m	50	50	5.0	#	200	5.0	150	10*	5.0	5.0	1.0	25	#	30MΔ	200m#	250n	PL	T03	CØ					
45		UPT7321	500m	50	50	5.0	#	250	5.0	200	10*	5.0	5.0	1.0	25	#	30MΔ	200m#	250n	PL	T03	CØ					
46		UPT7331	500m	50	50	5.0	#	300	5.0	250	10*	5.0	5.0	1.0	25	#	30MΔ	200m#	250n	PL	T03	CØ					
47		UPT7341	500m	50	50	5.0	#	350	5.0	300	10*	5.0	5.0	1.0	25	#	30MΔ	200m#	250n	PL	T03	CØ					
48		UPT7351	500m	50	50	5.0	#	400	5.0	300	10*	5.0	5.0	1.0	25	#	30MΔ	200m#	250n	PL	T03	CØ					
49		UPT8311	500m	50	50	5.0	#	60	5.0	40	10*	5.0	5.0	5.0	30	#	60MΔ	100m#	250n	PL	T03	CØ					
50		UPT8321	500m	50	50	5.0	#	80	5.0	60	10*	5.0	5.0	5.0	30	#	60MΔ	100m#	250n	PL	T03	CØ					
51		UPT8331	500m	50	50	5.0	#	100	5.0	80	10*	5.0	5.0	5.0	30	#	60MΔ	100m#	250n	PL	T03	CØ					
52		UPT8341	500m	50	50	5.0	#	120	5.0	100	10*	5.0	5.0	5.0	30	#	60MΔ	150m#	250n	PL	T03	CØ					
53		UPT8351	500m	50	50	5.0	#	150	5.0	100	10*	5.0	5.0	5.0	30	#	60MΔ	150m#	250n	PL	T03	CØ					
54		CD1979*	512m	90	90	5.0	†	4.0	4.0	60	6.0	6.0	1.0	5.0	5.0	30	#	60MΔ	150m#	250n	PL	T03	CØ				
55		2N6315†	515m	90	90	5.0	†	60	5.0	60	250u	4.0	2.5	2.0	20	100	#	4.0MΔ	700n	700n	E	T066	CØ				
56		2N6316†	515m	90	90	5.0	†	80	5.0	80	250u	4.0	2.5	2.0	20	100	#	4.0MΔ	700n	700n	E	T066	CØ				
57		BDX91†	515m	90	90	5.0	†	60	5.0	60	100u	2.0	3.0	3.0	20	#	4.0MΔ	266m	1.0u	E	T03	CØ					
58		BDX93†	515m	90	90	5.0	†	80	5.0	80	100u	2.0	3.0	3.0	20	#	4.0MΔ	266m	1.0u	E	T03	CØ					
59		BDX95†	515m	90	90	5.0	†	100	5.0	100	100u	2.0	3.0	3.0	20	#	4.0MΔ	266m	1.0u	E	T03	CØ					
60		2N6082	520m	50	50	4.0	†	36	4.0	18	1.0	5.0	1.0	5.0	5.0		4.0MΔ	266m	1.0u	E	T72h	R					
61		2N6083	520m	50	50	4.0	†	36	4.0	18	1.0	5.0	1.0	5.0	5.0		4.0MΔ	266m	1.0u	E	T72h	R					
62		BD243†	520m	65	65	3.0	†	40	5.0	45	400u	4.0	3.0	3.0	30		3.0MΔ	250m	300n	D	B1	D					
63		BD243A†	520m	65	65	3.0	†	60	5.0	60	400u	4.0	3.0	3.0	30		3.0MΔ	250m	300n	D	B1	D					
64		BD243B†	520m	65	65	3.0	†	5.0	8.0	8.0	400u	4.0	3.0	3.0	30		3.0MΔ	250m	300n	D	B1	D					
65		BD243C†	520m	65	65	3.0	†	5.0	100	100	400u	4.0	3.0	3.0	30		3.0MΔ	250m	300n	D	B1	D					
66		MRF222	520m	65	65	4.0	†	36	4.0	18	1.0	5.0	1.0	5.0	5.0												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE			f _{ae}	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	C O D E	
						Ic	Ib	BVcbo	BVcbo	BVceo	l _{cb0}	MAX. V _{cb} @25°C	MIN V _{cb}							MAX V _{cb}
1#	BU209†	625mΔ	12 ∅	∅	J	4.0	100m	5.0	800	1.0m	5.0	3.0	2.2	7.0m	1.6	10u	ME	T03	C ∅	
2#	BU209A	625m	12 ∅	∅	J	6.0 #	4.0 #	5.0	800	1.0m	5.0	3.0	2.2	7.0m	1.6	700n#	ME	T03	C ∅	
3	C5628	625m	110 ∅	∅	J	6.0		4.0	33					400m#			ME	T03	C ∅	
4	D56W1	625m	78 ∅	∅	J	5.0	2.0		1.4k∅	10u	5.0	2.5	3.0	2.0	600n#	ME	T03	C ∅		
5	D56W2	625m	78 ∅	∅	J	5.0	2.0		1.4k∅	10u	5.0	3.5	3.0	1.4	600n#	ME	T03	C ∅		
6	MJ3480	625m	56 ∅	∅	J	5.0	4.0	1.3k	7.0	1.0m	5.0			7.5m	1.1	1.0u#	ME	T03	C ∅	
7	2N3362	630m	110 ∅	∅	S	6.0		60 †	4.0 †	22	1.0m						ME	W55	R	
8#	2SC1106	630m∅	80 ∅	∅	S	6.0	4.0	350	5.0	250	1.0m	15 ∅	500m	40	200	7.5m	833m	700m#	ME	T03
9	MJ3760	638m	80 ∅	∅	S	6.0	4.0	750	7.0	300							ME	F11b	R	
10	MJ3761	638m	80 ∅	∅	S	6.0	4.0	750	7.0	300							ME	F11b	R	
11	2N6084	640m	80 ∅	∅	S	6.0	4.0	36	4.0	18	2.5m	5.0	1.0	5.0	75 #	5.0m	1.0 #	800n#	ME	T03
12	2N6497†	640m	80 ∅	∅	S	6.0	2.0	350 †	6.0 †	250	1.0m	2.5	10	75 #	5.0m	1.0 #	800n#	ME	B23a	
13	2N6498†	640m	80 ∅	∅	S	6.0	2.0	450 †	6.0 †	300	1.0m	2.5	10	75 #	5.0m	1.0 #	800n#	ME	B23a	
14	2N6499†	640m	80 ∅	∅	S	6.0	2.0	450 †	6.0 †	350	1.0m	2.5	10	75 #	5.0m	1.0 #	800n#	ME	B23a	
15#	2NC898	640m	80 ∅	∅	S	5.0	2.0	150	5.0	10	1.0m	1.0	75	200	15m	360m		D	F6h	
16#	2SC1325	640m	80 ∅	∅	S	6.0		1.5k	6.0	600	20u	5.0	1.0	5.0	60 #		1.0u#	ME	T03	
17#	2SC1325A	640m	80 ∅	∅	S	6.0		1.5k	6.0	600	20u	5.0	1.0	5.0	60 #		1.0u#	ME	T03	
18#	2SC1867†	640m	80 ∅	∅	S	7.0	2.0	150	7.0	100	100u	5.0	5.0	15 #		200m#	EM	T03		
19#	2SC1867†	640m	80 ∅	∅	S	7.0	2.0	300	7.0	250	100u	5.0	5.0	15 #		200m#	EM	T03		
20#	2SC1868†	640m	80 ∅	∅	S	7.0	2.0	300	7.0	250	100u	5.0	5.0	15 #		200m#	EM	T03		
21#	2SD323	640m∅	80 ∅	∅	S	7.0		150	7.0	100	300u	5.0	4.0	30			DM	T03		
22#	2SD351	640m	80 ∅	∅	J	7.0 #		650	6.0	270	5.0m	5.0	5.0	6.5	30		DM	T03		
23#	2SD388	640m	80 ∅	∅	J	12 #		150	7.0	100	100u	5.0	1.0	40	200	9.0m	400n#	ME	T03	
24#	2SD418	640m	80 ∅	∅	J	10 #		1.0k	5.0	500	1.0m	5.0	5.0	6.5	30		DM	T03		
25#	2SD461	640m	80 ∅	∅	J	5.0	2.0	600	5.0	400	1.0m	5.0	5.0	6.5	50		DM	T03		
26#	2SD481	640m	80 ∅	∅	J	5.0	2.0	250	8.0	250	100u	5.0	1.0	40	170	1.0m	300m	DM	T03	
27#	2SD588	640m	80 ∅	∅	J	7.0		120	5.0	120	50u	5.0	1.0	40	200	6.0m	400m	DM	B33	
28#	2SD598	640m	80 ∅	∅	J	4.0		120	5.0	120	1.0m	5.0	1.0	40	200	6.0m	250m		T03	
29#	2SD632	640m	80 ∅	∅	J	4.0		350	5.0	300	1.0m	5.0	500m	50	250	1.5			T03	
30#	2SD674	640m	80 ∅	∅	J	7.0	2.0	120	5.0	120	1.0m	5.0	1.0	35	200		D	T03		
31	HFS3009-RT	640m	80 ∅	∅	S	6.0		36	4.0	18	2.5m	5.0	1.0	10		150m			193a	
32#	MD33	640m	80 ∅	∅	S	10		40	5.0	40	400u	5.0	3.0	20		3.0m	400m	ME	B19	
33#	MD33A	640m	80 ∅	∅	S	10		60	5.0	40	400u	5.0	3.0	20		3.0m	400m	ME	B19	
34	MJ3026	640m	80 ∅	∅	J	2.0	1.0		5.0	275	200u	5.0	250m	25					T03	
35	MJ3027	640m	80 ∅	∅	J	2.0	1.0		5.0	200	200u	5.0	250m	25					T03	
36	MJ3200	640m	80 ∅	∅	J	6.0	2.5	700	5.0	250	1.0m	5.0	250m	25					T03	
37	MJE231	640m	80 ∅	∅	J	10	3.0	40	5.0	40	700u	4.0	3.0	20		7.5m	1.0	1.0u#	Δ	T03
38	MJE33A†	640m	80 ∅	∅	J	10	3.0	60	5.0	60	700u	4.0	3.0	20		2.0m	400m	500n#	DM	B18h
39	MJE33B†	640m	80 ∅	∅	J	10	3.0	80	5.0	80	700u	4.0	3.0	20		2.0m	400m	500n#	DM	B18h
40	MJE33C†	640m	80 ∅	∅	J	10	3.0	100	5.0	100	700u	4.0	3.0	20		2.0m	400m	500n#	DM	B18h
41	MJE51†	640m	80 ∅	∅	J	5.0	2.0	350	6.0	250	1.0	100m	30		2.5m	400m	500n#	DM	B18h	
42	MJE52†	640m	80 ∅	∅	J	5.0	2.0	400	6.0	300	1.0	100m	30		2.5m	400m	500n#	DM	B18h	
43	MJE53†	640m	80 ∅	∅	J	5.0	2.0	450	6.0	350	1.0m	100	100m	30		2.5m	400m	500n#	DM	B18h
44	MJE2020	640m	80 ∅	∅	J	5.0	3.0	40	5.0	40	400u	4.0	1.0	25	125 #	3.0m			Δ	B23
45	MJE2021	640m	80 ∅	∅	J	5.0	3.0	60	5.0	60	400u	4.0	1.0	25	125 #	3.0m			Δ	B23
46	MJE13006†	640m	2.0	∅	S	8.0	4.0	90	9.0	300	1.0m	5.0	2.0	80 #	4.0m	500m#	500n		Δ	Y220b
47	MJE13007†	640m	2.0	∅	S	8.0	4.0	90	9.0	400	1.0m	5.0	2.0	80 #	4.0m	500m#	500n		Δ	Y220b
48	MRF224	640m∅	80 ∅	∅	S	6.0		36	4.0	18	2.5m	5.0	1.0	50		4.0m	500m#			W52h
49	TIP33†	640m	3.5 ∅	∅	J	10 †	3.0	40 †	5.0 †	40	700u	4.0	3.0	20	100	3.0m	600n#	DM	B3	
50	TIP33A†	640m	3.5 ∅	∅	J	10 †	3.0	60 †	5.0 †	60	700u	4.0	3.0	20	100	3.0m	600n#	DM	B3	
51	TIP33B†	640m	3.5 ∅	∅	J	10 †	3.0	80 †	5.0 †	80	700u	4.0	3.0	20	100	3.0m	600n#	DM	B3	
52	TIP33C†	640m	3.5 ∅	∅	J	10 †	3.0	100 †	5.0 †	100	700u	4.0	3.0	20	100	3.0m	600n#	DM	B3	
53	TIP73†	640m	80 ∅	∅	S	15	5.0	50	5.0	40	5.0u	4.0	5.0	20	150	5.0m	260m#	DM†	B1	
54	TIP73A†	640m	80 ∅	∅	S	15	5.0	70	5.0	60	5.0u	4.0	5.0	20	150	5.0m	260m#	DM†	B1	
55	TIP73B†	640m	80 ∅	∅	S	15	5.0	90	5.0	80	5.0u	4.0	5.0	20	150	5.0m	260m#	DM†	B1	
56	TIP73C†	640m	80 ∅	∅	S	15	5.0	110	5.0	100	5.0u	4.0	5.0	20	150	5.0m	260m#	DM†	B1	
57	2N5329	645m	65 ∅	∅	J	20	5.0	150	8.0	90	2.0	2.0	10	40	120	80m	90m	350n#		To61
58	KSD1051	650m	115 ∅	∅	J	15	3.0	55	7.0	45	5.0m	4.0	4.0	20	70	800k		D	T03	
59	KSD1052	650m	115 ∅	∅	J	15	3.0	70	7.0	80	5.0m	4.0	4.0	20	70	800k		D	T03	
60	KSD1053	650m	115 ∅	∅	J	15	3.0	120	7.0	100	5.0m	4.0	4.0	20	70	800k		D	T03	
61	KSD1054	650m	115 ∅	∅	J	15	3.0	140	7.0	120	5.0m	4.0	4.0	20	70	800k		D	T03	
62	KSD1055	650m	115 ∅	∅	J	15	3.0	55	7.0	45	5.0m	4.0	4.0	15	70	800k		D	T03	
63	KSD1056	650m	115 ∅	∅	J	15	3.0	80	7.0	60	5.0m	4.0	4.0	15	70	800k		D	T03	
64	KSD1057	650m	115 ∅	∅	J	15	3.0	100	7.0	80	5.0m	4.0	4.0	15	70	800k		D	T03	
65	KSD1058	650m	115 ∅	∅	J	15	3.0	120	7.0	100	5.0m	4.0	4.0	15	70	800k		D	T03	
66	KSD2201	650m	115 ∅	∅	J	10	2.0	140	7.0	120	1.0m	4.0	3.0	20	70	800k		D	T03	
67	KSD2202	650m	115 ∅																	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # s/a TO200 Ser.	L O A D E				
					I _c (A)	I _b (A)	V _{cb0} (V)	V _{eb0} (V)	V _{ce0} (V)	I _{cb0} @ MAX V _{cb} @ 25°C (A)	V _{cb} (V)							I _c (A)	MIN	MAX	
1#	BDX13	666m	117 ∅	∅	15	7.0	50	5.0	4.0	4.0	8.0	15	60	#	500k	H	D	TO3	∅		
2#	BDX23	666m	117	∅	15	7.0	50	5.0	4.0	4.0	8.0	20	250	#	500k	H	D	TO3	∅		
3#	BDY20†	666m	115 ∅	∅	15	100	7.0	60	5.0	4.0	20	70			D	D	TO3	∅			
4#	BDY38	666m	115 ∅	∅	6.0	2.0 #	50	7.0	4.0	1.0m	4.0	30			1.0M	D	D	TO3	∅		
5#	BDY39	666m	115 ∅	∅	15	7.0	100	7.0	60	1.0m	4.0	25	100		1.1M	D	H	TO3	∅		
6#	BDY73	666m	117 ∅	∅	15	7.0	100	7.0†	60	5.0m#	4.0	50	150	#	800k	H	Δ	TO3	∅		
7#	BDY74	666m	117 ∅	∅	10	7.0	150	7.0†	120	1.0m	3.0	50	150		800k	H	Δ	TO3	∅		
8#	BDY96†	666m	40 ∅	∅	10	4.0	350	5.0	2.0	500u	5.0	15	60		10M			TO3	∅		
9#	BDY96/01†	666m	40 ∅	∅	10	4.0	400	5.0	2.0	500u	5.0	30	∅		10M			TO3	∅		
10#	BDY97†	666m	40 ∅	∅	10	4.0	300	5.0	2.0	500u	5.0	25	80		10M			TO3	∅		
11#	BDY97/01†	666m	40 ∅	∅	10	4.0	300	5.0	2.0	500u	5.0	20	∅		10M			TO3	∅		
12#	BDY98†	666m	40 ∅	∅	10	4.0	250	5.0	2.0	500u	5.0	25	80		10M			TO3	∅		
13#	BLV17	666m	100 ∅	∅	10	2.0	100	4.0	100	10m	0.0	1.0	Δ	5.0	70M			DPL DM	TO36	∅	
14#	BU120	666m	50	∅	∅	5.0		8.0	400	∅	1.0	35	165		10M			DM	TO3	∅	
15#	BU123	666m	50	∅	∅	5.0		8.0	180	∅	1.0	25	250		10M			DM	TO3	∅	
16#	BUX82†	666m	60 ∅	∅	∅	5.0	2.0	10	400	1.0m	∅				8.0M			DM	TO3	∅	
17#	BUX83	666m	60 ∅	∅	∅	8.0		10	500	1.0m	∅				8.0M			DM	TO3	∅	
18#	DTS701	666m	50 ∅	∅	∅	1.0	250m		5.0	800	500u	5.0	150m	20	1.5M			D	TO3	∅	
19#	DTS702	666m	50 ∅	∅	∅	3.0	1.0	5.0	1.0k	500u	5.0	2.0	2.5		1.5M			Δ	Y204a	∅	
20#	DTS704	666m	50 ∅	∅	∅	3.0	1.0	5.0	1.0k	500u	5.0	2.0	2.5		1.5M			Δ	Y204a	∅	
21#	DTS708	666m	50 ∅	∅	∅	3.0	2.0	5.0	900	250m	5.0				1.5M			Δ	Y204a	∅	
22#	DTS709	666m	50 ∅	∅	∅	3.0	2.0	5.0	900	250m	5.0				1.5M			Δ	Y204a	∅	
23#	DTS710	666m	50 ∅	∅	∅	3.0	2.0	5.0	900	250m	5.0	150m	10		1.5M			Δ	Y204a	∅	
24#	DTS712	666m	50 ∅	∅	∅	3.0	1.0	5.0	900	500u	5.0	2.0	2.5		1.5M			Δ	Y204a	∅	
25#	DTS714	666m	50 ∅	∅	∅	3.0	1.0	5.0	900	500u	5.0	2.0	2.5		1.5M			Δ	Y204a	∅	
26#	DTS720	666m	50 ∅	∅	∅	3.0	1.0	5.0	1.0k	250u	5.0	150m	18		1.5M			Δ	Y204a	∅	
27#	DTS723	666m	50 ∅	∅	∅	3.0	1.0	5.0	1.0k	250u	5.0	500m	10		1.5M			Δ	Y204a	∅	
28#	IR701	666m	50 ∅	∅	∅	1.0	250m	5.0	800	500u	5.0	150m	20		1.5M			D	TO3	∅	
29#	IR708	666m	50 ∅	∅	∅	3.0	2.0	5.0	900	250u	5.0				1.5M			D	TO3	∅	
30#	IR709	666m	50 ∅	∅	∅	3.0	2.0	5.0	900	250u	5.0				1.5M			D	TO3	∅	
31#	IR710	666m	50 ∅	∅	∅	3.0	2.0	5.0	900	250u	5.0	150m	10		1.5M			D	TO3	∅	
32#	IR721	666m	50 ∅	∅	∅	3.0	1.0	5.0	1.0k	250u	5.0	150m	20		1.5M			D	TO3	∅	
33#	KT927A	666m	83 ∅	∅	∅	10			35	40m*	6.0	5.0	15		50			D	T67c	∅	
34#	KT927B	666m	83 ∅	∅	∅	10			35	40m*	6.0	5.0	25		75			D	T67c	∅	
35#	KT927V	666m	83 ∅	∅	∅	10			35	40m*	6.0	5.0	40		100			D	T67c	∅	
36#	MJ3010	666m	100 ∅	∅	∅	∅		5.0	200			500m	20		180				TO3	∅	
37#	MJ3011	666m	100 ∅	∅	∅	∅	6.0	5.0	325			2.0	10		100				TO3	∅	
38#	MRF644	666m	117 ∅	∅	∅	15		36	60	16	5.0m	5.0	4.0	10				DM	W65a	∅	
39#	PP3000	666m	115 ∅	∅	∅	15		60	50	50	4.0	5.0	12					DM	TO3	∅	
40#	PP3001	666m	115 ∅	∅	∅	15		100	80	80	4.0	5.0	12					DM	TO3	∅	
41#	PP3002	666m	115 ∅	∅	∅	15		120	100	100	4.0	5.0	12					DM	TO3	∅	
42#	PP3003	666m	115 ∅	∅	∅	15		60	50	50	4.0	5.0	12					DM	TO3	∅	
43#	PP3004	666m	115 ∅	∅	∅	15		100	80	80	4.0	5.0	12					DM	TO3	∅	
44#	PT1937	666m	5.0 ∅	∅	∅	7.0		120	100	100	4.0	7.0	12					DM	TO3	∅	
45#	PT1937	666m	5.0 ∅	∅	∅	7.0		140	100	100	2.0	7.0	15		60 #			DM	TO3	∅	
46#	PT5992	666m	116	∅	∅	30	10	120	5.0	70	5.0	5.0	10		20			PL	W39	∅	
47#	PT6939†	666m	100 ∅	∅	∅	30		220	80	200	5.0	5.0	5.0	40		67m			PL	T061	∅
48#	PT6984†	666m	100 ∅	∅	∅	30		250	60	250	5.0	5.0	10		75			PL	T061	∅	
49#	PT6988†	666m	100 ∅	∅	∅	30		250	60	250	5.0	5.0	10		75			PL	T063	∅	
50#	RCS242	666m	115 ∅	∅	∅	15	7.0	50	4.0	4.0	4.0	3.0	20	#				H	TO3	∅	
51#	SDT7201	666m	50 ∅	∅	∅	10		225	80	200	1.0u	5.0	20		60 #			PL	TO3	∅	
52#	SDT7202	666m	50 ∅	∅	∅	10		250	80	225	1.0u	5.0	20		60 #			PL	TO3	∅	
53#	SDT7203	666m	50 ∅	∅	∅	10		275	80	250	1.0u	5.0	20		60 #			PL	TO3	∅	
54#	SDT7204	666m	50 ∅	∅	∅	10		325	80	300	1.0u	5.0	20		60 #			PL	TO3	∅	
55#	SDT7205	666m	50 ∅	∅	∅	10		350	80	325	1.0u	5.0	20		60 #			PL	TO3	∅	
56#	SDT7206	666m	115	∅	∅	10	2.0	150	80	150	10u	5.0	10		30M			PL	TO3	∅	
57#	SDT7207	666m	115	∅	∅	10	2.0	200	80	200	10u	5.0	15		30M			PL	TO3	∅	
58#	SDT7208	666m	115	∅	∅	10	2.0	250	80	250	10u	5.0	15		30M			PL	TO3	∅	
59#	SDT7209	666m	115	∅	∅	10	2.0	300	80	300	10u	5.0	15		30M			PL	TO3	∅	
60#	SDT7601	666m	60 ∅	∅	∅	10	5.0	60	80	40	500n	5.0	5.0	40	120 #			PE	TO3	∅	
61#	SDT7602	666m	60 ∅	∅	∅	10	5.0	80	80	60	500n	5.0	5.0	40	120 #			PE	TO3	∅	
62#	SDT7603	666m	60 ∅	∅	∅	10	5.0	100	80	80	500n	5.0	5.0	40	120 #			PE	TO3	∅	
63#	SDT7604	666m	60 ∅	∅	∅	10	5.0	140	80	120	500n	5.0	5.0	40	120 #			PE	TO3	∅	
64#	SDT7605	666m	60 ∅	∅	∅	10	5.0	170	80	150	500n	5.0	5.0	40	120 #			PE	TO3	∅	
65#	SDT7606	666m	60 ∅	∅	∅	10	5.0	220	80	200	500n	5.0	5.0	40	120 #			PE	TO3	∅	
66#	SDT7607	666m	60 ∅	∅	∅	10	5.0	60	80	40	500n	5.0	5.0	20	60			PE	TO3	∅	
67#	SDT7608	666m	60 ∅	∅	∅	10	5.0	80	80	60	500n	5.0	5.0	20	60			PE	TO3	∅	
68#	SDT7609	666m	60 ∅	∅	∅	10	5.0	100	80	80	500n	5.0	5.0	20	60			PE	TO3	∅	
69#	SDT7610	666m	60 ∅	∅	∅	10	5.0	140	80	120	500n	5.0	5.0	20	60			PE	TO3	∅	
70#	SDT7611	666m	60 ∅	∅	∅	10	5.0	170	80	150	500n	5.0	5.0	20	60			PE	TO3	∅	
71#	SDT7612	666m	60 ∅	∅	∅	10	5.0	220	80	200	500n	5.0	5.0	20	60			PE	TO3	∅	
72#	SDT9201	666m	117 ∅	∅	∅	15	7.0		12	55 #	2.0m	4.0	20		70 #			D	TO3	∅	
73#	SDT9202	666m	117 ∅	∅	∅	15	7.0		12	100 #	700u	4.0	4.0	20	70 #			D	TO3	∅	
74#	SDT9203	666m	117 ∅	∅	∅	15	7.0		12	120 #	700u	4.0	4.0	20	70 #			D	TO3	∅	
75#	SDT9204	666m	117 ∅	∅	∅	15	7.0		12	140 #	700u	4.0	4.0	20	70 #			D	TO3	∅	
76#	SDT9205	666m	117 ∅	∅	∅	15	7.0		12	55 #	2.0m	4.0	4.0	15	70 #			D	TO3	∅	
77#	SDT9206	666m	117 ∅	∅																	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	M T A X E M P	ABSOLUTE MAX. RATINGS @25°C			MAX. @25°C			hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	# C O A D E			
					Ic (A)	Ib (A)	BVcbo (V)	BVcbo (V)	BVcbo (V)	MIN	MAX										
1	2N6590†	714m	125	∅	∅	10	5.0	550	9.0†	450	∅	3.0	7.0	7.0	35	25mΔ	214m	500n∅	TO61	A	
2	410†	714m	125	∅	∅	7.0	2.0	200	5.0	200	∅	5.0	1.0	30	90 #	4.0m∅	350n	TO3	C∅		
3	411†	714m	125	∅	∅	7.0	2.0	300	5.0	300	∅	5.0	1.0	30	90 #	2.5m∅	350n	TO3	C∅		
4	413†	714m	125	∅	∅	7.0	2.0	400	5.0	325	∅	5.0	500m	30	80 #	4.0m∅	350n	TO3	C∅		
5 #	BDW51	714m	125	∅	∅	15	7.0	45	5.0	45	∅	4.0	5.0	20	150	3.0mΔ	300m	TO3	C∅		
6 #	BDW51A	714m	125	∅	∅	15	7.0	60	5.0	60	∅	4.0	5.0	20	150	3.0mΔ	300m	TO3	C∅		
7 #	BDW51B	714m	125	∅	∅	15	7.0	80	5.0	80	∅	4.0	5.0	20	150	3.0mΔ	300m	TO3	C∅		
8 #	BDW51C	714m	125	∅	∅	15	7.0	100	5.0	100	∅	4.0	5.0	20	150	3.0mΔ	300m	TO3	C∅		
9 #	BWU26†	714m	125	∅	∅	6.0	3.0 #	850	7.0	450	∅	5.0	1.0	10	70	2.0m∅	1.0	15u#	TO3	C∅	
10 #	DT5515†	714m	125	∅	∅	10	4.0	300	5.0	500	∅	5.0	3.0	15	80	5.0mΔ	600m	250n#	PEΔ	Y204a	
11 #	DT5516†	714m	125	∅	∅	10	4.0	400	5.0	250	∅	5.0	3.0	20	80	5.0mΔ	500m	250n#	D D	Y204a	
12 #	DT5517†	714m	125	∅	∅	10	4.0	500	5.0	250	∅	5.0	3.0	20	80	5.0mΔ	400m	250n#	D D	Y204a	
13 #	DT5518†	714m	125	∅	∅	10	4.0	600	5.0	275	∅	5.0	3.0	25	75	5.0mΔ	333m	250n#	D D	Y204a	
14 #	DT5519†	714m	125	∅	∅	10	4.0	700	5.0	300	∅	5.0	3.0	25	75	5.0mΔ	333m	250n#	D D	Y204a	
15 #	DT5520	714m	125	∅	∅	10	4.0	700	5.0	350	∅	5.0	3.0	20	80	5.0mΔ	500m	250n#	D D	Y204a	
16	IR515	714m	125	∅	∅	10	4.0	300	5.0	250	∅	5.0	3.0	15	80	5.0m∅	600m	400n	D D	TO3	
17	IR516	714m	125	∅	∅	10	4.0	400	5.0	250	∅	5.0	3.0	20	80	5.0m∅	500m	400n	D D	TO3	
18	IR517	714m	125	∅	∅	10	4.0	500	5.0	250	∅	5.0	3.0	20	80	5.0m∅	400m	400n	D D	TO3	
19	IR518	714m	125	∅	∅	10	4.0	600	5.0	275	∅	5.0	3.0	25	75	5.0m∅	333m	400n	D D	TO3	
20	IR519	714m	125	∅	∅	10	4.0	700	5.0	300	∅	5.0	3.0	25	75	5.0m∅	333m	400n	D D	TO3	
21	PT6947†	714m	125	∅	∅	∅	∅	120	8.0	70	∅	5.0	5.0	40	200	100m∅	120m	∅	D	TO3	
22	PT6948†	714m	125	∅	∅	∅	∅	160	8.0	100	∅	5.0	5.0	40	200	100m∅	120m	∅	D	TO3	
23	PT6949†	714m	125	∅	∅	∅	∅	200	8.0	140	∅	5.0	5.0	30	150	100m∅	160m	∅	D	TO3	
24	PT9211†	714m	125	∅	∅	∅	∅	90	6.0	70	∅	5.0	5.0	30	150	100m∅	140m	∅	D	TO3	
25	PT9221†	714m	125	∅	∅	∅	∅	190	6.0	70	∅	5.0	5.0	40	200	100m∅	120m	∅	D	TO3	
26	PT9231†	714m	125	∅	∅	∅	∅	120	6.0	140	∅	5.0	5.0	30	150	100m∅	140m	∅	D	TO3	
27	PT9271†	714m	125	∅	∅	∅	∅	170	6.0	140	∅	5.0	5.0	30	150	100m∅	180m	∅	D	TO3	
28	PT9281†	714m	125	∅	∅	∅	∅	170	6.0	140	∅	5.0	5.0	20	150	100m∅	180m	∅	D	TO3	
29	PT9291†	714m	125	∅	∅	∅	∅	200	8.0	140	∅	5.0	5.0	30	150	100m∅	180m	∅	D	TO3	
30	RC4410	714m	125	∅	∅	7.0	2.0	200	5.0	200	∅	5.0	1.0	30	90 #	4.0m∅	800m#	350n	E	TO3	
31	RC4411	714m	125	∅	∅	7.0	2.0	300	5.0	300	∅	5.0	1.0	30	90 #	2.5m∅	800m#	350n	E	TO3	
32	RC4413	714m	125	∅	∅	7.0	2.0	400	5.0	325	∅	5.0	500m	30	80 #	4.0m∅	800m#	350n	E	TO3	
33	RC4423	714m	125	∅	∅	7.0	2.0	400	5.0†	400	∅	5.0	1.0	30 #	80 #	4.0m∅	800m#	350n	E	TO3	
34	RC4431	714m	125	∅	∅	7.0	2.0	400	5.0†	400	∅	5.0	2.5	15	35	4.0m∅	800m#	350n	E	TO3	
35 #	RC5579†	714m	125	∅	∅	8.0	4.0	500	6.0	250	∅	5.0	3.0	12	100	5.0m∅	250m	600n	E	TO3	
36 #	SCD321	714m	125	∅	∅	10	2.0	50	5.0	80	∅	1.0m#	4.0	20	100	2.5m∅	250m	∅	DME	TO3	
37	SDT7731†	714m	71	∅	∅	10	2.0	60	2.0	40	∅	1.0u∅	5.0	20	80	5.0mΔ	100m	400n∅	TO3	C∅	
38	SDT7732†	714m	71	∅	∅	10	2.0	80	2.0	60	∅	1.0u∅	5.0	20	80	5.0mΔ	100m	400n∅	TO3	C∅	
39	SDT7733†	714m	71	∅	∅	10	2.0	100	2.0	80	∅	1.0u∅	5.0	20	80	5.0mΔ	100m	400n∅	TO3	C∅	
40	SDT7734†	714m	71	∅	∅	10	2.0	120	2.0	100	∅	1.0u∅	5.0	20	80	5.0mΔ	100m	400n∅	TO3	C∅	
41	SDT7735†	714m	71	∅	∅	10	2.0	140	2.0	125	∅	1.0u∅	5.0	20	80	5.0mΔ	100m	400n∅	TO3	C∅	
42	SDT7736†	714m	71	∅	∅	10	2.0	165	2.0	150	∅	1.0u∅	5.0	20	80	5.0mΔ	100m	400n∅	TO3	C∅	
43	STA8309	714m	125	∅	∅	5.0	2.0	200	5.0	200	∅	1.0m#	4.0	3.0	200	15mΔ	333m	400n∅	EMΔ	TO3	
44	STA9370	714m	125	∅	∅	2.0	1.0	225	5.0	225	∅	500u#	4.0	2.0	10	200	10mΔ	100m	600n	EMΔ	TO3
45	STA9371	714m	125	∅	∅	2.0	1.0	300	5.0	300	∅	1.0m#	4.0	1.5	10	200	10mΔ	133m	600n	EMΔ	TO3
46	STA9372	714m	125	∅	∅	2.0	1.0	350	5.0	350	∅	1.0m#	4.0	1.2	10	200	10mΔ	167m	600n	EMΔ	TO3
47	2N6470	715m	71	∅	∅	15	5.0	50	5.0†	50	∅	1.0mΔ	4.0	5.0	20	150 #	5.0mΔ	233m#	∅	TO3	
48	2N6471	715m	71	∅	∅	15	5.0	70	5.0†	70	∅	1.0mΔ	4.0	5.0	20	150 #	5.0mΔ	233m#	∅	TO3	
49	2N6472	715m	71	∅	∅	15	5.0	90	5.0†	90	∅	1.0mΔ	4.0	5.0	20	150 #	5.0mΔ	233m#	∅	TO3	
50	MJE3055	718m	90	∅	∅	15	6.0	70	5.0	60	∅	1.0m	4.0	4.0	20	70 #	2.0mΔ	∅	Δ	B16d	
51	MJE3055K	718m	90	∅	∅	15	6.0	70	5.0	60	∅	1.0m	4.0	4.0	20	70 #	2.0mΔ	∅	Δ	B16d	
52	2N5983	720m	90	∅	∅	8.0	3.0	80	5.0	40	∅	1.0mΔ	2.0	4.0	20	120 #	2.0mΔ	∅	∅	B23	
53	2N5984	720m	90	∅	∅	8.0	3.0	80	5.0	40	∅	1.0mΔ	2.0	4.0	20	120 #	2.0mΔ	∅	∅	B23	
54	2N5985	720m	90	∅	∅	8.0	3.0	100	5.0	60	∅	1.0mΔ	2.0	4.0	20	120 #	2.0mΔ	∅	∅	B23	
55	BD205	720m	90	∅	∅	10	6.0	55	5.0	45	∅	1.0m	2.0	2.0	15 #	1.5mΔ	275m#	∅	∅	B16g	
56	BD207	720m	90	∅	∅	10	6.0	70	5.0	45	∅	1.0m	2.0	2.0	15 #	1.5mΔ	275m#	∅	∅	B16g	
57	BD607	720m	90	∅	∅	10	6.0	55	5.0	45	∅	1.0m	2.0	2.0	30 #	1.5mΔ	275m#	∅	∅	B16h	
58	BD609	720m	90	∅	∅	10	6.0	70	5.0	45	∅	1.0m	2.0	2.0	30 #	1.5mΔ	275m#	∅	∅	B16h	
59	HSE3002-RT	720m	90	∅	∅	∅	∅	80	4.0	80	∅	100u	4.0	2.0	40	500kΔ	∅	∅	B3	B	
60 #	HSE3003-RT	720m	90	∅	∅	∅	∅	100	5.0	100	∅	100u	4.0	1.0	40	500kΔ	∅	∅	B3	B	
61 #	MJE1660	720m	90	∅	∅	15	5.0	60	5.0	40	∅	700u	4.0	5.0	20	100 #	3.0mΔ	∅	Δ	B16a	
62	MJE1661	720m	90	∅	∅	15	5.0	60	5.0	40	∅	700u	4.0	5.0	20	100 #	3.0mΔ	∅	Δ	B16a	
63	MJE2801	720m	90	∅	∅	10	5.0	60	4.0	60	∅	100u	2.0	3.0	25	100	∅	∅	Δ	B16d	
64	MJE2801K	720m	90	∅	∅	10	5.0	60	4.0	60	∅	100u	2.0	3.0	25	100	∅	∅	Δ	B16d	
65	MJE5983	720m	90	∅	∅	8.0	3.0	60	5.0	40	∅	1.0mΔ	2.0	4.0	20	120	2.0mΔ	150m	∅	∅	B23
66	MJE5984	720m	90	∅	∅	8.0	3.0	60	5.0	40	∅	1.0mΔ	2.0	4.0	20	120	2.0mΔ	150m	∅	∅	B23
67	MJE5985	720m	90	∅	∅	8.0	3.0	100	5.0	60	∅	1.0mΔ	2.0	4.0	20	120	2.0mΔ	150m	∅	∅	B23
68	PT1941†	731m	90	∅	∅	10	5.0	140	4.0	100	∅	5.0m	2.0	7.0	15	60	4.0mΔ	230m	1.0u∅	Δ PL	T39
69	BLY90	740m	130	∅	∅	8.0	3.0	36	4.0	18	∅	20mΔ	5.0	1.0	10	50 #	500m∅	∅	∅	T94	V
70	BLY94	740m	130	∅	∅	6.0	3.0	65	4.0	36	∅	5.0	1.								

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	2	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX. FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	# C O A D E	
							Ic (A)	Ib (A)	BVcbo (V)	BVceo (V)	BVcvo (V)	ICBO @ 25°C (A)	hFE (V)						MIN
1		KSD9703	850m	145		J	16	4.0	140	7.0	120	2.0m	4.0	8.0	15	60	800k	T03	C0
2		KSD9703A	850m	145		J	16	4.0	140	7.0	120	2.0m	4.0	8.0	10	30	800k	T03	C0
3		KSD9704	850m	145		J	16	4.0	100	7.0	80	1.0m	4.0	5.0	20	80	800k	T03	C0
4		KSD9705	850m	145		J	16	4.0	120	7.0	100	1.0m	4.0	5.0	20	80	800k	T03	C0
5		KSD9706	850m	145		J	16	4.0	140	7.0	120	1.0m	4.0	5.0	20	80	800k	T03	C0
6		KSD9707	850m	145		J	16	4.0	80	7.0	60	1.0m	4.0	5.0	15	50	800k	T03	C0
7		JAN2N2015	854m	150		S	10	6.0	100	10	100	50u	4.0	5.0	15	50	250m	T036	C0
8		JAN2N2016	854m	150		S	10	6.0	130	10	130	50u	4.0	5.0	15	50	180m	T036	C0
9		2N3055C	854m	150		S	30	15	140	10	130	1.0m	4.0	4.0	25	70	187m	T03	C0
10		2N3713	854m	150		S	10	4.0	80	7.0	60	1.0m	2.0	1.0	25	75	30kΔ	T03	C0
11		2N3713HS	854m	150		S	10	4.0	80	7.0	60	1.0m	2.0	1.0	25	75	30kΔ	T03	C0
12		2N3714	854m	150		S	10	4.0	100	7.0	80	1.0m	2.0	1.0	25	75	30kΔ	T03	C0
13		2N3714HS	854m	150		S	10	4.0	100	7.0	80	1.0m	2.0	1.0	25	75	30kΔ	T03	C0
14		2N3715	854m	150		S	10	4.0	80	7.0	60	1.0m	2.0	1.0	50	150	30kΔ	T03	C0
15		2N3716	854m	150		S	10	4.0	100	7.0	80	1.0m	2.0	1.0	50	150	30kΔ	T03	C0
16		2N3716HS	854m	150		S	10	4.0	100	7.0	80	1.0m	2.0	1.0	50	150	30kΔ	T03	C0
17		2N3771	854m	150		S	30	7.5	50	5.0	40	2.0m	4.0	15	15	60	130m	T03	C0
18		2N3772	854m	150		S	20	5.0	100	7.0	60	5.0m	4.0	10	15	60	140m	T03	C0
19		2N3772C	854m	150		S	30	15	140	10	135	1.0m	4.0	10	15	60	90m	T03	C0
20		1561-0408	854m	150		S	30	7.0	40	7.0	40	2.0	4.0	8.0	15	60	800kΔ	T03	C0
21		1561-0410	854m	150		S	30	7.0	40	7.0	40	2.0	4.0	10	15	60	800kΔ	T03	C0
22		1561-0615	854m	150		S	30	7.0	60	7.0	60	2.0	4.0	15	15	60	800kΔ	T03	C0
23		1561-0808	854m	150		S	30	7.0	70	7.0	80	2.0	4.0	8.0	15	60	1.0M	T03	C0
24		1561-0810	854m	150		S	30	7.0	70	7.0	80	2.0	4.0	10	15	60	1.0M	T03	C0
25		1561-0815	854m	150		S	30	7.0	80	7.0	80	2.0	4.0	15	15	60	800kΔ	T03	C0
26		1561-1008	854m	150		S	30	7.0	100	7.0	100	2.0	4.0	8.0	15	60	800kΔ	T03	C0
27		1561-1010	854m	150		S	30	7.0	100	7.0	100	2.0	4.0	10	15	60	800kΔ	T03	C0
28		1561-1015	854m	150		S	30	7.0	100	7.0	100	2.0	4.0	15	15	60	800kΔ	T03	C0
29		1561-1208	854m	150		S	30	7.0	120	7.0	120	2.0	4.0	8.0	15	60	800kΔ	T03	C0
30		1561-1210	854m	150		S	30	7.0	120	7.0	120	2.0	4.0	10	15	60	800kΔ	T03	C0
31		1561-1215	854m	150		S	30	7.0	120	7.0	120	2.0	4.0	15	15	60	800kΔ	T03	C0
32		1561-1410	854m	150		S	30	7.0	140	7.0	140	2.0	4.0	10	15	60	800kΔ	T03	C0
33		1723-0405I	854m	85		S	20	5.0	50	7.0	40	4.0	4.0	5.0	20	#	30MΔ	T03	C0
34		1723-0410I	854m	85		S	20	5.0	50	7.0	40	4.0	4.0	10	20	#	30MΔ	T03	C0
35		1723-0605I	854m	85		S	20	5.0	70	7.0	60	4.0	4.0	5.0	20	#	30MΔ	T03	C0
36		1723-0610I	854m	85		S	20	5.0	70	7.0	60	4.0	4.0	5.0	20	#	30MΔ	T03	C0
37		1723-0805I	854m	85		S	20	5.0	90	7.0	80	4.0	4.0	5.0	20	#	30MΔ	T03	C0
38		1723-0810I	854m	85		S	20	5.0	90	7.0	80	4.0	4.0	5.0	20	#	30MΔ	T03	C0
39		1723-1005I	854m	85		S	20	5.0	110	7.0	100	4.0	4.0	5.0	20	#	30MΔ	T03	C0
40		1723-1010I	854m	85		S	20	5.0	110	7.0	100	4.0	4.0	10	20	#	30MΔ	T03	C0
41		1723-1205I	854m	85		S	20	5.0	130	7.0	120	4.0	4.0	5.0	20	#	30MΔ	T03	C0
42		1723-1210I	854m	85		S	20	5.0	130	7.0	120	4.0	4.0	10	20	#	30MΔ	T03	C0
43		1723-1405I	854m	85		S	20	5.0	150	7.0	140	4.0	4.0	5.0	20	#	30MΔ	T03	C0
44		1723-1410I	854m	85		S	20	5.0	150	7.0	140	4.0	4.0	10	20	#	30MΔ	T03	C0
45		1723-1605I	854m	85		S	20	5.0	170	7.0	160	4.0	4.0	5.0	20	#	30MΔ	T03	C0
46		1723-1610I	854m	85		S	20	5.0	170	7.0	160	4.0	4.0	10	20	#	30MΔ	T03	C0
47		1723-1805I	854m	85		S	20	5.0	190	7.0	180	4.0	4.0	5.0	20	#	30MΔ	T03	C0
48		1723-1810I	854m	85		S	20	5.0	190	7.0	180	4.0	4.0	10	20	#	30MΔ	T03	C0
49		1743-0620I	854m	85		S	40	10	60	7.0	60	5.0m	2.5	2.0	20	#	30MΔ	T03	C0
50		1743-0810I	854m	85		S	40	10	80	7.0	80	5.0m	2.0	10	20	#	30MΔ	T03	C0
51		1743-0830I	854m	85		S	40	10	80	7.0	80	5.0m	3.0	30	20	#	30MΔ	T03	C0
52		1743-1020I	854m	85		S	40	10	100	7.0	100	5.0m	2.5	20	20	#	30MΔ	T03	C0
53		1743-1210I	854m	85		S	40	10	120	7.0	120	5.0m	2.0	10	20	#	30MΔ	T03	C0
54		1743-1230I	854m	85		S	40	10	120	7.0	120	5.0m	3.0	30	20	#	30MΔ	T03	C0
55		1743-1420I	854m	85		S	40	10	140	7.0	140	5.0m	2.5	20	20	#	30MΔ	T03	C0
56		1743-1610I	854m	85		S	40	10	160	7.0	160	5.0m	2.0	10	20	#	30MΔ	T03	C0
57		1743-1630I	854m	150		S	40	#	160	7.0	160	5.0m	3.0	30	20	#	30MΔ	T03	C0
58		1763-0420	854m	150		S	25	10	50	7.0	40	2.0m	4.0	20	20	#	40MΔ	T03	C0
59		1763-0610I	854m	85		S	40	#	60	7.0	60	5.0m	2.0	10	20	#	30MΔ	T03	C0
60		1763-0620I	854m	85		S	40	#	60	7.0	60	5.0m	2.5	20	20	#	30MΔ	T03	C0
61		1763-0630I	854m	85		S	40	#	60	7.0	60	5.0m	3.0	30	20	#	30MΔ	T03	C0
62		1763-0810I	854m	85		S	40	#	80	7.0	80	5.0m	2.0	10	20	#	30MΔ	T03	C0
63		1763-0820I	854m	85		S	40	#	80	7.0	80	5.0m	2.5	20	20	#	30MΔ	T03	C0
64		1763-0830I	854m	85		S	40	#	80	7.0	80	5.0m	3.0	30	20	#	30MΔ	T03	C0
65		1763-1010I	854m	85		S	40	#	100	7.0	100	5.0m	2.0	10	20	#	30MΔ	T03	C0
66		1763-1020I	854m	85		S	40	#	100	7.0	100	5.0m	2.5	20	20	#	30MΔ	T03	C0
67		1763-1030I	854m	85		S	40	#	100	7.0	100	5.0m	3.0	30	20	#	30MΔ	T03	C0
68		1763-1210I	854m	85		S	40	#	120	7.0	120	5.0m	2.0	10	20	#	30MΔ	T03	C0
69		1763-1220I	854m	85		S	40	#	120	7.0	120	5.0m	2.5	20	20	#	30MΔ	T03	C0
70		1763-1230I	854m	85		S	40	#	120	7.0	120	5.0m	3.0	30	20	#	30MΔ	T03	C0
71		1763-1410I	854m	85		S	40	#	140	7.0	140	5.0m	2.0	10	20	#	30MΔ	T03	C0
72		1763-1420I	854m	85		S	40	#	140	7.0	140	5.0m	2.5	20	20	#	30MΔ	T03	C0
73		1763-1430I	854m	85		S	40	#	140	7.0	140	5.0m	3.0	30	20	#	30MΔ	T03	C0
74		1763-1610I	854m	85		S	40	#	160	7.0	160	5.0m	2.0	10	20	#	30MΔ	T03	C0
75		1763-1620I	854m	85		S	40	#	160	7.0	160	5.0m	2.5	20	20	#	30MΔ	T03	C0
76		1763-1630	854m	85		S	40	#	160	7.0	160	5.0m	3.0	30	20	#	30MΔ	T03	C0
77		1763-1810I	854m	85		S	40	#	180	7.0	180	5.0m	2.0	10	20	#	30MΔ	T03	C0
78		1763-1820I	854m	85		S	40	#	180	7.0	180	5.0m	2.5	20	20	#	30MΔ	T03	C0
79		1763-1830	854m	85		S	40	#	180	7.0	180	5.0m							

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @25°C					MAX. Icb0 @ MAX Vcb @25°C (A)		hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C O A D E
						Ic (A)	Ib (A)	V _{cb0} (V)	V _{eb0} (V)	V _{ceo} (V)	Ic (A)	Ib (A)	MIN	MAX						
1	2N5331†	1.0	100	0	SJ	30	5.0	150	8.0	90	2.0	10	40	120	80MΔ	60m	350n	T063	A	
2	2N5387	1.0	3.5	0	SJ	7.5	3.0	200	10	200	1.0m	5.0	2.0	25	15MΔ	100	100	T061	A	
3	2N5388	1.0	3.5	0	SJ	7.5	3.0	250	10	250	1.0m	5.0	2.0	25	15MΔ	100	100	T061	A	
4	2N5389	1.0	3.5	0	SJ	7.5	3.0	300	10	300	1.0m	5.0	2.0	25	15MΔ	100	100	T061	A	
5	2N5539†	1.0	100	0	SJ	20	2.0	175	7.0	130	500n	5.0	2.0	25	20MΔ	75	500n	T063	A	
6	2N5559†	1.0	100	0	SJ	10	5.0	150	7.0	120	2.0	4.0	12	60	800kΔ	190m	6.0u	T03	C	
7	2N5584†	1.0	100	0	SJ	30	5.0	225	8.0	180	50m	3.0	10	40	120	70MΔ	350n	T063	A	
8	2N5733†	1.0	150	0	SJ	30	6.0	100	5.0	80	1.0m	2.0	10	30	300	30MΔ	60m	700n	T063	A
9	2N5734†	1.0	150	0	SJ	30	6.0	100	5.0	80	1.0m	2.0	10	30	300	30MΔ	60m	700n	T03	A
10	2N5929†	1.0	100	0	SJ	30	10	90	7.0	80	4.0	10	20	100	30MΔ	500n	500n	F4f	C	
11	2N5930†	1.0	100	0	SJ	30	10	130	7.0	120	4.0	10	20	100	30MΔ	500n	500n	F4f	C	
12	2N5931†	1.0	100	0	SJ	30	10	170	7.0	160	4.0	10	20	100	30MΔ	500n	500n	F4f	C	
13	2N5932†	1.0	100	0	SJ	30	10	70	7.0	80	4.0	10	20	100	30MΔ	600n	600n	F4f	C	
14	2N5933†	1.0	100	0	SJ	30	10	110	7.0	100	4.0	20	20	100	30MΔ	600n	600n	F4f	C	
15	2N5934†	1.0	100	0	SJ	30	10	150	7.0	140	4.0	20	20	100	30MΔ	600n	600n	F4f	C	
16	2N5935†	1.0	100	0	SJ	30	10	90	7.0	80	4.0	30	20	100	30MΔ	700n	700n	F4f	C	
17	2N5936†	1.0	100	0	SJ	30	10	130	7.0	120	4.0	30	20	100	30MΔ	700n	700n	F4f	C	
18	2N5937†	1.0	100	0	SJ	30	10	170	7.0	160	4.0	30	20	100	30MΔ	600n	600n	F4f	C	
19	2N5957†	1.0	100	0	SJ	20	2.0	100	10	100	500u	10	10	30	120	10MΔ	90m	1.1u	T061	A
20	JAN2N5957†	1.0	150	0	SJ	20	2.0	100	10	100	100u	10	10	30	120	10MΔ	90m	1.1u	T50a	A
21	2N5959†	1.0	100	0	SJ	20	2.0	100	10	100	500u	10	10	30	120	10MΔ	90m	1.1u	T061	A
22	JAN2N5959†	1.0	150	0	SJ	20	2.0	100	10	100	100u	10	10	30	120	10MΔ	90m	1.1u	T50a	A
23	2N6249†	1.0	100	0	SJ	10	10	300	6.0	225	3.0	10	10	50	2.5MΔ	100m	2.0u	T03	C	
24	2N6250†	1.0	100	0	SJ	10	10	375	6.0	300	3.0	10	10	8.0	2.5MΔ	150m	2.0u	T03	C	
25	2N6251†	1.0	100	0	SJ	10	10	450	6.0	375	3.0	10	10	5.0	2.5MΔ	150m	2.0u	T03	C	
26	2N6546†	1.0	175	0	SJ	15	10	650	9.0	300	2.0	10	6.0	30	6.0MΔ	150m	1.0u	T03	C	
27	2N6547†	1.0	175	0	SJ	15	10	850	9.0	400	2.0	10	6.0	30	6.0MΔ	150m	1.0u	T03	C	
28	2N6562†	1.0	175	0	SJ	10	2.0	450	5.0	450	2.0	5.0	10	40	10MΔ	150m	500n	T061	A	
29	2N6563†	1.0	175	0	SJ	10	2.0	300	5.0	300	2.0	10	10	50	15MΔ	150m	500n	T061	A	
30	25C1142†	1.0	125	0	SJ	10	3.0	800	6.0	400	3.0	5.0	10	25	4.0MΔ	400m	1.5u	T03	C	
31	25C1143†	1.0	125	0	SJ	10	3.0	600	6.0	300	3.0	5.0	10	25	4.0MΔ	400m	1.5u	T03	C	
32	25C1582	1.0	140	0	SJ	13	4.0	65	4.0	35	6.0	10	10	100	50MΔ	400m	1.5u	W72	C	
33	25D54	1.0	150	0	SJ	10	4.0	100	12	50	200u	4.0	5.0	12	48	1.2M†	50m	1.5u	T036	C
34	25D132	1.0	150	0	SJ	20	4.0	100	6.0	65	5.0	5.0	20	20	100	50m	1.2u	F10a	C	
35	25D171	1.0	125	0	SJ	3.5	10	450	150	150	100u	3.0	1.0	30	100	50m	1.2u	F10a	C	
36	25D211†	1.0	100	0	SS	10	4.0	60	7.0	40	50u	4.0	5.0	15	30	8.0M†	500m	1.2u	T03	C
37	25D212†	1.0	100	0	SS	10	4.0	90	7.0	60	30u	4.0	5.0	15	30	8.0M†	500m	1.2u	T03	C
38	25D213†	1.0	100	0	SS	10	4.0	110	7.0	80	30u	4.0	5.0	15	30	8.0M†	500m	1.2u	T03	C
39	25D214†	1.0	100	0	SS	10	4.0	130	7.0	100	30u	4.0	5.0	15	30	8.0M†	500m	1.2u	T03	C
40	25D293	1.0	125	0	SJ	10	3.0	800	10	400	3.0	5.0	5.0	14	27	8.0M†	400m	1.2u	T03	C
41	25D294	1.0	125	0	SJ	10	3.0	800	10	400	3.0	5.0	5.0	28	70	8.0M†	400m	1.2u	T03	C
42	25D533	1.0	100	0	SJ	10	2.5	270	15	90	50u	2.0	1.0	45	220	8.0M†	400m	1.2u	T03	C
43	25D538A	1.0	150	0	SJ	10	2.0	500	7.0	400	100u	5.0	5.0	20	20	15	200m	1.5u	T03	C
44	25D539A	1.0	150	0	SJ	10	2.0	400	7.0	350	500u	5.0	5.0	20	20	15	200m	1.5u	T03	C
45	25D676	1.0	125	0	SJ	12	2.0	160	5.0	160	1.0	5.0	1.0	35	200	15	200m	1.5u	T03	C
46	108T2†	1.0	175	0	SJ	30	15	120	10	80	1.0	4.0	10	20	60	30MΔ	140m	200n	DM	T03
47	109T2†	1.0	175	0	SJ	30	15	160	10	125	1.0	4.0	10	20	60	30MΔ	140m	200n	DM	T03
48	1743-0610†	1.0	175	0	SJ	30	10	70	7.0	60	4.0	10	20	100	30MΔ	100m	500n	E	T03	
49	1743-0630†	1.0	175	0	SJ	30	10	70	7.0	60	4.0	10	20	100	30MΔ	100m	500n	E	T03	
50	1743-0820†	1.0	175	0	SJ	30	10	90	7.0	80	4.0	20	20	100	30MΔ	50m	600n	E	T03	
51	1743-1010†	1.0	175	0	SJ	30	10	110	7.0	100	4.0	10	20	100	30MΔ	100m	500n	E	T03	
52	1743-1030†	1.0	175	0	SJ	30	10	110	7.0	100	4.0	10	20	100	30MΔ	33m	700n	E	T03	
53	1743-1220†	1.0	175	0	SJ	30	10	130	7.0	120	4.0	10	20	100	30MΔ	50m	600n	E	T03	
54	1743-1410†	1.0	175	0	SJ	30	10	150	7.0	140	4.0	10	20	100	30MΔ	100m	500n	E	T03	
55	1743-1430†	1.0	175	0	SJ	30	10	150	7.0	140	4.0	10	20	100	30MΔ	33m	700n	E	T03	
56	1743-1620†	1.0	175	0	SJ	30	10	170	7.0	160	4.0	10	20	100	30MΔ	50m	600n	E	T03	
57	1743-1810†	1.0	175	0	SJ	30	10	190	7.0	180	4.0	10	20	100	30MΔ	100m	500n	E	T03	
58	1743-1820†	1.0	175	0	SJ	30	10	190	7.0	180	4.0	10	20	100	30MΔ	50m	600n	E	T03	
59	1743-1830†	1.0	175	0	SJ	30	10	190	7.0	180	4.0	10	20	100	30MΔ	33m	700n	E	T03	
60	1748-0610†	1.0	100	0	SJ	40	10	60	7.0	60	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
61	1748-0630†	1.0	100	0	SJ	40	10	60	7.0	60	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
62	1748-0810†	1.0	100	0	SJ	40	10	80	7.0	80	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
63	1748-0820†	1.0	200	0	SJ	20	10	90	7.0	80	5.0	2.0	10	100	30MΔ	50m	600n	E	T063	
64	1748-0830†	1.0	100	0	SJ	40	10	80	7.0	80	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
65	1748-1010†	1.0	100	0	SJ	40	10	100	7.0	100	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
66	1748-1030†	1.0	100	0	SJ	40	10	100	7.0	100	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
67	1748-1210†	1.0	100	0	SJ	40	10	120	7.0	120	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
68	1748-1220†	1.0	200	0	SJ	20	10	130	7.0	80	5.0	2.0	10	100	30MΔ	50m	600n	E	T063	
69	1748-1230†	1.0	100	0	SJ	40	10	120	7.0	120	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
70	1748-1410†	1.0	100	0	SJ	40	10	140	7.0	140	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
71	1748-1430†	1.0	100	0	SJ	40	10	140	7.0	140	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
72	1748-1610†	1.0	100	0	SJ	40	10	160	7.0	160	5.0	2.0	10	20	30MΔ	300n	300n	E	T063	
73	1748-1620†	1.0	200	0	SJ	20	10	170	7.0	80	5.0	2.0	10	100	30MΔ	50m	600n	E	T063	
74	1748-1630†	1.0	175	0																

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	# DWG	C O A D E	
						Ic (A)	Ib (A)	Vcbo (V)	Vebo (V)	Vceo (V)	Icbo @ MAX Vcb @ 25°C (A)	Vcb (V)								MIN (A)
1	SDT8755	1.0	175	20		4.0	4.0	120	8.0	100	10u	5.0	10	30	90	25M		PL	T063	
2	SDT8756	1.0	175	20		4.0	4.0	140	8.0	120	10u	5.0	10	30	90	25M		PL	T063	
3	SDT8757	1.0	175	20		4.0	4.0	170	8.0	150	10u	5.0	10	30	90	25M		PL	T063	
4	SDT8758	1.0	175	20		4.0	4.0	200	8.0	180	10u	5.0	10	30	90	25M		PL	T063	
5	SDT8801	1.0 \$	100 ∅	∅	\$J	20	20	200	8.0	200	1.0u∅	5.0∅	10	15	60 #	30M5Δ		PL	T063	
6	SDT8801F	1.0	100 ∅	∅	\$J	20	20	200	8.0	200	1.0u	5.0∅	10	15	60			PL	T118a	
7	SDT8802	1.0 \$	100 ∅	∅	\$J	20	20	225	8.0	225	1.0u∅	5.0∅	10	15	60 #	30M5Δ		PL	T063	
8	SDT8802F	1.0	100 ∅	∅	\$J	20	20	225	8.0	225	1.0u	5.0∅	10	15	60			PL	T118a	
9	SDT8803	1.0 \$	100 ∅	∅	\$J	20	20	250	8.0	250	1.0u∅	5.0∅	10	15	60 #	30M5Δ		PL	T063	
10	SDT8803F	1.0	100 ∅	∅	\$J	20	20	250	8.0	250	1.0u	5.0∅	10	15	60			PL	T118a	
11	SDT8804	1.0 \$	100 ∅	∅	\$J	20	20	275	8.0	275	1.0u∅	5.0∅	10	15	60 #	30M5Δ		PL	T063	
12	SDT8804F	1.0	100 ∅	∅	\$J	20	20	275	8.0	275	1.0u	5.0∅	10	15	60			PL	T118a	
13	SDT8805	1.0 \$	100 ∅	∅	\$J	20	20	300	8.0	300	1.0u∅	5.0∅	10	15	60 #	30M5Δ		PL	T063	
14	SDT8805F	1.0	100 ∅	∅	\$J	20	20	300	8.0	300	1.0u	5.0∅	10	15	60			PL	T118a	
15	SDT9640	1.0	175	50		50	50	225	10	200	1.0u	10∅	40	10	40	10M	45m	DPL	T03	
16	SDT9641	1.0	175	50		50	50	250	10	225	1.0u	10∅	40	10	40	10M	45m	DPL	T03	
17	SDT9642	1.0	175	50		50	50	275	10	250	1.0u	10∅	40	10	40	10M	45m	DPL	T03	
18	SDT9643	1.0	175	50		50	50	300	10	275	1.0u	10∅	40	10	40	10M	45m	DPL	T03	
19	SDT9644	1.0	175	50		50	50	325	10	300	1.0u	10∅	40	10	40	10M	45m	DPL	T03	
20	SDT9680	1.0	175	100		100	100	80	10	60	1.0u	5.0∅	70	15		10M	14m	DPL	T03	
21	SDT9681	1.0	175	100		100	100	100	10	80	1.0u	5.0∅	70	15		10M	14m	DPL	T03	
22	SDT9682	1.0	175	100		100	100	120	10	100	1.0u	5.0∅	70	15		10M	14m	DPL	T03	
23	SDT9683	1.0	175	100		100	100	140	10	120	1.0u	5.0∅	70	15		10M	14m	DPL	T03	
24	SDT9684	1.0	175	100		100	100	160	10	140	1.0u	5.0∅	70	15		10M	14m	DPL	T03	
25	SDT12201	1.0	100 ∅	∅	\$J	10	1.0	200	5.0	200	1.0m	5.0∅	10	10	50	25M5	200n#		T39b	
26	SDT12202	1.0	100 ∅	∅	\$J	10	1.0	250	5.0	250	1.0m	5.0∅	10	10	50	25M5	200n#		T39b	
27	SDT12203	1.0	100 ∅	∅	\$J	10	1.0	300	5.0	300	1.0m	5.0∅	10	10	50	25M5	200n#		T39b	
28	SDT13201	1.0	100 ∅	∅	\$J	10	1.0	300	5.0	300	1.0m	5.0∅	5.0	10	40	15M5	350n#		T39b	
29	SDT13202	1.0	100 ∅	∅	\$J	10	1.0	350	5.0	350	1.0m	5.0∅	5.0	10	40	15M5	350n#		T39b	
30	SDT13203	1.0	100 ∅	∅	\$J	10	1.0	400	5.0	400	1.0m	5.0∅	5.0	10	40	15M5	350n#		T39b	
31	SDT13204	1.0	100 ∅	∅	\$J	10	1.0	450	5.0	450	1.0m	5.0∅	5.0	10	40	15M5	350n#		T39b	
32	SDT13205	1.0	100 ∅	∅	\$J	10	1.0	500	5.0	500	1.0m	5.0∅	5.0	10	40	15M5	350n#		T39b	
33	SDT96301	1.0	100 ∅	∅	\$J	100	15	80	10	60	1.0u∅	5.0∅	90	5.0				PL	T03	
34	SDT96302	1.0	100 ∅	∅	\$J	120	15	120	10	100	1.0u∅	5.0∅	90	5.0				PL	T03	
35	SDT96303	1.0	100 ∅	∅	\$J	120	15	160	10	140	1.0u∅	5.0∅	90	5.0				PL	T03	
36	SDT96304	1.0	100 ∅	∅	\$J	50	10	225	10	200	1.0u∅	10∅	40	8.0	40			PL	T03	
37	SDT96305	1.0	100 ∅	∅	\$J	50	10	275	10	250	1.0u∅	10∅	40	8.0	40			PL	T03	
38	SDT96306	1.0	100 ∅	∅	\$J	50	10	325	10	300	1.0u∅	10∅	40	8.0	40			PL	T03	
39	SPC401	1.0	100 ∅	∅	\$J	2.0	1.0	400	5.0	300	500uΔ	5.0∅	500m	20	100	4.0M	1.6	D	T03	
40	SPC413	1.0	75 ∅	∅	\$J	2.0	1.0	400	5.0	325	500u	5.0∅	500m	20	80	6.0M	1.6	D	T03	
41	SSP33001	1.0 \$	100 ∅	∅	\$J	20	20	80	8.0	80	10u5	5.0∅	10	40	120	40M5Δ	50m	500n#	PL	T063
42	SSP33011	1.0 \$	100 ∅	∅	\$J	20	20	80	8.0	60	10u5	5.0∅	2.0	40	40	40M5Δ	50m	500n#	PL	T063
43	ST170601	1.0 #	150 ∅	∅	\$J	30	30	125	10	80 *	100u∅	10∅	10	30	120 #	10M5Δ	500n#		PL	T063
44	ST170611	1.0 #	150 ∅	∅	\$J	30	30	145	10	100 *	100u∅	10∅	10	30	120 #	10M5Δ	500n#		PL	T063
45	ST170621	1.0 #	150 ∅	∅	\$J	30	30	170	10	120 *	100u∅	10∅	10	30	120 #	10M5Δ	500n#		PL	T063
46	ST18007	1.0	100 ∅	∅	\$J	20	20	375	10	375		10	10	20		10M	150m		PE	T063
47	ST18008	1.0	100 ∅	∅	\$J	20	20	300	10	300		10	10	20		10M	150m		PE	T063
48	ST18009	1.0	100 ∅	∅	\$J	20	20	250	10	250		10	10	20		10M	150m		PE	T063
49	ST18010	1.0	100 ∅	∅	\$J	20	20	200	10	200		10	10	20		10M	150m		PE	T063
50	STA8341	1.0 \$	100 ∅	∅	\$J	10	10	450	5.0	400	10m#	5.0∅	10	10	100	2.5M5Δ	100m	2.0m∅	EMΔ	T03
51	STC1726	1.0 \$	200 ∅	∅	\$J	20	4.5	10	80	80	2.0m	3.0	10	20	80		100m		ME	T18
52	STC1728	1.0 \$	200 ∅	∅	\$J	30	4.5	10	80	80	2.0m	3.0	20	10	40		80m		ME	T18
53	STC1731	1.0 \$	200 ∅	∅	\$J	20	4.5	10	100	100	2.0m	3.0	10	20	80		100m		ME	T18
54	STC1733	1.0 \$	200 ∅	∅	\$J	30	4.5	10	100	100	2.0m	3.0	20	10	40		80m		ME	T18
55	STC1736	1.0 \$	200 ∅	∅	\$J	20	4.5	10	150	150	2.0m	3.0	10	20	80		100m		ME	T18
56	STC1738	1.0	200 ∅	∅	\$J	30	4.5	10	150	150	2.0m	3.0	20	10	40		80m		ME	T18
57	STS401	1.0	75 ∅	∅	\$J	2.0	1.0	400	5.0	400	500uΔ	5.0∅	500m	20	100	4.0M5	1.6	EM	T03	
58	STS413	1.0	75 ∅	∅	\$J	2.0	1.0	400	5.0	400	500u#	5.0∅	500m	20	80	6.0M5	1.6	EMΔ	T03	
59	SVT200-051	1.0	100 ∅	∅	\$J	10	2.0	225	8.0	200	100u5	5.0∅	5.0	15		100M5Δ	200m	400n∅	EMΔ	T03
60	SVT200-101	1.0	100 ∅	∅	\$J	20	4.0	225	8.0	200	100u5	5.0∅	10	15		75M5Δ	100m	250n∅	PL	T03
61	SVT200-201	1.0	100 ∅	∅	\$J	30	6.0	225	8.0	200	100u5	5.0∅	20	15		60M5Δ	50m	300n∅	PL	T03
62	SVT250-051	1.0	100 ∅	∅	\$J	10	2.0	275	8.0	250	100u5	5.0∅	5.0	15		100M5Δ	200m	250n∅	PL	T03
63	SVT250-101	1.0	100 ∅	∅	\$J	20	4.0	275	8.0	250	100u5	5.0∅	10	15		75M5Δ	100m	250n∅	PL	T03
64	SVT250-201	1.0	100 ∅	∅	\$J	30	6.0	275	8.0	250	100u5	5.0∅	20	15		60M5Δ	50m	300n∅	PL	T03
65	SVT300-051	1.0	100 ∅	∅	\$J	10	2.0	325	8.0	300	100u5	5.0∅	5.0	15		100M5Δ	200m	250n∅	PL	T03
66	SVT300-101	1.0	100 ∅	∅	\$J	20	4.0	325	8.0	300	100u5	5.0∅	10	15		75M5Δ	100m	250n∅	PL	T03
67	SVT300-201	1.0	100 ∅	∅	\$J	30	6.0	325	8.0	300	100u5	5.0∅	20	15		60M5Δ	50m	300n∅	PL	T03
68	TIP351	1.0	3.5	∅	\$J	25	5.0	40	5.0	40	1.0mΔ	4.0∅	15	10	50 #	3.0M5Δ	1.2u∅	DM	B19	
69	TIP35A1	1.0	3.5	∅	\$J	25	5.0	60	5.0	60	1.0mΔ	4.0∅	15	10	50 #	3.0M5Δ	1.2u∅	DM	B19	
70	TIP35B1	1.0	3.5	∅	\$J	25	5.0	80	5.0	80	1.0mΔ	4.0∅	15	10	50 #	3.0M5Δ	1.2u∅	DM	B19	
71	TIP35C1	1.0	3.5	∅	\$J	25	5.0	100	5.0	100	1.0mΔ	4.0∅	15	10	50 #	3.0M5Δ	1.2u∅	DM	B19	
72	TIP55A1	1.0 \$	3.0	∅	\$J	7.5	4.0	350	8.0	250	100u*Δ	2.0∅	1.0	10	100 #	3.0M5Δ	250m#	130n	DM	B3
73	TIP56A1	1.0 \$	3.0	∅	\$J	7.5	4.0	400	8.0	300	100u*Δ	2.0∅	1.0	10	100 #	3.0M5Δ	250m#	130n</		

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/°C)	MAX. FREE AIR @ 25°C (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	C O A D E	
					IC	Ib	VCbo	VEbo	VCceo	ICbo @ MAX Vcb	IC									
					(A)	(A)	(V)	(V)	(V)	(A)	(A)									
1	TIP538	1.2	5.0	5	15	5.0	300	5.0	200	1.0	4.0	7.5	20	100	10MΔ	200m	5.0u	DMΔ	T03	C
2	TIP539	1.2	5.0	5	15	5.0	400	5.0	300	1.0	4.0	7.5	20	100	10MΔ	200m	5.0u	DMΔ	T03	C
3	TIP540	1.2	5.0	5	15	5.0	500	5.0	400	1.0	4.0	7.5	20	100	10MΔ	200m	5.0u	DMΔ	T03	C
4	2N3429†	1.3	150	5	5.0	3.0	50	25	50	2.0	2.0	5.0	10	35	20kΔ	200m	5.0u	DMΔ	T52	B
5	2N3430†	1.3	150	5	5.0	3.0	100	25	100	2.0	2.0	5.0	10	35	20kΔ	200m	5.0u	DMΔ	T52	B
6	2N3431†	1.3	150	5	5.0	3.0	150	25	150	2.0	2.0	5.0	10	35	20kΔ	200m	5.0u	DMΔ	T52	B
7	2N3432†	1.3	150	5	5.0	3.0	200	25	200	2.0	2.0	5.0	10	35	20kΔ	200m	5.0u	DMΔ	T52	B
8	2N3433†	1.3	150	5	5.0	3.0	250	25	250	2.0	2.0	5.0	10	35	20kΔ	200m	5.0u	DMΔ	T52	B
9	2N3902†	1.3	100	5	2.5	1.0	400	5.0	400	250	5.0	1.0	30	90	40kΔ	1.0	800n	DMΔ	T03	C
10	JAN2N3902†	1.3	4.0	5	3.5	2.0	700	5.0	400	250	5.0	1.0	30	90	2.5MΔ	800m	800n	DMΔ	T03	C
11	2N1571	1.3	100	5	3.5	2.0	700	6.0	500	500	5.0	1.0	30	90	2.8MΔ	710m	800n	DMΔ	T03	C
12	JAN2N1571	1.3	4.0	5	3.5	2.0	700	6.0	500	250	5.0	1.0	30	90	2.5MΔ	800m	800n	DMΔ	T03	C
13	2SC1299†	1.3	200	5	3	30	300	5.0	200	50	5.0	10	40	50	100m	1.5u	700n	DMΔ	F1a	C
14	2SC1300†	1.3	200	5	3	30	500	5.0	400	50	5.0	15	25	40	100m	2.7u	700n	DMΔ	F1a	C
15	2SC1301†	1.3	200	5	3	30	250	5.0	200	200	5.0	10	25	40	100m	1.5u	700n	MEΔ	F1a	C
16	2SC1302†	1.3	200	5	3	30	400	5.0	400	200	5.0	15	25	40	100m	2.7u	700n	MEΔ	F1a	C
17	2SC1401†	1.3	200	5	3	30	400	5.0	350	200	5.0	15	25	40	100m	2.7u	700n	MEΔ	F1a	C
18	2SD363	1.3	200	5	3	30	250	6.0	200	100	5.0	15	15	100	100m	300n	700n	MEΔ	F27a	A
19	2SD364†	1.3	200	5	3	30	450	6.0	400	100	5.0	15	10	80	100m	300n	700n	DMΔ	F27a	A
20	2SD372	1.3	200	5	3	30	150	6.0	100	100	5.0	15	10	100	100m	2.0u	700n	EM	F10a	C
21	2SD373	1.3	200	5	3	30	250	6.0	200	100	5.0	15	20	100	100m	2.0u	700n	EM	F10a	C
22	2SD373A	1.3	200	5	3	30	350	6.0	300	100	5.0	15	15	100	100m	2.0u	700n	ME	F10a	C
23	2SD374	1.3	200	5	3	30	450	6.0	400	100	5.0	15	10	80	100m	2.0u	700n	ME	F10a	C
24	2SD457	1.3	200	5	3	30	250	6.0	200	100	5.0	50	20	100	100m	300n	700n	ME	F10a	C
25	2SD540†	1.3	200	5	3	30	200	5.0	200	2.0	5.0	10	40	50	25MΔ	133m	700n	DMΔ	F1a	C
26	2SD541†	1.3	200	5	3	30	200	5.0	150	2.0	5.0	10	40	50	25MΔ	133m	700n	DMΔ	F1a	C
27	2SD542†	1.3	200	5	3	30	400	5.0	400	2.0	5.0	15	25	40	20MΔ	133m	1.0u	DMΔ	F1a	C
28	2SD543†	1.3	200	5	3	30	400	5.0	350	2.0	5.0	15	25	40	20MΔ	133m	1.0u	DMΔ	F1a	C
29	2SD630	1.3	200	5	3	30	50	5.0	40	100	5.0	15	25	50	800k	100m	3.0u	D	T03	C
30	153-041	1.3	200	5	7.5	3.0	65	25	40	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
31	153-045PCT	1.3	200	5	7.5	3.0	65	25	40	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
32	153-05	1.3	200	5	7.5	3.0	75	25	50	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
33	153-061	1.3	200	5	7.5	3.0	85	25	60	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
34	153-065PCT	1.3	200	5	7.5	3.0	85	25	60	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
35	153-07	1.3	200	5	7.5	3.0	95	25	70	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
36	153-081	1.3	200	5	7.5	3.0	105	25	80	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
37	153-085PCT	1.3	200	5	7.5	3.0	105	25	80	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
38	153-09	1.3	200	5	7.5	3.0	115	25	90	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
39	153-101	1.3	200	5	7.5	3.0	125	25	100	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
40	153-105PCT	1.3	200	5	7.5	3.0	125	25	100	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
41	153-121	1.3	200	5	7.5	3.0	145	25	120	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
42	153-125PCT	1.3	200	5	7.5	3.0	145	25	120	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
43	153-141	1.3	200	5	7.5	3.0	165	25	140	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
44	153-145PCT	1.3	200	5	7.5	3.0	165	25	140	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
45	153-161	1.3	200	5	7.5	3.0	185	25	160	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
46	153-165PCT	1.3	200	5	7.5	3.0	185	25	160	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
47	153-181	1.3	200	5	7.5	3.0	205	25	180	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
48	153-185PCT	1.3	200	5	7.5	3.0	205	25	180	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
49	153-201	1.3	200	5	7.5	3.0	225	25	200	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
50	153-205PCT	1.3	200	5	7.5	3.0	225	25	200	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
51	153-221	1.3	200	5	7.5	3.0	245	25	220	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
52	153-225PCT	1.3	200	5	7.5	3.0	245	25	220	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T52	A
53	153-245PCT	1.3	200	5	7.5	3.0	265	25	240	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T58	A
54	153-265PCT	1.3	200	5	7.5	3.0	285	25	260	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T58	A
55	153-285PCT	1.3	200	5	7.5	3.0	305	25	280	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T58	A
56	153-305PCT	1.3	200	5	7.5	3.0	325	25	300	10m	4.0	1.5	15	15	500k	866m	3.0u	A	T58	A
57	154-041	1.3	200	5	7.5	3.0	65	25	40	10m	4.0	1.5	25	25	500k	833m	3.0u	A	T52	A
58	154-045PCT	1.3	200	5	7.5	3.0	65	25	40	10m	4.0	1.5	25	25	500k	833m	3.0u	A	T52	A
59	154-05	1.3	200	5	7.5	3.0	75	25	50	10m	4.0	1.5	25	25	500k	833m	3.0u	A	T52	A
60	154-061	1.3	200	5	7.5	3.0	85	25	60	10m	4.0	1.5	25	25	500k	833m	3.0u	A	T52	A
61	154-065PCT	1.3	200	5	7.5	3.0	85	25	60	10m	4.0	1.5	25	25	500k	833m	3.0u	A	T52	A
62	154-07	1.3	200	5	7.5	3.0	95	25	70	10m	4.0	1.5	25	25	500k	833m	3.0u	A	T52	A
63	154-081	1.3	200	5	7.5	3.0	105	25	80	10m	4.0	1.5								

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc MAX	Tj MAX	ABSOLUTE MAX. RATINGS @25°C					MAX. Icbo @ 25°C (A)	BIAS			MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a T200 Ser.	DWG #	C O D E
						Ic	Ib	Vcbo	Vebo	Vceo		Vcb	Vcb	Ic									
						(A)	(A)	(V)	(V)	(V)		(V)	(V)	(A)									
1	151-04SPC†	1.4	100	0	6.0	3.0	65	25	40	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
2	151-05	1.4	100	0	6.0	3.0	75	25	50	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
3	151-06†	1.4	100	0	6.0	3.0	85	25	60	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
4	151-06SPC†	1.4	100	0	6.0	3.0	85	25	60	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
5	151-07	1.4	100	0	6.0	3.0	95	25	70	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
6	151-08†	1.4	100	0	6.0	3.0	105	25	80	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
7	151-08SPC†	1.4	100	0	6.0	3.0	105	25	80	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
8	151-09	1.4	100	0	6.0	3.0	115	25	90	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
9	151-10†	1.4	100	0	6.0	3.0	125	25	100	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
10	151-10SPC†	1.4	100	0	6.0	3.0	125	25	100	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
11	151-12†	1.4	100	0	6.0	3.0	145	25	120	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
12	151-12SPC†	1.4	100	0	6.0	3.0	145	25	120	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
13	151-14†	1.4	100	0	6.0	3.0	165	25	140	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
14	151-14SPC†	1.4	100	0	6.0	3.0	165	25	140	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
15	151-16†	1.4	100	0	6.0	3.0	185	25	160	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
16	151-16SPC†	1.4	100	0	6.0	3.0	185	25	160	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
17	151-18†	1.4	100	0	6.0	3.0	205	25	180	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
18	151-18SPC†	1.4	100	0	6.0	3.0	205	25	180	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
19	151-20†	1.4	100	0	6.0	3.0	225	25	200	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
20	151-20SPC†	1.4	100	0	6.0	3.0	225	25	200	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
21	151-22†	1.4	100	0	6.0	3.0	245	25	220	10m#	4.0	1.5	11	∅		500k\$	866m	7.0u	A	T1	B		
22	151-22SPC†	1.4	100	0	6.0	3.0	245	25	220	10m#	4.0	1.5	22	∅			870m	7.0u	A	T1	B		
23	151-26SPC†	1.4	100	0	6.0	3.0	285	25	260	10m#	4.0	1.5	22	∅			870m	7.0u	F	T1	B		
24	151-28SPC†	1.4	100	0	6.0	3.0	305	25	280	10m#	4.0	1.5	22	∅			870m	7.0u	F	T1	B		
25	152-04†	1.4	100	0	6.0	3.0	65	25	40	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
26	152-04SPC†	1.4	100	0	6.0	3.0	65	25	40	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
27	152-05	1.4	100	0	6.0	3.0	75	25	50	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
28	152-06†	1.4	100	0	6.0	3.0	85	25	60	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
29	152-06SPC†	1.4	100	0	6.0	3.0	85	25	60	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
30	152-07	1.4	100	0	6.0	3.0	95	25	70	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
31	152-08†	1.4	100	0	6.0	3.0	105	25	80	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
32	152-08SPC†	1.4	100	0	6.0	3.0	105	25	80	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
33	152-09	1.4	100	0	6.0	3.0	115	25	90	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
34	152-10†	1.4	100	0	6.0	3.0	125	25	100	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
35	152-10SPC†	1.4	100	0	6.0	3.0	125	25	100	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
36	152-12†	1.4	100	0	6.0	3.0	145	25	120	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
37	152-12SPC†	1.4	100	0	6.0	3.0	145	25	120	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
38	152-14†	1.4	100	0	6.0	3.0	165	25	140	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
39	152-14SPC†	1.4	100	0	6.0	3.0	165	25	140	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
40	152-16†	1.4	100	0	6.0	3.0	185	25	160	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
41	152-16SPC†	1.4	100	0	6.0	3.0	185	25	160	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
42	152-18†	1.4	100	0	6.0	3.0	205	25	180	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
43	152-18SPC†	1.4	100	0	6.0	3.0	205	25	180	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
44	152-20†	1.4	100	0	6.0	3.0	225	25	200	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
45	152-20SPC†	1.4	100	0	6.0	3.0	225	25	200	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
46	152-22†	1.4	100	0	6.0	3.0	245	25	220	10m#	4.0	1.5	18	∅		500k\$	833m	7.0u	A	T1	B		
47	152-22SPC†	1.4	100	0	6.0	3.0	245	25	220	10m#	4.0	1.5	37	∅			830m	7.0u	A	T1	B		
48	152-26SPC†	1.4	100	0	6.0	3.0	285	25	260	10m#	4.0	1.5	37	∅			830m	7.0u	F	T1	B		
49	152-28SPC†	1.4	100	0	6.0	3.0	305	25	280	10m#	4.0	1.5	37	∅			830m	7.0u	F	T1	B		
50	1776-0440†	1.4	150	0	7.5	15	40	7.0	40	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	E	EM	T063	A	
51	1776-0460†	1.4	150	0	7.5	15	40	7.0	40	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	E	EM	T063	A	
52	1776-0640†	1.4	150	0	7.5	15	60	7.0	60	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
53	1776-0660†	1.4	150	0	7.5	15	60	7.0	60	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
54	1776-0840†	1.4	150	0	7.5	15	60	7.0	80	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
55	1776-0860†	1.4	150	0	7.5	15	60	7.0	80	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
56	1776-1040†	1.4	150	0	7.5	15	60	7.0	100	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
57	1776-1060†	1.4	150	0	7.5	15	60	7.0	100	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
58	1776-1240†	1.4	150	0	7.5	15	60	7.0	120	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
59	1776-1260†	1.4	150	0	7.5	15	60	7.0	120	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
60	1776-1440†	1.4	150	0	7.5	15	60	7.0	140	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
61	1776-1460†	1.4	150	0	7.5	15	60	7.0	140	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
62	1776-1640†	1.4	150	0	7.5	15	60	7.0	160	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
63	1776-1660†	1.4	150	0	7.5	15	60	7.0	160	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
64	1776-1840†	1.4	150	0	7.5	15	60	7.0	180	2.0m#	3.0	4.0	15	15		20M\$Δ	37m	500n	EM	EM	T063	A	
65	1776-1860†	1.4	150	0	7.5	15	60	7.0	180	2.0m#	3.0	4.0	15	15		20M\$Δ	25m	600n	EM	EM	T063	A	
66#	BUX20†	1.4	250	0	5.0	10	160	7.0	125	5.0mΔ	2.0	2.0	20	20		8.0M\$Δ	30m	1.5u	DM	DM	T03	C	
67#	BUX21†	1.4	250	0	5.0	10	160	7.0	200	5.0mΔ	2.0	2.0	12	20	60	8.0M\$Δ	50m	1.5u	DM	DM	T03	C	
68#	BUX22†	1.4	250	0	5.0	10	300	7.0	250	5.0mΔ	4.0	1.0	20	20	60	8.0M\$Δ	100m	1.5u	DM	DM	T03	C	
69#	BUX23†	1.4	250	0	5.0	10	400	7.0	325	5.0mΔ</													

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR & (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	T A E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. Icbo @ 25°C (A)	hFE		f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	C O D E
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)		BIAS							
												Vcb (V)	Vc (A)						
1	2N2227	2.0	150	30	10	1.0	100	150	100	20m#	6.0	9.0	100	500	7.0kΔ	380m		T1	A0
2	2N2228	2.0	150	30	10	1.0	150	150	150	20m#	6.0	9.0	100	500	7.0kΔ	380m		T1	A0
3	2N2229	2.0	150	30	10	1.0	200	200	200	20m#	6.0	9.0	100	500	7.0kΔ	380m		T1	A0
4	2N2230	2.0	150	30	10	1.0	50	50	50	20m#	6.0	9.0	350		4.0kΔ	380m		T1	A0
5	2N2231	2.0	150	30	10	1.0	100	100	100	20m#	6.0	9.0	350		4.0kΔ	380m		T1	A0
6	2N2232	2.0	150	30	10	1.0	150	150	150	20m#	6.0	9.0	350		4.0kΔ	380m		T1	A0
7	2N2233	2.0	150	30	10	1.0	200	200	200	20m#	6.0	9.0	350		4.0kΔ	380m		T1	A0
8	2N2739	2.0	200	30	20	7.5	50	50	50	15m#	4.0	10	10			150m	6.0u0	T1	A0
9	2N2740	2.0	200	30	20	7.5	100	100	100	15m#	4.0	10	10			150m	6.0u0	T1	A0
10	2N2741	2.0	200	30	20	7.5	150	150	150	15m#	4.0	10	10			150m	6.0u0	T1	A0
11	2N2742	2.0	200	30	20	7.5	200	200	200	15m#	4.0	10	10			150m	6.0u0	T1	A0
12	2N2743	2.0	200	30	20	7.5	250	250	250	15m#	4.0	10	10			150m	6.0u0	T1	A0
13	2N2744	2.0	200	30	20	7.5	300	300	300	15m#	4.0	10	10			150m	6.0u0	T1	A0
14	2N2745	2.0	200	30	20	7.5	50	50	50	15m#	4.0	15	10			100m	6.0u0	T1	A0
15	2N2746	2.0	200	30	20	7.5	100	100	100	15m#	4.0	15	10			100m	6.0u0	T1	A0
16	2N2747	2.0	200	30	20	7.5	150	150	150	15m#	4.0	15	10			100m	6.0u0	T1	A0
17	2N2748	2.0	200	30	20	7.5	200	200	200	15m#	4.0	15	10			100m	6.0u0	T1	A0
18	2N2749	2.0	200	30	20	7.5	250	250	250	15m#	4.0	15	10			100m	6.0u0	T1	A0
19	2N2750	2.0	200	30	20	7.5	300	300	300	15m#	4.0	15	10			100m	6.0u0	T1	A0
20	2N2751	2.0	200	30	20	7.5	50	50	50	15m#	4.0	20	10			75m	7.0u0	T1	A0
21	2N2752	2.0	200	30	20	7.5	100	100	100	15m#	4.0	20	10			75m	7.0u0	T1	A0
22	2N2753	2.0	200	30	20	7.5	150	150	150	15m#	4.0	20	10			75m	7.0u0	T1	A0
23	2N2754	2.0	200	30	20	7.5	200	200	200	15m#	4.0	20	10			75m	7.0u0	T1	A0
24	2N2755	2.0	200	30	20	7.5	250	250	250	15m#	4.0	20	10			75m	7.0u0	T1	A0
25	2N2756	2.0	200	30	20	7.5	300	300	300	15m#	4.0	20	10			75m	7.0u0	T1	A0
26	2N2757	2.0	200	30	20	7.5	50	50	50	15m#	4.0	10	10			150m	6.0u0	T33	A0
27	2N2758	2.0	200	30	20	7.5	100	100	100	15m#	4.0	10	10			150m	6.0u0	T33	A0
28	2N2759	2.0	200	30	20	7.5	150	150	150	15m#	4.0	10	10			150m	6.0u0	T33	A0
29	2N2760	2.0	200	30	20	7.5	200	200	200	15m#	4.0	10	10			150m	6.0u0	T33	A0
30	2N2761	2.0	200	30	20	7.5	250	250	250	15m#	4.0	10	10			150m	6.0u0	T33	A0
31	2N2762	2.0	200	30	20	7.5	300	300	300	15m#	4.0	10	10			150m	6.0u0	T33	A0
32	2N2763	2.0	200	30	20	7.5	50	50	50	15m#	4.0	15	10			100m	6.0u0	T33	A0
33	2N2764	2.0	200	30	20	7.5	100	100	100	15m#	4.0	15	10			100m	6.0u0	T33	A0
34	2N2765	2.0	200	30	20	7.5	150	150	150	15m#	4.0	15	10			100m	6.0u0	T33	A0
35	2N2766	2.0	200	30	20	7.5	200	200	200	15m#	4.0	15	10			100m	6.0u0	T33	A0
36	2N2767	2.0	200	30	20	7.5	250	250	250	15m#	4.0	15	10			100m	6.0u0	T33	A0
37	2N2768	2.0	200	30	20	7.5	300	300	300	15m#	4.0	15	10			100m	6.0u0	T33	A0
38	2N2769	2.0	200	30	20	7.5	50	50	50	15m#	4.0	20	10			75m	7.0u0	T33	A0
39	2N2770	2.0	200	30	20	7.5	100	100	100	15m#	4.0	20	10			75m	7.0u0	T33	A0
40	2N2771	2.0	200	30	20	7.5	150	150	150	15m#	4.0	20	10			75m	7.0u0	T33	A0
41	2N2772	2.0	200	30	20	7.5	200	200	200	15m#	4.0	20	10			75m	7.0u0	T33	A0
42	2N2773	2.0	200	30	20	7.5	250	250	250	15m#	4.0	20	10			75m	7.0u0	T33	A0
43	2N2774	2.0	200	30	20	7.5	300	300	300	15m#	4.0	20	10			75m	7.0u0	T33	A0
44	2N2775	2.0	200	30	20	7.5	50	50	50	15m#	4.0	25	10			60m	8.0u0	T33	A0
45	2N2776	2.0	200	30	20	7.5	100	100	100	15m#	4.0	25	10			60m	8.0u0	T33	A0
46	2N2777	2.0	200	30	20	7.5	150	150	150	15m#	4.0	25	10			60m	8.0u0	T33	A0
47	2N2778	2.0	200	30	20	7.5	200	200	200	15m#	4.0	25	10			60m	8.0u0	T33	A0
48	2N2779	2.0	200	30	20	7.5	250	250	250	15m#	4.0	25	10			60m	8.0u0	T33	A0
49	2N2780	2.0	200	30	20	7.5	300	300	300	15m#	4.0	25	10			60m	8.0u0	T33	A0
50	2N3149	2.0	300	30	70	15	80	80	80	2.0m#	3.0	50	10	#	100kΔ	30m	10u0	D	T49
51	2N3150	2.0	300	30	70	15	100	100	100	2.0m#	3.0	50	10	#	100kΔ	30m	10u0	D	T49
52	2N3151	2.0	300	30	70	15	150	150	150	2.0m#	3.0	50	10	#	100kΔ	30m	10u0	D	T49
53	2N3470	2.0	150	30	10	1.0	50	50	50	20m#	6.0	9.0	100	500	7.0kΔ	390m	10u0	D	T33
54	2N3471	2.0	150	30	10	1.0	100	100	100	20m#	6.0	9.0	100	500	7.0kΔ	390m	10u0	D	T33
55	2N3472	2.0	150	30	10	1.0	150	150	150	20m#	6.0	9.0	100	500	7.0kΔ	390m	10u0	D	T33
56	2N3473	2.0	150	30	10	1.0	200	200	200	20m#	6.0	9.0	100	500	7.0kΔ	390m	10u0	D	T33
57	2N3474	2.0	150	30	10	1.0	50	50	50	20m#	6.0	9.0	350		4.0kΔ	390m	10u0	D	T33
58	2N3475	2.0	150	30	10	1.0	100	100	100	20m#	6.0	9.0	350		4.0kΔ	390m	10u0	D	T33
59	2N3476	2.0	150	30	10	1.0	150	150	150	20m#	6.0	9.0	350		4.0kΔ	390m	10u0	D	T33
60	2N3477	2.0	150	30	10	1.0	200	200	200	20m#	6.0	9.0	350		4.0kΔ	390m	10u0	D	T33
61	2N3846	2.0	4.0	30	20	10	300	300	300	2.0m#	3.0	5.0	40	200	10mΔ	80m	4.0u0	D	T063
62	JAN2N3846†	2.0	4.0	30	20	10	300	300	300	2.0m#	3.0	5.0	40	200	10mΔ	80m	4.0u0	D	T063
63	2N3847	2.0	4.0	30	20	10	400	400	400	2.0m#	3.0	5.0	40	200	10mΔ	80m	4.0u0	D	T063
64	JAN2N3847†	2.0	4.0	30	20	10	400	400	400	2.0m#	3.0	5.0	40	200	10mΔ	80m	4.0u0	D	T063
65	2N3848	2.0	4.0	30	20	10	300	300	300	2.0m#	3.0	5.0	40	200	10mΔ	80m	4.0u0	D	T063
66	2N3849	2.0	4.0	30	20	10	400	400	400	2.0m#	3.0	5.0	40	200	10mΔ	80m	4.0u0	D	T063
67	2N4865	2.0	350	30	90	15	100	80	80	1.0u0	5.0	70	10	40	10mΔ	2.0u0	PL	T69	
68	JAN2N4865†	2.0	350	30	90	15	100	80	80	1.0u0	5.0	70	10	40	10mΔ	2.0u0	PL	T69	
69	2N4866	2.0	350	30	90	15	140	80	120	1.0u0	5.0	70	10	40	10mΔ	2.0u0	PL	T69	
70	2N4950†	2.0	300	30	70	15	80	80	60	2.0m#	3.0	50	10	#	10mΔ	9.5u0		T69	
71	2N5250†	2.0	350	30	90	15	125	100	100	1.0u0	5.0	70	10	40	10mΔ	2.0u0		T69	
72	JAN2N5250†	2.0	350	30	90	15	125	100	100	1.0u0	5.0	70	10	40	10mΔ	2.0u0		T69	
73	2N5251†	2.0	350	30	90	15	180	100	150	1.0u0	5.0	70	10	40	10mΔ	2.0u0		T69	
74	JAN2N5251†	2.0	350	30	90	15	180	100	150	1.0u0	5.0	70	10	40	10mΔ	2.0u0		T69	
75	2N5489	2.0	300	30	90	15	100	100	100	2.0m#	6.0	40	15	50	10mΔ	2.0u0		T69	
76	2N5757	2.0	150	30	80	15	70	70	70	4.0	80	10	40	#	33m#	15			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR & (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T A X E M P	ABSOLUTE MAX. RATINGS @25°C					MAX. I _{ceo} @ 25°C (A)	BIAS hFE			f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG #	FL C O D E
						I _c (A)	I _b (A)	V _{cb0} (V)	V _{be0} (V)	V _{ce0} (V)		MIN	MAX	MIN							
1	SDT5830	2.0	350	100				250	10	225	10k	5.0	25	30	10M	48m	DPL	T068	CØ		
2	SDT5831	2.0	350	100				275	10	250	10k	5.0	25	30	10M	48m	DPL	T068	CØ		
3	SDT5832	2.0	350	100				300	10	275	10k	5.0	25	30	10M	48m	DPL	T068	CØ		
4	SDT5833	2.0	350	100				325	10	300	10k	5.0	25	30	10M	48m	DPL	T068	CØ		
5	SDT5835	2.0	350	20				525	10	525	10u	10	10	15	10M	40m	DPL	T068	CØ		
6	SDT5836	2.0	350	20				550	10	550	10u	10	10	15	10M	40m	DPL	T068	CØ		
7	SDT5837	2.0	350	20				575	10	575	10u	10	10	15	10M	40m	DPL	T068	CØ		
8	SDT5838	2.0	350	20				600	10	600	10u	10	10	15	10M	40m	DPL	T068	CØ		
9	SDT8920	2.0	350	90			20	80	8.0	60	0.1m	5.0	75	10	20M			T49			
10	SDT8921	2.0	350	90			20	100	8.0	80	0.1m	5.0	75	10	20M			T49			
11	SDT8922	2.0	350	90			20	120	8.0	100	0.1m	5.0	75	10	20M			T49			
12	SDT8923	2.0	350	90			20	140	8.0	120	0.1m	5.0	75	10	20M			T49			
13	SDT8951	2.0	350	60			15	200	8.0		10u	10	40	10	40 #	20M		PL	T49a		
14	SDT8952	2.0	350	60			15	225	8.0		10u	10	40	10	40 #	20M		PL	T49a		
15	SDT8953	2.0	350	60			15	250	8.0		10u	10	40	10	40 #	20M		PL	T49a		
16	SDT8954	2.0	350	60			15	275	8.0		10u	10	40	10	40 #	20M		PL	T49a		
17	SDT8955	2.0	350	60			15	300	8.0		10u	10	40	10	40 #	20M		PL	T49a		
18	SDT9610	2.0	350	50				225	10	200	1.0u	10	40	10	10M	45m	DPL	TO114			
19	SDT9611	2.0	350	50				250	10	225	1.0u	10	40	10	10M	45m	DPL	TO114			
20	SDT9612	2.0	350	50				275	10	250	1.0u	10	40	10	10M	45m	DPL	TO114			
21	SDT9613	2.0	350	50				300	10	275	1.0u	10	40	10	10M	45m	DPL	TO114			
22	SDT9614	2.0	350	50				325	10	300	1.0u	10	40	10	10M	45m	DPL	TO114			
23	SDT9650	2.0	350	100				80	10	60	1.0u	5.0	70	15	10M	14m	DPL	TO114			
24	SDT9651	2.0	350	100				100	10	80	1.0u	5.0	70	15	10M	14m	DPL	TO114			
25	SDT9652	2.0	350	100				120	10	100	1.0u	5.0	70	15	10M	14m	DPL	TO114			
26	SDT9653	2.0	350	100				140	10	120	1.0u	5.0	70	15	10M	14m	DPL	TO114			
27	SDT9654	2.0	350	100				160	10	140	1.0u	5.0	70	15	10M	14m	DPL	TO114			
28	SDT96901	2.0	200	100				80	10	60	1.0u	5.0	90	5.0			PL	TO114			
29	SDT96902	2.0	200	100				120	10	100	1.0u	5.0	90	5.0			PL	TO114			
30	SDT96903	2.0	200	100				160	10	140	1.0u	5.0	90	5.0			PL	TO114			
31	SDT96904	2.0	200	50			15	225	10	200	1.0u	10	40	8.0	40		PL	TO114			
32	SDT96905	2.0	200	50			15	275	10	250	1.0u	10	40	8.0	40		PL	TO114			
33	SDT96906	2.0	200	50			15	325	10	300	1.0u	10	40	8.0	40		PL	TO114			
34	SPC163-04	2.0	200	20			7.5	55	15	40	30m#	4.0	5.0	15		220m	D	T063			
35	SPC163-06	2.0	200	20			7.5	75	15	60	30m#	4.0	5.0	15		220m	D	T063			
36	SPC163-08	2.0	200	20			7.5	95	15	80	30m#	4.0	5.0	15		220m	D	T063			
37	SPC163-10	2.0	200	20			7.5	115	15	100	30m#	4.0	5.0	15		220m	D	T063			
38	SPC163-12	2.0	200	20			7.5	135	15	120	30m#	4.0	5.0	15		220m	D	T063			
39	SPC163-14	2.0	200	20			7.5	155	15	140	30m#	4.0	5.0	15		220m	D	T063			
40	SPC163-16	2.0	200	20			7.5	175	15	160	30m#	4.0	5.0	15		220m	D	T063			
41	SPC163-18	2.0	200	20			7.5	195	15	180	30m#	4.0	5.0	15		220m	D	T063			
42	SPC163-20	2.0	200	20			7.5	215	15	200	30m#	4.0	5.0	15		220m	D	T063			
43	SPC163-22	2.0	200	20			7.5	235	15	220	30m#	4.0	5.0	15		220m	D	T063			
44	SPC163-24	2.0	200	20			7.5	255	15	240	30m#	4.0	5.0	15		220m	D	T063			
45	SPC163-26	2.0	200	20			7.5	275	15	260	30m#	4.0	5.0	15		220m	D	T063			
46	SPC163-28	2.0	200	20			7.5	295	15	280	30m#	4.0	5.0	15		220m	D	T063			
47	SPC163-30	2.0	200	20			7.5	315	15	300	30m#	4.0	5.0	15		220m	D	T063			
48	SPC164-04	2.0	200	20			7.5	55	15	40	30m#	4.0	5.0	25		50m	D	T063			
49	SPC164-06	2.0	200	20			7.5	75	15	60	30m#	4.0	5.0	25		50m	D	T063			
50	SPC164-08	2.0	200	20			7.5	95	15	80	30m#	4.0	5.0	25		50m	D	T063			
51	SPC164-10	2.0	200	20			7.5	115	15	100	30m#	4.0	5.0	25		50m	D	T063			
52	SPC164-12	2.0	200	20			7.5	135	15	120	30m#	4.0	5.0	25		50m	D	T063			
53	SPC164-14	2.0	200	20			7.5	155	15	140	30m#	4.0	5.0	25		50m	D	T063			
54	SPC164-16	2.0	200	20			7.5	175	15	160	30m#	4.0	5.0	25		50m	D	T063			
55	SPC164-18	2.0	200	20			7.5	195	15	180	30m#	4.0	5.0	25		50m	D	T063			
56	SPC164-20	2.0	200	20			7.5	215	15	200	30m#	4.0	5.0	25		50m	D	T063			
57	ST14010	2.0	200	80			10	150	12	100	10u	5.0	80	10	10M	30m	PE	TO114			
58	ST14011	2.0	200	80				100	12	60	0.1m	5.0	20	40	200	10M	PE	TO114			
59	ST14012	2.0	200	80				125	12	80	0.1m	5.0	20	40	200	10M	PE	TO114			
60	ST14013	2.0	200	80				150	12	100	0.1m	5.0	20	40	200	10M	PE	TO114			
61	ST14026	2.0	200	80				125	10	80	100u	10	30	30	120	10M	38m	2.0u	PE	TO114	
62	ST14027	2.0	200	80				145	10	100	100u	10	30	30	120	10M	38m	2.0u	PE	TO114	
63	ST14028	2.0	200	80				170	10	120	100u	10	30	30	120	10M	38m	2.0u	PE	TO114	
64	ST14060	2.0	200	80				100	12	60	10u	5.0	80	10	10M	30m	PE	TO114			
65	ST14080	2.0	200	80			10	125	12	80	10u	5.0	80	10	10M	30m	PE	TO114			
66	STC2103	2.0	300	65			15	80	10	80	6.0	45	10		50m	D	T49				
67	STC2104	2.0	300	65			15	100	10	100	6.0	45	10		50m	D	T49				
68	STC2105	2.0	300	65			15	150	10	150	6.0	45	10		50m	D	T49				
69	STC2106	2.0	300	60				80	10	80	6.0	40	10		50m	D	T49				
70	STC2107	2.0	300	60				100	10	100	6.0	40	10		50m	D	T49				
71	STC2108	2.0	300	60				150	10	150	6.0	40	10		50m	D	T49				
72	STC2180	2.0	300	75			15	60	6.0	40	5.0m#	5.0	50	10	20M	30m	600n	EMA	TO114		
73	STC2181	2.0	300	75			15	100	6.0	60	5.0m#	5.0	50	10	20M	30m	600n	EMA	TO114		
74	STC2182	2.0	300	75			15	160	6.0	140	5.0m#	5.0	50	10	20M	30m	600n	EMA	TO114		
75	STC2183	2.0	300	100			15	250	6.0	200	5.0m#	5.0	50	10	20M	30m	600n	EMA	TO114		
76	STC2184	2.0	300	100			15	100	6.0	40	5.0m#	5.0	75	10	20M	20m	600n	EMA	TO114		
77	STC2185	2.0	300	100			15	160	6.0	60	5.0m#	5.0	75	10	20M	20m	600n	EMA	TO114		
78	STC2186	2.0	300	100			15	160	6.0	140	5.0m#	5.0	75	10	20M	20m	600n	EMA	TO114		
79	STC2187	2.0	300	100			15	250	6.0	200	5.0m#	5.0	100	10	20M	20m	600n	EMA	TO114		
80	STC2188	2.0	300	100			15	80	6.0	40	5.0m#	5.0	100	10	20M	15m	600n	EMA	TO114		
81	STC2189	2.0	300	100			15	100	6.0	60	5.0m#	5.0	100								

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @25°C					MAX. Vcb @ 25°C (V)	hFE		fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	C O D E	
						Ic	Ib	BVcbo	BVebo	BVceo		MIN	MAX							
						(A)	(A)	(V)	(V)	(V)		(A)	(A)							
1	1401-0415†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
2	1401-0420†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
3	1401-0425†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
4	1401-0615†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
5	1401-0625†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
6	1401-0815†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
7	1401-0820†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
8	1401-0825†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
9	1401-1015†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
10	1401-1020†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
11	1401-1025†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
12	1401-1215†	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14a	C	
13#	BDY10†	5.0	150	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	4.0u	D	T03	C∅	
14#	BDY11†	5.0	150	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	4.0u	D	T03	C∅	
15#	TR250B0815	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
16#	TR250B0820	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
17#	TR250B0825	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
18#	TR250B1015	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
19#	TR250B1020	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
20#	TR250B1025	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
21#	TR250B1215	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
22#	TR250B1220	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
23#	TR250B1415	5.0	625	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	#	500kΔ	5.0u∅	D	T14b	C	
24#	2SD223†	12	10	∅	∅	∅	∅	∅	∅	∅	∅	∅	20	#	8.0M†	300n	D	F43	A∅	
25	TRL2015	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
26	TRL2255S	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
27	TRL2505	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
28	TRL2505S	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
29	TRL2755S	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
30	TRL3015	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
31	TRL3015S	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
32	TRL3505	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
33	TRL3515S	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
34	TRL4015	13	2.0	∅	∅	∅	∅	∅	∅	∅	∅	∅	15	35	∅	20MΔ	400n	DM	F8	
35#	BLY36†	109	12	∅	∅	∅	∅	∅	∅	∅	∅	∅	10	60	∅	450M\$		DM	T060	A∅

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E
								Vcb (V)	Ic (A)	hFE								
1#	2SC1374H	600M\$Δ	7.0n	6.0n	10n	6.0n	300m	1.0 ∅	70m∅	30 Δ	11	3.5p∅	N-PE	Si	175J	TO18	A	
2	2N4858A	250M\$Δ	8.0n	8.0n∅		8.0n∅	1.8 ∅				60 \$	10p\$	N∅	Si	200S	TO18	DB	
3	2N4861A	8.0n	8.0n	8.0n∅		8.0n∅	1.8 ∅				60 \$	10p\$	N∅	Si	200S	TO18	DB	
4	2N5639		8.0n	10n		20n	310m					10p\$	N∅	Si	150S	TO92	DD	
5	2N5654		8.0n	10n		20n	310m					10p\$	N∅	Si	150S	TO92	DD	
6	2N2059	50M\$Δ	8.0n∅			25n∅	60	50 ∅	50m	20 Δ	20		N∅	Si	100S	TO1	A	
7	2N2258	250M\$Δ	8.0n∅			7.0n∅	150m	1.0 ∅	10m	30		8.0p∅	P-ME	Ge	100J	TO1	A	
8	2N2259	250M\$Δ	8.0n∅			7.0n∅	150m	1.0 ∅	10m	50		8.0p∅	P-ME	Ge	100J	TO1	A	
9#	2SC131	350M\$	8.0n∅		20n∅	20n∅	350m	1.0 ∅	10m∅	60	7.0	4.0p	N-PE	Si	175J	TO18		
10#	2SC132	350M\$	8.0n∅		20n∅	20n∅	350m	1.0 ∅	10m∅	60	7.0	4.0p	N-PE	Si	175J	TO18		
11#	2SC133	350M\$	8.0n∅		20n∅	20n∅	350m	1.0 ∅	10m∅	60	8.0	4.0p	N-PE	Si	175J	TO18		
12#	2SC137	350M\$	8.0n∅		20n∅	30n∅	350m	1.0 ∅	10m∅	50	7.0	4.0p	N-PE	Si	175J	TO18		
13#	MEF4856		9.0n∅			25n∅	360m				25 \$	18p\$∅	N∅	Si	200S	TO106	DB	
14#	MEF4859		9.0n∅			25n∅	360m				25 \$	18p\$∅	N∅	Si	200S	TO106	DB	
15#	BSY38	350M\$	9.0n∅			25n∅	300m	350m∅	10m∅	60 ∅	6.0	5.0p	N-PE	Si	175J	TO18	∅	
16#	BSY39	350M\$	9.0n∅			25n∅	300m	350m∅	10m∅	120 ∅	6.0	5.0p	N-PE	Si	175J	TO18	∅	
17#	PE9001	400M\$Δ	9.0n∅			15n∅	250m	5.0 ∅	10m	340 ∅	25	4.0p∅	N-PE	Si	125S	R110c	A	
18#	PE9002	400M\$Δ	9.0n∅			15n∅	250m	5.0 ∅	10m	340 ∅	25	4.0p∅	N-PE	Si	125S	R110c	A	
19	2N2784	1.0G\$Δ	9.0n∅		5.0n	9.0n∅	500m∅	1.0 ∅	30m	20 Δ	86	3.0p∅	N	Si	200J	TO18	A∅	
20	2N2784/46	1000M\$Δ	9.0n∅		5.0n	9.0n∅	400m	500m∅	10m∅	40 Δ	87	3.0p∅	N-PE	Si	200J	TO46		
21	2N3633	1300M\$Δ	9.0n∅		5.0n	9.0n∅	300m	500m∅	10m∅	150 ∅	70	2.5p∅	N-PE	Si	200J	TO18	A∅	
22	2N3970		10n	10n	30n∅		1.8				30 \$		N	Si	200S	TO18	DB∅	
23	JAN2N4091		10n			40n∅	360m	1.8 ∅				16p\$∅	N-∅	Si	175A	TO18	DB∅	
24	2N4091A		10n	15n		40n∅	360m	1.8 ∅			30 \$	16p\$∅	N∅	Si	200S	TO18	DB∅	
25	2N4858		10n	10n	100n∅		360m				60 \$	18p\$∅	N∅	Si	200S	TO18	DB∅	
26	2N4861		10n	10n	100n∅		360m				60 \$	18p\$∅	N∅	Si	200S	TO18	DB∅	
27	2N4978		10n	50n	40n∅		1.8 ∅				20 \$	35p\$	N	Si	200S	TO18	DB∅	
28	2N5114		10n		15n	15n	500m				75 \$	25p\$∅	P	Si	200S	TO18	DA∅	
29	JAN2N5114		10n		15n	15n	500m					25p\$∅	P	Si	200J	TO18	DA∅	
30	2N5640		10n	15n	30n	30n	310m					10p\$	N∅	Si	150S	TO92	DD	
31#	2SA558		10n∅		90n∅	25n∅	350m	1.0 ∅	10m∅	50	12		P-PE	Si	175J	TO18	A∅	
32#	2SA559		10n∅		90n∅	25n∅	350m	1.0 ∅	10m∅	50	12		P-PE	Si	175J	TO18	A∅	
33#	2SA559A		10n∅		90n∅	25n∅	350m	1.0 ∅	10m∅	50	12		P-PE	Si	175J	TO18	A∅	
34#	2SC565		10n∅		100n∅	25n∅	350m	1.0 ∅	10m∅	45	20		N-PE	Si	175J	TO18	A∅	
35	3N169		10n		15n	15n	800m∅					5.0p\$	N	Si	200S	TO72	DR∅	
36	3N170		10n		15n	15n	800m∅					5.0p\$	N	Si	200S	TO72	DR∅	
37	3N171		10n		15n	800m∅						5.0p\$	N	Si	200S	TO72	DR∅	
38#	BSV80		10n	10n		50n∅	350m				60 \$		N	Si	200J	TO18	DB	
39	E175		10n∅			20n∅	350m				125 \$	40p\$∅	PS∅	Si	125A	R187	DA	
40#	MEF4857		10n∅			50n∅	360m				40 \$	18p\$∅	N∅	Si	200S	TO106	DB	
41#	MEF4860		10n∅			50n∅	360m				40 \$	18p\$∅	N∅	Si	200S	TO106	DB	
42	MFE2006		10n	10n		40n∅	1.8 ∅					16p\$∅	N∅	Si	175J	TO18	DB∅	
43	TIS75		10n	10n∅		100n∅	360m				60 \$		N-PE	Si	120S	R203	DE	
44	U1897E		10n	15n		40n∅	300m				30 \$	16p\$∅	N∅	Si	125J	R97b	DB	
45	VMP1	1.0M	10n∅			10n∅	2.5 ∅	10	400m	270 \$		50p\$	N-MOS\$	Si	150J	TO39	DA\$	
46	VMP2	1.0M	10n∅			10n∅	4.0 ∅	10	400m	270 \$		50p\$	N-MOS\$	Si	150J	TO39	DA\$	
47	VMP11	1.0M	10n∅			10n∅	2.5 ∅	10	400m	270 \$		50p\$	N-MOS\$	Si	150J	TO39	DA\$	
48	VMP12	1.0M	10n∅			10n∅	2.5 ∅	10	400m	270 \$		50p\$	N-MOS\$	Si	150J	TO39	DA\$	
49	VMP21	1.0M	10n∅			10n∅	4.0 ∅	10	400m	270 \$		50p\$	N-MOS\$	Si	150J	TO39	DA\$	
50	VMP22	1.0M	10n∅			10n∅	4.0 ∅	10	400m	270 \$		50p\$	N-MOS\$	Si	150J	TO39	DA\$	
51#	BSY24	90.0M\$	10n∅	9.0n∅	350n∅	25n∅	600m	2.0 ∅	500m∅	20	4.0	35p\$∅	N-PE∅	Si	150A	TO5	∅	
52#	BSY25	140M\$	10n∅	9.0n∅	350n∅	15n∅	600m	2.0 ∅	500m∅	40	25	5.5p	N-PE∅	Si	150A	TO5	∅	
53#	2SA555	200M\$Δ	10n∅		170n∅	25n∅	200m	1.0 ∅	10m	80	8.5	5.5p	P-PE	Si	150A	R195d	B	
54	2N976	250M\$Δ	10n			100m	100m	50 ∅	40m	25 Δ	8.5	3.0p∅	P-PE	Ge	200S	TO18	A	
55	2N6375	300M\$Δ	10n	6.0n	35n	10n	2.9 ∅	1.0 ∅	500m∅	30 Δ	2.5	10p∅	N	Si	200S	R169	A∅	
56	2N6376	300M\$Δ	10n	6.0n	35n	10n	7.0 ∅	1.0 ∅	10m	60 Δ	2.5	10p∅	N	Si	200S	R169	A∅	
57	2N4420	300M\$Δ	10n	8.0n	15n	10n	360m	1.0 ∅	100m∅	25 Δ#		5.0p\$∅	N	Si	150S	R203	A	
58#	2SC134	350M\$	10n∅		100n∅	25n∅	350m	1.0 ∅	10m∅	60	3.0	4.0p	N-PE	Si	175J	TO18		
59#	2SC135	350M\$	10n∅		100n∅	25n∅	350m	1.0 ∅	10m∅	60	5.0	4.0p	N-PE	Si	175J	TO18		
60#	2SC136	350M\$	10n∅		100n∅	25n∅	350m	1.0 ∅	10m∅	60	5.0	4.0p	N-PE	Si	175J	TO18		
61	2N977	400M\$Δ	10n		20n	8.0n	150m	30 ∅	40m	50 Δ	2.5	8.0p∅	N	Ge	100S	TO18	A	
62	2N5187	400M\$Δ	10n	8.0n	13n	8.0n	1.0 ∅	40 ∅	30m	25 Δ	2.5	3.5p∅	N	Si	200S	TO52	A∅	
63	2N3511	450M\$Δ	10n	8.0n	12n	8.0n	360m	1.0 ∅	150m∅	15 Δ	2.6	4.0p∅	N	Si	200	TO52	A∅	
64	2N3648	450M\$Δ	10n	8.0n	12n	8.0n	2.0 ∅	1.0 ∅	1.0m∅	40 Δ	2.5	4.0p∅	N	Si	200S	TO46	A∅	
65	2N3320	600M\$Δ	10n	10n	25n	15n	60m	50 ∅	40m	80 Δ		3.0p∅	P	Ge	100S	TO18	A	
66	2N3321	600M\$Δ	10n	10n	25n	15n	60m	50 ∅	40m	80 Δ		3.5p∅	P	Ge	100S	TO18	A	
67	2N3322	600M\$Δ	10n	10n	30n	15n	60m	50 ∅	40m	25 Δ		3.5p∅	P	Ge	100S	TO18	A	
68	2N4873	700M\$Δ	10n	15n	15n	1.2 ∅	1.0 ∅	1.0 ∅	10m	110 #Δ		4.0p∅	N	Si	200J	TO18	A∅	
69	2N555A	1000M\$	10n	4.5n∅	5.0n∅	8.0n∅	150m	500m∅	30m	50			N-ME	Ge	100J	TO18		
70	2N955	1000M\$	11n∅	20n∅	45n∅	50n∅	150m	500m∅	30m	30 Δ	16		N-ME	Ge	100	TO18		
71#	MPS2369K		12n∅		13n	18n∅	1.2 ∅	1.0 ∅	10m	120 #∅	25 #	4.0p∅	N-PL	Si	175A	X167	A	
72#	MPS2369L		12n∅		13n	18n∅	1.2 ∅	1.0 ∅	10m	120 #∅	25 #	4.0p∅	N-PL	Si	175A	X168	A	
73#	MPS2369M		12n∅		13													

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	3	TYPE No.	2	1	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-PNP	M AT	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E
										Vcb (V)	Ic (A)	hFE								
1		2N4257A	500MSΔ	15n	10n	12n	10n	500m	500m	1.0m	15 Δ	15	3.0p	P	Si	125J	R124	A		
2#		BFV27	500MSΔ	15n	8n	10n	20n	150m	50	10m	20 1Δ#	133	3.0p	NPE	Si	200J	S5a	A		
3		MM4257	500MSΔ	15n	10n	15n	10n	1.2	1.0	50m	30 Δ#	15	3.0p	P-AN	Si	200J	TO18	A		
4		2N5055	550MSΔ	15n	6.0n	20n	15n	500m	50	30m	100 #	13	4.5p	N	Si	125J	R124	A		
5		2N709	600MSΔ	15n	10n	30n	15n	500	1.0	30m	15 Δ	100	3.0p	P	Si	200J	TO18	A		
6		2N5056	600MSΔ	15n	10n	30n	15n	1.2	50	30m	100 #	13	4.5p	P	Si	200J	TO18	A		
7#		ME9003	600MSΔ	15n	10n	20n	20n	625m	5.0	1.0m	30 Δ	250	2.0p	N-PE	Si	150J	R110c	A		
8#		ZT709	600MSΔ	15n	6.0n	15n	15n	300m	1.0	30m	45	2.1p	N-PL	Si	200J	TO18	A			
9		2N4207	650MSΔ	15n	10n	15n	10n	300m	3.0	10m	120 #	130	3.0p	P	Si	200J	TO18	A		
10		2N3546	700MSΔ	15n	10n	20n	15n	360m	1.0	10m	120 #	5.0	6.0p	P	Si	200J	TO18	A		
11		2N4208	700MSΔ	15n	10n	20n	10n	300m	3.0	10m	120 #	130	3.0p	P	Si	200J	TO18	A		
12		2N4258	700MSΔ	15n	10n	20n	10n	500m	5.0	1.0m	15 Δ	15	3.0p	P	Si	125J	R110	A		
13		2N4258A	700MSΔ	15n	10n	15n	10n	500m	5.0	1.0m	15 Δ	15	3.0p	P	Si	125J	R124	A		
14		2N4313	700MSΔ	15n	10n	20n	15n	200m	5.0	30m	120 Δ#	15	4.5p	P	Si	125J	R124	A		
15		2N5910	700MSΔ	15n	10n	20n	10n	310m	3.0	10m	30 Δ	100	3.0p	P	Si	135S	TO106	A		
16		MM4258	700MSΔ	15n	10n	20n	10n	1.2	1.0	50m	30 Δ	15	3.0p	P-AN	Si	200J	TO18	A		
17		MMT3546	700MSΔ	15n	10n	20n	15n	225m	1.0	100m	15 #	6.0p	PAN	Si	135J	W6	C			
18#		MA9002	750MSΔ	15n	10n	20n	20n	360m	1.0	10m	30 Δ	4.0p	N-PE	Si	150J	TO18	A			
19#		MA9003	750MSΔ	15n	10n	20n	20n	360m	1.0	10m	25 Δ	4.0p	N-PE	Si	150J	TO18	A			
20		2N709A	800MSΔ	15n	10n	30n	15n	300m	5.0	10m	60	100	3.0p	N-PE	Si	200J	TO18	A		
21		2N5057	800MSΔ	15n	10n	30n	15n	1.2	50	30m	100 #	13	4.5p	P	Si	200J	TO18	A		
22#		MT9002	800MSΔ	15n	10n	20n	20n	100m	1.0	10m	30 1Δ	4.0p	N-PE	Si	150J	X173	B			
23#		MT9003	800MSΔ	15n	10n	20n	20n	100m	5.0	10m	25 1Δ	4.0p	N-PE	Si	150J	X173	B			
24		2N4209	850MSΔ	15n	10n	20n	10n	300m	3.0	10m	120 #	150	3.0p	P	Si	200J	TO18	A		
25		2N5771	850MSΔ	15n	10n	20n	10n	1.0	300m	15m	50 Δ	150	3.0p	P	Si	150J	T092	A		
26		2N4872	900MSΔ	15n	10n	20n	10n	700m	3.0	10m	50 #	130	3.0p	P	Si	200J	TO18	A		
27		2N709A46	1.0G	15n	10n	20n	15n	400m	5.0	10m	60	100	3.0p	NPE	Si	200J	TO46	A		
28		2N2456	1000MSΔ	15n	65n	18n	15n	150m	4.0	30m	40 Δ	19	3.0p	P	Ge	100S	TO18	A		
29		JAN2N3013	1.2G	15n	25n	18n	25n	1.2	1.0	30m	15 Δ	5.0p	N	Si	200J	T052	A			
30		2N709/46	1280M	15n	15n	40m	15n	400m	5.0	10m	55	100	3.0p	N-PL	Si	200J	TO46	A		
31		MMCM2222	200MSΔ	16n	16n	160n	200m	200m	1.0	10m	75 Δ	3.5p	N-AN	Si	200J	W10	C			
32#		BFY50	210MSΔ	16n	12n	170n	30n	800m	1.0	10m	20 Δ	1.0	12p	N-PE	Si	200J	TO39	A		
33#		BFY51	230MSΔ	16n	12n	35n	800m	1.0	1.0	10m	30 Δ	1.6	12p	N-PE	Si	200J	TO39	A		
34#		BFY52	250MSΔ	16n	12n	230n	40n	800m	1.0	10m	30 Δ	1.6	12p	N-PE	Si	200J	TO39	A		
35		2N743	280MSΔ	16n	14n	24n	300m	250m	1.0	10m	10 Δ	5.0p	N	Si	200S	TO18	A			
36		2N744	280MSΔ	16n	18n	24n	300m	250m	1.0	10m	20 Δ	5.0p	N	Si	200S	TO18	A			
37		JAN2N744	280MSΔ	16n	18n	45n	300m	250m	1.0	10m	20 Δ	5.0p	N	Si	175J	TO18	A			
38		2N851	280MSΔ	16n	14n	24n	1.2	350m	10m	20 Δ	35	5.0p	N	Si	200S	W5a	B			
39		2N852	280MSΔ	16n	18n	24n	1.2	350m	10m	40 Δ	35	5.0p	N	Si	200S	W5a	B			
40#		BSY17	280MSΔ	16n	24n	400m	350m	10m	60	10m	300 #	2.7p	N-PE	Si	200J	TO18	A			
41#		BSY18	280MSΔ	16n	24n	400m	350m	10m	300	10m	300 #	2.7p	N-PE	Si	200J	TO18	A			
42		EN744	282MSΔ	16n	18n	24n	5.0m	350m	10m	40 #	5.0p	N-DPE	Si	125J	TO106	A				
43		2N3014	350MSΔ	16n	18n	25n	1.2	40	30m	120 #	6.0	5.0p	N	Si	200J	T052	A			
44#		BFV83C	350MSΔ	16n	18n	25n	300m	40	30m	30 #	5.0p	NPE	Si	200J	W5a	B				
45		EN3014	350MSΔ	16n	25n	200m	40	30m	120 #	6.0	5.0p	N	Si	125J	TO106	A				
46		GET3014	350MSΔ	16n	18n	25n	360m	400m	30m	120 #	18	4.5p	N-PE	Si	125J	TO18	A			
47		MMT3014	350MSΔ	16n	18n	25n	225m	400m	30m	200 #	7.3	5.0p	N-AN	Si	135J	W6	D			
48		MPS834	350MSΔ	16n	25n	30n	310m	1.0	10m	25 #	4.0p	N-AN	Si	135J	T092	A				
49		2N834A	500MSΔ	16n	10n	24n	360m	1.0	10m	25 #	25	4.0p	N	Si	200J	TO18	A			
50		2N6001	700MSΔ	17n	6.0n	170n	60n	800m	1.0	10m	100 Δ	10	8.0p	P	Si	125J	R203a	A		
51		2N6005	700MSΔ	17n	6.0n	170n	60n	800m	1.0	10m	100 Δ	10	8.0p	P	Si	125J	R203a	A		
52		2N6003	800MSΔ	17n	6.0n	200n	100n	800m	1.0	10m	250 Δ	10	8.0p	P	Si	125J	R203a	A		
53		2N6007	800MSΔ	17n	6.0n	200n	100n	800m	1.0	10m	250 Δ	10	8.0p	P	Si	125J	R203a	A		
54		JAN2N501A	800MSΔ	18n	12n	10n	60m	500m	50m	30 Δ	5.0	3.0p	P	Ge	100S	R139	A			
55		2N982	18n	18n	18n	60m	50	10m	50	40 Δ	3.6	2.5p	PA	Ge	100S	TO18	A			
56		2N983	18n	18n	18n	60m	50	10m	40	40 Δ	4.0	2.5p	PA	Ge	100S	TO18	A			
57		2N2168	18n	18n	18n	60m	50	10m	50	50 Δ	3.6	2.5p	PA	Ge	100S	T09	A			
58		2N2169	18n	18n	18n	60m	50	10m	40	40 Δ	4.0	2.5p	PA	Ge	100S	T09	A			
59		2N4256	18n	600	140n	3.5n	200m	200m	50m	20 Δ	2.0m	5.0p	N	Si	125S	T098	B			
60		MMT75	18n	25n	15n	225m	1.0	10m	400	10m	400	5.0p	N-AN	Si	135J	W6	C			
61		2N501	90MSΔ	18n	12n	10n	60m	500m	10m	20 Δ	5.0p	P-DA	Ge	100S	T01	A				
62		2N501A	90MSΔ	18n	12n	10n	60m	500m	10m	30 Δ	3.0p	P-DA	Ge	100J	T01	A				
63		JAN2N1500	100MSΔ	18n	12n	10n	60m	500m	50m	14 Δ	4.0	3.0p	P	Ge	100J	T09	A			
64		2N783	200MSΔ	18n	10n	30n	1.0	1.0	10m	80	25	3.5p	N	Si	175J	TO18	A			
65		2N5861	200MSΔ	18n	8.0n	35n	5.0	1.0	500m	25 Δ	1.0	7.0p	N	Si	200J	TO39	A			
66		2N5860	250MSΔ	18n	8.0n	35n	5.0	1.0	1.0	15 Δ	700m	7.0p	N	Si	200J	TO39	A			
67#		MPS5134	250MSΔ	18n	18n	18n	625m	1.0	10m	20 #	25 #	4.0p	N	Si	150S	T092	A			
68		2N779	320MSΔ	18n	18n	18n	60m	500m	10m	200	440m	2.5p	P	Si	100S	TO18	A			
69		CS4021	350MSΔ	18n	18n	28n	200m	50	100m	55 #	3.3p	N-E	Si	125J	R97a	A				
70		GET3646	350MSΔ	18n	18n	28n	360m	400m	30m	120	80	4.5p	N-PE	Si	125J	TO18	A			
71		2N3576	400MSΔ	18n	12n	30n	360m	50	10m	120	4.5p	P	Si	200S	TO72	A				
72#		BFV81B	400MSΔ	18n	12n	30n	300m	50	10m	20 Δ	4.5p	PPE	Si	200S	W5a	B				
73		2N779A	450MSΔ	18n	50n	18n	60m	500m	50m	85	12	1.4p	P-MD	Ge	100S	TO18	A			
74		2N846A	450MSΔ	18n	50n	18n	60m	500m	50m	35	14	1.9p	P-MD	Ge	100S	TO18	A			
75		2N3227	500MSΔ	18n	5.0n	13n	15n	1.2	1.0	10m	300 #	4.0p	N	Si	200J	TO18	A			
76		2N3508	500MSΔ	18n	5.0n	13n	15n	400m	1.0	10m	120 #	14	4.0p	N	Si	200S	TO46	A		
77		2N3509	500MSΔ	18n	5.0n	13n	15n	400m	1.0	10m	300 #	25	4.0p	N	Si	200S	TO46	A		
78		2N5272	500MSΔ	18n	5.0n	13n	15n	360m	1.0	100m	30 Δ#	4.5p	N	Si	200S	TO18	A			
79		2N984	20n	20n	20n	60m	50	10m	20	40 Δ	5.0	3.0p	PA	Ge	100S	TO18	A			
80		2N2097	20n	50n	40n	750m	1.0	200m	30	2.5	20p	PA	Ge	100S	T031	A				
81		2N2100	20n	50n	40n	750m	1.0	200m	30	2.5	20p	PA	Ge	100S	T031	A				
82		2N2100A	20n	50n</																

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E
								Vcb (V)	Ic (A)	hFE								
1#	BSX75	100MΔ	25nΔ			150nΔ	1.3 *Δ	10	150mΔ	250	Δ	8.0pΔ	N-PE	Si	200J	T018	AΔ	
2	KS6130	120M	25n	30n	100n	40n		5.0	20	15	Δ	200p	N-PE	Si	200J	T03	Δ	
3	KS6124	150M	25n	60n	110n	60n		5.0	5.0	15	Δ	200p	N-PE	Si	200J	T03	Δ	
4	KS6126	150M	25n	50n	130n	50n		5.0	10	15	Δ	200p	N-PE	Si	200J	T03	Δ	
5	PT2635	170MΔ	25nΔ	25n	300n	60n	2.5	28	350mΔ	15	#Δ	30p	N	Si	200J	T05	Δ	
6	PT2670	170MΔ	25nΔ	25n	300n	60n	1.0m	20	350mΔ	20	#Δ	25p	N	Si	200J	T05	Δ	
7	2N919	200MΔ	25nΔ			360m		1.0	10m	60	#Δ	20	N	Si	200J	T018	AΔ	
8	2N920	200MΔ	25nΔ			360m		1.0	10m	120	#Δ	20	N	Si	200J	T018	AΔ	
9	2N4404	200MΔ	25n	15n	175n	35n	5.0	5.0	10m	40	#Δ	7.0pΔ	P	Si	200S	T039	AΔ	
10	2N4405	200MΔ	25n	15n	175n	35n	5.0	5.0	10m	100	#Δ	10pΔ	P	Si	200S	T039	AΔ	
11#	2SA495G	200MΔ	25nΔ			300n		200m	10	240	#Δ	7.0pΔ	P-PE†	Si	125S	R67a	B	
12	D40D1	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
13	D40D2	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
14	D40D3	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
15	D40D4	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
16	D40D5	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
17	D40D7	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
18	D40D8	200MΔ	25nΔ			200n		1.3 #	2.0	1.0	Δ	1.0	N†	Si	150S	B15b	F	
19	2N2218A	250MΔ	25n	10n	225n	60n	3.0	10	10m	35	Δ	2.0 #	N	Si	200J	T05	AΔ	
20	2N2221A	250MΔ	25n	10n	225n	60n	1.8	10	1.0m	25	Δ	2.0 #	N	Si	200J	T018	AΔ	
21	2N2476	250MΔ	25n			25n	45n	600m	40	150m	20	Δ	1.5	N	Si	200J	T05	AΔ
22	2N2477	250MΔ	25n			25n	45n	600m	40	150m	40	Δ	1.3	N	Si	200J	T05	AΔ
23	2N2847	250MΔ	25n			40n	360m	10	150m	140	#Δ	8.0pΔ	N	Si	200J	T018	AΔ	
24	2N2848	250MΔ	25n			40n	800m	10	150m	140	#Δ	8.0pΔ	N	Si	200J	T05	AΔ	
25	2N3678	250MΔ	25n	15n	190n	60n	800m	10	150m	40	#Δ	8.0pΔ	N	Si	200J	T05	AΔ	
26	2N5581	250MΔ	25n	10n	225n	60n	2.0	10	10m	35	Δ	8.0pΔ	N	Si	200S	T046	A	
27	2N5845A	250MΔ	25n	15n	38n	27n	1.5	1.0	500m	35	#	9.0pΔ	N	Si	150J	T092	A	
28#	2SC980AG	250MΔ	25n			400n	30n	200m	1.0	10m	140	#Δ	3.0p	N	Si	125J	R67a	B
29#	2SC980G	250MΔ	25n			400n	30n	200m	1.0	10m	240	#Δ	3.0p	N	Si	125J	R67a	B
30#	BFV85	250MΔ	25n			200n	360m	10	10m	75	Δ	8.0pΔ	NPE	Si	175J	W5a	B	
31#	BFV85A	250MΔ	25n	10n	225n	60n	360m	10	10m	75	Δ	8.0pΔ	N-PE	Si	175J	W5a	B	
32#	BFV85B	250MΔ	25n			175n	360m	10	10m	35	Δ	8.0pΔ	NPE	Si	175J	W5a	B	
33#	BSS79	250MΔ	25n	10n	225n	60n	350n	10	150m	40	Δ	8.0pΔ	N	Si	150S	X156a	A	
34	D2T2218A	250MΔ	25n	10n	225n	60n	400m	10	150m	40	Δ	2.0	150p	N	Si	200S	T077	Δ
35	KS6113	250M	25n	30n	100n	50n		5.0	2.0	15	Δ		N-PE	Si	200J	T060	Δ	
36	MPS2222	250MΔ	25n	10n	225n	60n	1.5	10	100u	35	Δ	2.6 #	NAN	Si	150J	R211	A	
37#	MPS2222K	250MΔ	25n	10n	225n	60n	1.2	10	10m	75	#	2.6 #	NPL	Si	175A	X167	A	
38#	MPS2222L	250MΔ	25n	10n	225n	60n	1.2	10	10m	75	#	2.6 #	NPL	Si	175A	X168	A	
39#	MPS2222M	250MΔ	25n	10n	225n	60n	1.2	10	10m	75	#	2.6 #	NPL	Si	175A	X169	A	
40#	PL4051	250MΔ	25n			150n	220m	10	10m	17	Δ	8.0pΔ	NPE	Si	175S	S6		
41#	PL4052	250MΔ	25n	10n	225n	60n	220m	10	10m	35	Δ	8.0pΔ	N-PE	Si	175S	S6		
42#	PL4053	250MΔ	25n			175n	220m	10	10m	35	Δ	8.0pΔ	NPE	Si	175S	S6		
43#	PL4055	250MΔ	25n			200n	220m	10	10m	75	Δ	8.0pΔ	NPE	Si	175S	S6		
44#	ZT2476	250MΔ	25n			25n	45n	600m	400m	150m	20	Δ	1.5	N-PE	Si	200J	T05	Δ
45#	ZT2477	250MΔ	25n			25n	45n	600m	400m	150m	40	Δ	1.3	N-PE	Si	200J	T05	Δ
46	2N2219A	300MΔ	25n	10n	225n	60n	3.0	10	1.0m	75	Δ	2.0 #	N	Si	200J	T05	AΔ	
47	2N2222A	300MΔ	25n	10n	225n	60n	1.8	10	1.0m	50	Δ	2.0 #	N	Si	200J	T018	AΔ	
48	2N2957	300MΔ	25n	15n	60n	35n	150m	1.0	50m	130		4.0pΔ	P	Ge	100J	T018	A	
49	2N3451	300MΔ	25n	10n	20n	12n	300m	300m	10m	120	Δ	5.5pΔ	P	Si	200J	T018	AΔ	
50	2N5582	300MΔ	25n	10n	225n	60n	2.0	10	10m	75	Δ	8.0pΔ	N	Si	200S	T046	AΔ	
51	40219	300MΔ	25n	10n	225n	60n	360m	1.0	10m	30	Δ	6.0pΔ	N	Si	200	T052	AΔ	
52	A5T2222A	300MΔ	25n	10n	225n	60n	1.2	10	1.0m	50	Δ	8.0pΔ	N	Si	150S	R203	A	
53#	BFV85C	300MΔ	25n	10n	225n	60n	360m	10	10m	50	Δ	8.0pΔ	NPE	Si	175J	W5a	B	
54#	BSS27	300MΔ	25n	10n	225n	40n	800m	1.0	500m	25	Δ	8.0pΔ	N	Si	200J	T039	AΔ	
55#	BSS28	300MΔ	25n			45n	800m	1.0	500m	30	Δ	8.0pΔ	N	Si	200J	T039	AΔ	
56	D2T2219A	300MΔ	25n	10n	225n	60n	400m	10	150m	100	Δ	2.0	N	Si	200S	T077	Δ	
57	KS6104	300M	25n	20n	120n	20n		5.0	500m	15	Δ	25p	N-PE	Si	200J	T039	Δ	
58	MPS2222A	300MΔ	25n	10n	225n	60n	1.5	10	100u	35	Δ	2.0 #	NAN	Si	150J	R211	A	
59#	MPS2222AK	300MΔ	25n	10n	225n	60n	1.2	10	10m	75	#	2.0 #	NPL	Si	175A	X167	A	
60#	MPS2222AL	300MΔ	25n	10n	225n	60n	1.2	10	10m	75	#	2.0 #	NPL	Si	175A	X168	A	
61#	MPS2222AM	300MΔ	25n	10n	225n	60n	1.2	10	10m	75	#	2.0 #	NPL	Si	175A	X169	A	
62#	PL4054	300MΔ	25n	10n	225n	60n	220m	10	10m	75	#	8.0pΔ	N-PE	Si	175S	S6		
63	2N6010	330MΔ	25n	12n	300n	100n	1.0	1.0	10m	100	Δ	5.0	N	Si	150J	R203a	A	
64	2N6014	330MΔ	25n	12n	300n	100n	1.0	1.0	10m	100	Δ	5.0	N	Si	150J	R203a	A	
65	KS6110	350M	25n	25n	120n	50n		5.0	1.0	15	Δ		N-PE	Si	200J	T060	Δ	
66	KS6112	350M	25n	30n	100n	40n		5.0	1.0	15	Δ		N-PE	Si	200J	T060	Δ	
67	2N5186	400MΔ	25n			25n	500m	1.0	10m	25	Δ	30	N	Si	200S	T052	AΔ	
68#	ME6101	400MΔ	25n	10n	225n	60n	600m	10	1.0m	40		3.2	N	Si	150J	R110c	A	
69	2N6012	420MΔ	25n	12n	350n	150n	1.0	1.0	10m	250	Δ	5.0	N	Si	150J	R203a	A	
70	2N6016	420MΔ	25n	12n	350n	150n	1.0	1.0	10m	250	Δ	5.0	N	Si	150J	R203a	A	
71#	ME6102	450MΔ	25n	10n	225n	60n	600m	10	1.0m	60		3.2	N-PE	Si	150J	R110c	A	
72#	2SC1376H	500MΔ	25n	5.0n	12n	40n	300m	1.0	150m	40	Δ	3.3	N	Si	175J	T018	A	
73#	MA0491	500MΔ	25n			35n	360m	1.0	30m	30	Δ	4.0pΔ	P-PE	Si	150J	T018	A	
74#	MA0492	500MΔ	25n			35n	360m	1.0	30m	50	Δ	4.0pΔ	P-PE	Si	150J	T018	A	
75	JAN2N4029	600MΔ	25n	15n	175n	35n	500m	5.0	100m	300	#	1.0 #	P	Si	200J	T018	AΔ	
76	JAN2N4033	600MΔ	25n	15n	175n	35n	800m	5.0	100m	300	#	1.0 #	P	Si	200J	T039	AΔ	
77	JAN2N4405	600MΔ	25n	15n	175n	50n	5.0	5.0	500m	50	#	10pΔ	P	Si	200A	T039	AΔ	
78#	ME0491	750MΔ	25n	25n	175n	35n	500m	1.0	10m	60		15	P-PE	Si	150J	R110c	A	
79#	ME0492	750MΔ	25n	25n	175n	35n	500m	1.0	10m	70		15	P-PE	Si	150J	R110c	A	
80	MM2614	200MΔ	26n			70n	500m	10	150m	120	Δ	3.0	N	Si	200J	T018	A	
81	MM2712	200MΔ	26n			70n	500m	10	150m	300	Δ	3.0	N	Si	200J	T018	A	
82	MM2613	250MΔ	26n			70n	500m	10	150m	120	Δ	3.0	N	Si	200J	T018	A	
83	MM2711	250MΔ	26n			70n	500m	10	150m	300	Δ	3.0	N	Si	200J	T018	A	
84#	BSY26	200MΔ	27n			50n	130n	300m	2.0	50m	60	Δ						

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	3	TYPE No.	2	1	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-NPN N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E	
										V _{cb} (V)	I _e (A)	h _{FE}									
1#		ME9021	300msΔ	30n					625m	2.0	300m	10 Δ	25	6.0p		N-PE	Si	150J	RT10c	A	
2		MPS3639	300msΔ	30n		10n	20n	50n	12n	300m	10m	30 Δ#	16	3.5p		P-E	Si	125J	R196a	A	
3		THC3724	300msΔ	30n		10n	50n	25n		1.0	500m	35 Δ#	750m	12p		N	Si	200J	C17	T	
4		THC3725	300msΔ	30n		10n	50n	25n		1.0	300m	40 Δ#	950m	10p		N	Si	200J	C17	T	
5#		2SC97A	350msΔ	30n			70n	90n	80m	1.0	500m	40 Δ#	1.2	10p		N-PE	Si	175J	T039	A	
6#		BSX88A	350msΔ	30n				70n	360m	1.0	10m	30 Δ#	3.2	3.0p		NPE	Si	200J	TO18	A	
7		MM5262	350msΔ	30n		15n	40n	60n	4.0	1.0	500m	40 Δ#	800m#	7.3p		N-AN	Si	200J	T039	A	
8		2N4423	400msΔ	30n				15n	360m	1.0	30m	150 Δ#		6.0p		N	Si	150S	R203	A	
9#		BSY34	400msΔ	30n				50n	2.6	1.0	100m	42 †	20	4.5p		N-DPE	Si	200J	T039	A	
10		MMT73	400msΔ	30n				30n	225m	1.0	50m	20 Δ#	20	5.0p		P-AN	Si	135J	W6	C	
11		2N2938	500msΔ	30n				30n	1.0	400m	50m	30 Δ#		4.0p		N	Si	200S	TO52	A	
12#		JAN2N3467	500msΔ	30n		10n	60n	30n	5.0	5.0	1.0	40	1.2	25p		P	Si	200S	TO5	A	
13#		JAN2N3468	500msΔ	30n		10n	60n	30n	5.0	5.0	1.0	25	1.2	25p		P	Si	200S	TO5	A	
14		MPS3640	500msΔ	30n		10n	20n	12n	1.0	1.0	50m	20 Δ#	20	3.5p		PAN	Si	150J	R210a	A	
15#		ZT2938	500msΔ	30n		15n	30n	30m	300m	1.0	200m	60 Δ#	8.0	4.0p		N-PE	Si	175J	TO18	A	
16		2N2455	600msΔ	30n		65n		15m	150m	400m	30m	40 Δ	19	3.5p		P	Ge	100S	TO18	A	
17		2N769	900ms	30n				35m	500m	20m	55	Δ	24	1.5p		P-MD	Ge	100J	TO18	A	
18#		2SC1071	33n	33n		12n	27n	300m	1.0	30m	83	Δ	6.8			N-PE	Si	175J	TO18	A	
19		2N994	35n	35n		45n		200m	.25	10m	140	Δ	18	6.0p		P	Ge	150S	TO18	A	
20		2N2096	35n	35n		70n		750m	1.5	400m	15	Δ	3.0	20p		PA	Ge	100S	TO31	A	
21		2N2099	35n	35n		70n		750m	1.5	400m	15	Δ	3.0	20p		PA	Ge	100S	TO9	A	
22		JAN2N5116	35n	35n				50m	60m	500m	50	Δ	1.2	27p		P	Si	200J	TO18	DA	
23#		2SC1150	35n	35n				50n	55n	800m	1.0	Δ	1.2			N-PE	Si	175J	R216	A	
24#		2SC1635	35n	35n				50n	55n	800m	1.0	Δ	1.2			N-PE	Si	175J	R216a	A	
25		3N176	35n	35n		30n	55n	150n	225m	1.0	10m	90 †	15	20p		PMOS	Si	200S	TO72	DR	
26		3N182	35n	35n		35n	160n	180n	300m	1.0	10m	75 †	15	25p		PMOS	Si	200S	TO72	DM	
27#		BSS23	35n	35n				60n	15	100m	75 †	1.0	1.0	10p		N-PE	Si	200J	TO18	A	
28#		BSV69	35n	35n				60n	3.0	1.0	100m	75 †	1.0	10p		N-PE	Si	200J	TO39	A	
29		CM697	35n	35n		35n		400m	400m	1.0	1.0	15	1.5			N-E	Si	200J	R135d	DR	
30		MEM563C	35n	25n			140n	650m	10	2.0m	2.0	Δ	150	6.0p		N*#	Si	125J	TO72	DD	
31		THC3903	35n	35n		175n	50n	50n	350m	1.0	1.0m	35	Δ	20	4.0p		N	Si	200J	C5	T
32		THC3904	35n	35n		200n	50n	50n	350m	1.0	1.0m	70	Δ	20	4.0p		N	Si	200J	C5	T
33#		U306	35n	25n			60n	60n	350m	1.0	1.0m	70	Δ	175	2.7p		P#	Si	150S	TO18	DA
34#		BFS92	40msΔ	35n		20n	500n	65n	5.0	5.0	1.0m	90 †	15	20p		P	Si	200J	TO39	A	
35#		BFS93	40msΔ	35n		20n	500n	65n	5.0	5.0	1.0m	90 †	15	20p		P	Si	200J	TO39	A	
36#		BFS94	40msΔ	35n		20n	500n	65n	5.0	5.0	1.0m	90 †	15	20p		P	Si	200J	TO39	A	
37#		BFS95	40msΔ	35n		20n	500n	65n	5.0	5.0	1.0m	90 †	15	20p		P	Si	200J	TO39	A	
38#		BFV30	140msΔ	35n			150n	150m	5.0	5.0	10m	30 †	30	7.0p		PPE	Si	200J	S5a	P	
39		2N3444	150msΔ	35n		15n	40n	30n	100m	1.0	500m	60 Δ#		12p		N	Si	200S	TO5	A	
40		2N3554	150msΔ	35n		15n	65n	40n	800m	1.0	750m	100 Δ#		25p		N	Si	200S	TO5	A	
41		2N3762A	150msΔ	35n		8.0n	80n	35n	4.0	1.0	10m	35 Δ	1.0	15p		P	Si	200S	TO5	A	
42		2N3763	150msΔ	35n		8.0n	80n	35n	1.0	1.0	150m	40 Δ		15p		P	Si	200S	TO5	A	
43		2N3764A	150msΔ	35n		8.0n	80n	35n	2.0	1.5	1.0	20 Δ	14	15p		P	Si	200S	TO46	A	
44		2N3765	150msΔ	35n		8.0n	80n	35n	500m	1.5	1.0	20 Δ	10	15p		N	Si	200S	TO46	A	
45		2N4969	150msΔ	35n		20n	300n	80n	5.0m	10	10m	30 Δ#		8.0		N	Si	125S	TO106	A	
46#		2SC1781H	150ms	35n		30n	300n	350n	1.0	3.0	10m	80 Δ	2.6	20p		N-PE	Si	175J	TO18	A	
47		KS6118	150m	35n		30n	120n	50n	5.0	5.0	5.0	15	Δ	90p		N-PE	Si	200J	TO3	A	
48		2N3244	175msΔ	35n		15n	140n	45n	5.0	1.0	500m	50 Δ#		25p		P	Si	200J	TO5	A	
49		2N3253	175msΔ	35n		15n	40n	30n	5.0	1.0	375m	75 Δ#		12p		N	Si	200J	TO5	A	
50#		BFV55	175msΔ	35n		15n	50n	30n	150m	1.0	500m	25 Δ#	2.3	12p		NPE	Si	200J	S5a	A	
51		2N3762	180msΔ	35n		8.0n	80n	35n	1.0	1.0	150m	40 Δ	10	15p		P	Si	200S	TO5	A	
52		2N3762S	180msΔ	35n		8.0n	80n	35n	1.0	1.0	150m	40 Δ	10	15p		P	Si	200S	TO5	A	
53		2N3764	180msΔ	35n		8.0n	80n	35n	500m	1.5	1.0	30 Δ	10	15p		P	Si	200S	TO46	A	
54		NS3762	180msΔ	35n		8.0n	80n	35n	1.0	1.5	1.0	30 Δ#		18p		P	Si	200S	TO39	A	
55		NS3763	180msΔ	35n		8.0n	80n	35n	1.0	1.5	1.0	20 Δ#		18p		P	Si	200S	TO39	A	
56		2N3502	200msΔ	35n		25n	70n	50n	700m	10	10m	80 Δ	2.6	8.0p		N	Si	200J	TO5	A	
57		2N3503	200msΔ	35n		25n	70n	50n	700m	10	10m	80 Δ	2.6	8.0p		N	Si	200J	TO5	A	
58		2N3504	200msΔ	35n		25n	70n	50n	400m	10	10m	80 Δ	2.6	8.0p		P	Si	200J	TO18	A	
59		2N3505	200msΔ	35n		25n	70n	50n	400m	10	10m	80 Δ	2.6	8.0p		P	Si	200J	TO18	A	
60		2N3644	200msΔ	35n		25n	70n	50n	700m	10	100m	40 Δ		8.0p		P	Si	125J	R110a	A	
61		2N3645	200msΔ	35n		25n	70n	50n	700m	10	100m	40 Δ		8.0p		P	Si	125J	R110a	A	
62		2N3905	200msΔ	35n		35n	200n	60n	350m	1.0	100m	30 Δ#	2.5m#	4.5p		P	Si	150J	TO82	A	
63		2N5382	200msΔ	35n		35n	200n	60n	360m	1.0	100m	30 Δ		4.5p		P	Si	150J	R27	A	
64		2N5755	200msΔ	35n		15n	100n	40n	600m	10	100m	40 Δ		8.0p		P	Si	200S	TO78	A	
65		2N5796	200msΔ	35n		15n	100n	40n	600m	10	100m	75 Δ		8.0p		P	Si	200S	TO78	A	
66#		2SA876H	200ms	35n		25n	300n	1.0	3.0	3.0	100m	20 Δ#	2.6	20p		PE	Si	175J	TO18	A	
67#		2SA876HA	200ms	35n		25n	300n	1.0	3.0	3.0	100m	20 Δ#	2.6	20p		PE	Si	175J	TO18	A	
68#		2SA876HB	200ms	35n		25n	300n	1.0	3.0	3.0	100m	20 Δ#	2.6	20p		PE	Si	175J	TO18	A	
69#		2SA876HC	200ms	35n		25n	300n	1.0	3.0	3.0	100m	20 Δ#	2.6	20p		PE	Si	175J	TO18	A	
70#		A5T3504	200msΔ	35n		25n	70n	50n	625m	1.0	150m	100 Δ	2.7	8.0p		P	Si	150S	R203	A	
71#		A5T3505	200msΔ	35n		25n	70n	50n	625m	1.0	150m	100 Δ	2.7	8.0p		P	Si	150S	R203	A	
72#		A5T3645	200msΔ	35n		25n	70n	50n	625m	1.0	150m	300 Δ#	5.0	8.0p		P-†	Si	150S	R203e	A	
73#		A5T3645	200msΔ	35n		25n	70n	50n	625m	1.0	150m	300 Δ#	5.0	8.0p		P-†	Si	150S	R203e	A	
74		A5T3905	200msΔ	35n		35n	200n	60n	360m	1.0	1.0m	40 Δ		4.5p		P-PE	Si	150S	R203	A	
75#		A8T3645	200msΔ	35n		25n	70n	50n	625m	1.0	150m	300 Δ#	5.0	8.0p		P-†	Si	150S	R210a	A	
76#		A8T3645	200msΔ	35n		25n	70n	50n	625m												

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	3 TYPE No.	2 fab	1 MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L O A D E
								Vcb (V)	Ic (A)	hFE								
1	2N2906	200MSΔ	40n	10n	80n	30n	400m	10 ∅	10m ∅	20 Δ	8.0pZ		P	Si	200S	TO18	A ∅	
2	2N2906A	200MSΔ	40n	10n	80n	30n	400m	10 ∅	10m ∅	40 Δ	8.0pZ		P	Si	200S	TO18	A ∅	
3	2N2907	200MSΔ	40n	10n	80n	30n	400m	10 ∅	10m ∅	35 Δ	8.0pZ		P	Si	200S	TO18	A ∅	
4	2N2907A	200MSΔ	40n	10n	80n	30n	400m	10 ∅	10m ∅	75 Δ	8.0pZ		P	Si	200S	TO18	A ∅	
5	2N2955	200MSΔ	40n	15n	40n	40n	150m	1.0 ∅	50m ∅	60 Z	4.0pZ	20	P	Ge	100S	TO18	A ∅	
6	2N3485	200MSΔ	40n	10n	80n	30n	2.0 ∅	10 ∅	100u ∅	20 Δ	8.0pZ	3.2	P-FA	Si	200S	TO46	A ∅	
7	2N3485A	200MSΔ	40n	10n	80n	30n	2.0 ∅	10 ∅	100u ∅	40 Δ	8.0pZ	3.2	P-FA	Si	200S	TO46	A ∅	
8	2N3486	200MSΔ	40n	10n	80n	30n	2.0 ∅	10 ∅	100u ∅	35 Δ	8.0pZ	3.2	P-FA	Si	200S	TO46	A ∅	
9	2N3486A	200MSΔ	40n	10n	80n	30n	2.0 ∅	10 ∅	100u ∅	75 Δ	8.0pZ	3.2	P-FA	Si	200S	TO46	A ∅	
10	2N3671	200MSΔ	40n	10n	80n	30n	600m	10 ∅	10m ∅	75 Δ	9.0pZ		P	Si	200S	TO5	A ∅	
11	2N3672	200MSΔ	40n	10n	80n	30n	400m	10 ∅	10m ∅	75 Δ	9.0pZ		P	Si	200S	TO18	A ∅	
12	2N3673	200MSΔ	40n	10n	80n	30n	350m	10 ∅	10m ∅	75 Δ	9.0pZ		P	Si	200S	TO46	A ∅	
13	2N3838	200MSΔ	40n	10n	250n	90n	350m	10 ∅	1.0m ∅	50 Δ	8.0pZ		P	Si	200S	TO89	PB A	
14	2N4142	200MSΔ	40n	10n	80n	30n	300m	10 ∅	150m ∅	120 Z	3.2	8.0pZ	P	Si	125J	R110	A	
15	2N4143	200MSΔ	40n	10n	80n	30n	300m	10 ∅	150m ∅	300 Z	3.2	8.0pZ	P	Si	125J	R110	A	
16	2N4228	200MSΔ	40n	10n	80n	30n	300m	10 ∅	150m ∅	150 Z	3.2	8.0pZ	P	Si	125J	R110	A	
17	2N4854	200MSΔ	40n	20n	280n	70n	600m	10 ∅	1.0m ∅	50 Δ	8pZ		∅	Si	200S	TO78	PA	
18	2N4855	200MSΔ	40n	20n	280n	70n	600m	10 ∅	1.0m ∅	25 Δ	8pZ		∅	Si	200S	TO78	PR	
19	2N4970	200MSΔ	40n	25n	350n	90n	500m ∅	10 ∅	150m ∅	100 #Δ	8.0pZ		N	Si	125S	TO106	A	
20#	2SA742H	200MSΔ	40n ∅			100n ∅	3.0 ∅	5.0 ∅	150m ∅	250 Z	8.0pZ		N-PE	Si	175J	TO39	A ∅	
21#	2SC395A	200MSΔ	40n ∅		50n	30n	250m	1.0 ∅	10m ∅	200 Z*	6.0pZ		N-PE	Si	175J	TO18	A ∅	
22	40218	200MSΔ	40n ∅	25n #		75n ∅	300m	1.0 ∅	10m ∅	20 TΔ	5.0pZ		N	Si	175	TO52	∅	
23	40222	200MSΔ	40n ∅			75n ∅	300m	1.0 ∅	10m ∅	20 TΔ	6.0pZ		N	Si	175	TO52	∅	
24	A5T2907	200MSΔ	40n	10n	80n	30n	1.6 ∅	10 ∅	1.0m ∅	50 Δ	8.0pZ	3.2 #	P†	Si	150S	R203	A	
25	A5T2907A	200MSΔ	40n	10n	80n	30n	1.6 ∅	10 ∅	1.0m ∅	100 Δ	8.0pZ	3.2 #	P†	Si	150S	R203	A	
26#	BFV49	200MSΔ	40n ∅			35n	75n	150m	1.0 ∅	10m ∅	30 Δ		NPE	Si	200J	S5a	A	
27#	BFV86	200MSΔ	40n ∅			80n	30m	380m	10 ∅	10m ∅	75 Δ		PPE	Si	200S	W5a	B	
28#	BFV86A	200MSΔ	40n ∅			80n	30m	380m	10 ∅	10m ∅	100 Δ		PPE	Si	200S	W5a	B	
29#	BFV86B	200MSΔ	40n ∅			80n	30m	380m	10 ∅	10m ∅	35 Δ		PPE	Si	200S	W5a	B	
30#	BFV86C	200MSΔ	40n ∅			80n	30m	380m	10 ∅	10m ∅	40 Δ		PPE	Si	200S	W5a	B	
31#	BFV90	200MSΔ	40n	15n	250n	50n	300m	5.0 ∅	10m ∅	125	2.6		P-PL†	Si	125J	S1	A	
32#	BSS80	200MSΔ	40n	10n	80n	30n	350m	10 ∅	150m ∅	40 Δ	8.0pZ		P	Si	150S	X156a	A	
33#	BSW23	200MSΔ	40n	10n	80n	30n	700m	10 ∅	150m ∅	40 Δ#	2.7	8.0pZ	PPE	Si	200J	TO50	A ∅	
34#	BSW24	200MSΔ	40n	10n	80n	30n	400m	10 ∅	150m ∅	40 Δ#	2.7	8.0pZ	PPE	Si	200J	TO18	A ∅	
35#	BSW26	200MSΔ	40n ∅			85n ∅	1.8 ∅	2.0 ∅	100m ∅	25 Δ	3.5	10pZ	N-PE	Si	200J	TO18	A ∅	
36#	BSW27	200MSΔ	40n ∅			85n ∅	3.0 ∅	2.0 ∅	100m ∅	25 Δ	3.5	10pZ	N-PL	Si	200J	TO18	A ∅	
37#	BSW29	200MSΔ	40n ∅			85n ∅	5.0 ∅	2.0 ∅	100m ∅	25 Δ	3.5	10pZ	N-PL	Si	200J	TO5	A ∅	
38#	BSX36	200MSΔ	40n ∅			100n ∅	1.2 ∅	10 ∅	1.0m ∅	75	6.0p		N-DPE	Si	200J	TO18	A ∅	
39#	BSX89	200MSΔ	40n ∅			75n ∅	300m	10 ∅	10m ∅	20 #Δ	60	2.5p	NPE	Si	175J	TO18	A ∅	
40#	BSY61	200MSΔ	40n ∅		25n	75n ∅	200m	1.0 ∅	10m ∅	10	60		N-D†	Si	125J	TO92	B	
41#	BSY62A	200MSΔ	40n ∅			75n ∅	400m	1.0 ∅	10m ∅	60 Z	2.7p		N-PE	Si	200J	TO18	A	
42#	BSY62B	200MSΔ	40n ∅			75n ∅	400m	1.0 ∅	10m ∅	300 Z	2.7p		N-PE	Si	200J	TO18	A	
43	D2T2904	200MSΔ	40n	10n	80n	30n	400m	10 ∅	150m ∅	40 Δ	2.7	8.0pZ	P	Si	200S	TO77		
44	D2T2904A	200MSΔ	40n	10n	80n	30n	400m	10 ∅	150m ∅	40 Δ	2.7	8.0pZ	P	Si	200S	TO77		
45	D2T2905	200MSΔ	40n	10n	80n	30n	400m	10 ∅	150m ∅	100 Δ	2.7	8.0pZ	P	Si	200S	TO77		
46	D2T2905A	200MSΔ	40n	10n	80n	30n	400m	10 ∅	150m ∅	100 Δ	2.7	8.0pZ	P	Si	200S	TO77		
47	GET2904	200MSΔ	40n	10n	80n	30n	700m ∅	10 ∅	1.0m ∅	25 Δ	8.0pZ		P-PE	Si	125J	R208		
48	GET2905	200MSΔ	40n	10n	80n	30n	700m ∅	10 ∅	1.0m ∅	50 Δ	8.0pZ		P-PE	Si	125J	R208		
49	GET2906	200MSΔ	40n	10n	80n	30n	700m ∅	10 ∅	1.0m ∅	25 Δ	8.0pZ		P-PE	Si	125J	R207a	F	
50	GET2907	200MSΔ	40n	10n	80n	30n	700m ∅	1.0 ∅	1.0m ∅	50 Δ	8.0pZ		P-PE	Si	125J	R207a	F	
51	MPS706	200MSΔ	40n ∅			75n ∅	310m	1.0 ∅	10m ∅	20 #Δ	6.0pZ		NANT	Si	135J	R196b	A	
52	MPS706A	200MSΔ	40n ∅			75n ∅	310m	1.0 ∅	10m ∅	60 Z#	6.0pZ		NANT	Si	135J	R196b	A	
53#	MPS706AK	200MSΔ	40n ∅		25n	75n ∅	1.2 ∅	1.0 ∅	10m ∅	20 TΔ#	60 #		N-PL	Si	175A	X167	A	
54#	MPS706AL	200MSΔ	40n ∅		25n	75n ∅	1.2 ∅	1.0 ∅	10m ∅	20 TΔ#	60 #		N-PL	Si	175A	X168	A	
55#	MPS706AM	200MSΔ	40n ∅		25n	75n ∅	1.2 ∅	1.0 ∅	10m ∅	20 TΔ#	60 #		N-PL	Si	175A	X169	A	
56#	MPS706K	200MSΔ	40n ∅		60n	75n ∅	1.2 ∅	1.0 ∅	10m ∅	20 TΔ#	60 #	6.0pZ	N-PL	Si	175A	X167	A	
57#	MPS706L	200MSΔ	40n ∅		60n	75n ∅	1.2 ∅	1.0 ∅	10m ∅	20 TΔ#	60 #	6.0pZ	N-PL	Si	175A	X168	A	
58#	MPS706M	200MSΔ	40n ∅		60n	75n ∅	1.2 ∅	1.0 ∅	10m ∅	20 TΔ#	60 #	6.0pZ	N-PL	Si	175A	X169	A	
59	MPS2907	200MSΔ	40n	10n	80n	30n	1.5 ∅	10 ∅	1.0m ∅	50 Δ	2.6 #	8.0pZ	PAN	Si	150J	R211	A	
60	MPS2907A	200MSΔ	40n	10n	80n	30n	1.5 ∅	10 ∅	1.0m ∅	100 Δ	2.6 #	8.0pZ	PAN	Si	150J	R211	A	
61	TIS112	200MSΔ	40n	10n	80n	70n	360m	10 ∅	1.0m ∅	50 Δ	8.0pZ		P-PET	Si	150S	R203	A	
62#	ZT706A	200MSΔ	40n ∅		25n	75n ∅	300m	1.0 ∅	10m ∅	60 Z	6.0pZ		N-PL	Si	175J	TO18	∅	
63#	ZT1708	200MSΔ	40n ∅		25n	50n	300m	1.0 ∅	10m ∅	20 Δ	6.0pZ		N-PE	Si	175	TO46		
64#	ZT2205	200MSΔ	40n ∅		25n	50n	300m	1.0 ∅	10m ∅	20 Δ	6.0pZ		N-PE	Si	175	TO18		
65#	ZT2206	200MSΔ	40n ∅		35n	40n	300m	1.0 ∅	10m ∅	40 Δ	6.0pZ		N-PE	Si	175	TO46		
66	2N1410A	230M	40n	15n	170n	30n	800m	10 ∅	150m	60 #	2.0	12p	N-PL	Si	175J	TO5	A	
67	JAN2N2218	250MSΔ	40n ∅		18n*	250n ∅	3.0 ∅	10 ∅	150m ∅	40 #Δ	2.6	8.0pZ	N	Si	200S	TO39	A ∅	
68	JAN2N2219	250MSΔ	40n ∅		18n*	250n ∅	3.0 ∅	10 ∅	150m ∅	100 #Δ	2.6	8.0pZ	N	Si	200S	TO39	A ∅	
69	JAN2N2221	250MSΔ	40n ∅		18n*	250n ∅	1.8 ∅	10 ∅	150m ∅	120 #Δ	2.6	8.0pZ	N	Si	200S	TO18	A ∅	
70	JAN2N2222	250MSΔ	40n ∅		18n*	250n ∅	1.8 ∅	10 ∅	150m ∅	300 #Δ	2.6	8.0pZ	N	Si	200S	TO18	A ∅	
71	2N2537	250MSΔ	40n ∅		20n	40n ∅	3.0 ∅	10 ∅	10m ∅	30 Δ	8.0pZ		N	Si	200J	TO5	A ∅	
72	2N2538	250MSΔ	40n ∅		20n	40n ∅	3.0 ∅	10 ∅	10m ∅	50 Δ	8.0pZ		N	Si	200J	TO5	A ∅	
73	2N2539	250MSΔ	40n ∅		20n	40n ∅	1.8 ∅	10 ∅	10m ∅	30 Δ	8.0pZ		N	Si	200J	TO18	A ∅	
74	2N2540	250MSΔ	40n ∅		20n	40n ∅	1.8 ∅	10 ∅	10m ∅	50 Δ	8.0pZ		N	Si	200J	TO18	A ∅	
75	2N2845	250MSΔ	40n ∅		40n ∅	360m	10 ∅	150m ∅	120 T#Δ		8.0pZ		N	Si	200J	TO18	A ∅	
76	2N2846	250MSΔ	40n ∅		40n ∅	800m	10 ∅	150m ∅	120 T#Δ		8.0pZ		N	Si	200J	TO5	A ∅	
77	2N3015	250MSΔ	40n ∅		60n ∅	3.0 ∅	10 ∅	150m ∅	120 #Δ		8.0pZ		N	Si	200J	TO5	A ∅	
78	2N3735	250MSΔ	40n	8.0n		60n ∅	4.0 ∅	1.0 ∅	10m ∅	35 Δ	20		N	Si	200S	TO5	A ∅	
79	2N3737	250MSΔ	40n	8.0n		60n ∅	2.0 ∅	1.0 ∅	10									

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L E O A D E
								Vcb (V)	Ic (A)	hFE								
1	UPT024	40MΔ	50nΔ	10n		400nΔ	1.6	5.0	1.0	5.0	2.0	50pΔ	N-PL	Si	200J	T066	C0	
2	UPT025	40MΔ	50nΔ	10n		400nΔ	1.6	5.0	1.0	5.0	2.0	50pΔ	N-PL	Si	200J	T066	C0	
3	BSW39-6	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
4	BSW39-10	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
5	BSW39-16	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
6	BSW40-6	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
7	BSW40-10	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
8	BSW40-16	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
9	BSW40-25	50MΔ	50nΔ	10n		300nΔ	4.4	2.0	1.0	30	2.0	20pΔ	N-PE	Si	200J	T039	A0	
10	BSV84	60MΔ	50n	150n	400n	150n	800m	1.0	150m	70	25	25p	N	Si	200	T039	A	
11	2N1132/46	90.0MΔ	50n	50n			400m	10	150m	30	10	45pΔ	P-D	Si	200J	T046	A	
12	2N4890	100MΔ	50n	50n	200n	70n	5.0	2.5	150m	25	9.3	15pΔ	P	Si	200S	T05	A0	
13	TQ59	100MΔ	50n	10n	450n	120n	3.0	10	150m	100	20	10pΔ	P-PE	Si	200J	T05	A	
14	TQ60	100MΔ	50n	10n	450n	120n	1.8	10	150m	100	20	10pΔ	P-PE	Si	200J	T018	A	
15	TQ61	100MΔ	50n	10n	450n	120n	3.0	10	150m	50	20	10pΔ	P-PE	Si	200J	T05	A	
16	TQ62	100MΔ	50n	10n	450n	120n	1.8	10	150m	50	20	10pΔ	P-PE	Si	200J	T018	A	
17	TQ63	100MΔ	50n	10n	450n	120n	3.0	10	150m	25	20	10pΔ	P-PE	Si	200J	T05	A	
18	TQ64	100MΔ	50n	10n	450n	120n	1.8	10	150m	25	20	10pΔ	P-PE	Si	200J	T018	A	
19	BSV82	120MΔ	50n	35n	250n	10	10	1.0	500m	15	35	35pΔ	P	Si	150J	T039	A	
20	BCX58IX	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	250	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
21	BCX58VII	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	120	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
22	BCX58VIII	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	180	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
23	BCX58X	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	380	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
24	BCX59IX	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	250	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
25	BCX59VII	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	120	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
26	BCX59VIII	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	180	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
27	BCX59X	125MΔ	50n	35n	400n	80n	450m	5.0	2.0m	380	5.0	4.5pΔ	N-PE	Si	150J	R204c	A	
28	BCY65IX	125MΔ	50n	35n	400n	80n	1.0	5.0	2.0m	480	35	3.5pΔ	N-PE	Si	200J	T018	A0	
29	BCY65VII	125MΔ	50n	35n	400n	80n	1.0	5.0	2.0m	220	35	3.5pΔ	N-PE	Si	200J	T018	A0	
30	BCY65VIII	125MΔ	50n	35n	400n	80n	1.0	5.0	2.0m	310	35	3.5pΔ	N-PE	Si	200J	T018	A0	
31	2N5372	150MΔ	50n			150n	360m	10	10m	70	35	10pΔ	P	Si	150J	R207	A	
32	2N5373	150MΔ	50n			150n	360m	10	10m	10	35	10pΔ	P	Si	150J	R207	A	
33	2N5374	150MΔ	50n			175n	360m	10	10m	150	35	10pΔ	P	Si	150J	R207	A	
34	2N5375	150MΔ	50n			175n	360m	10	10m	30	35	10pΔ	P	Si	150J	R207	A	
35	2SA537AH	150MΔ	50n		300n	350n	750m	4.0	5.0m	30	3.3	35p	P-PE	Si	200J	T039	A	
36	2SA537H	150MΔ	50n		300n	350n	750m	4.0	5.0m	30	3.3	35p	P-PE	Si	200J	T039	A	
37	BCW61BA	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	470	35	6.0pΔ	P-PE	Si	150J	X156a	A	
38	BCW61BB	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	250	35	6.0pΔ	P-PE	Si	150J	X156a	A	
39	BCW61BC	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	350	35	6.0pΔ	P-PE	Si	150J	X156a	A	
40	BCW61BD	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	500	35	6.0pΔ	P-PE	Si	150J	X156a	A	
41	BCX71BG	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	170	35	6.0pΔ	P-PE	Si	150J	X156a	A	
42	BCX71BH	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	250	35	6.0pΔ	P-PE	Si	150J	X156a	A	
43	BCX71BJ	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	350	35	6.0pΔ	P-PE	Si	150J	X156a	A	
44	BCX71BK	150MΔ	50n	35n	400n	80n	150m	5.0	2.0m	500	35	6.0pΔ	P-PE	Si	150J	X156a	A	
45	BCY58IX	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	350	35	6.0pΔ	NAN	Si	200J	T018	A0	
46	BCY58VII	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	170	35	6.0pΔ	NAN	Si	200J	T018	A0	
47	BCY58VIII	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	250	35	6.0pΔ	NAN	Si	200J	T018	A0	
48	BCY58X	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	500	35	6.0pΔ	NAN	Si	200J	T018	A0	
49	BCY59IX	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	350	35	6.0pΔ	NAN	Si	200J	T018	A0	
50	BCY59VII	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	170	35	6.0pΔ	NAN	Si	200J	T018	A0	
51	BCY59VIII	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	250	35	6.0pΔ	NAN	Si	200J	T018	A0	
52	BCY59X	150MΔ	50n	35n	400n	80n	775m	5.0	2.0m	500	35	6.0pΔ	NAN	Si	200J	T018	A0	
53	BSW42	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	75	6.0	8.0pΔ	N-E	Si	125J	R110	A	
54	BSW42A	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	75	6.0	8.0pΔ	N-E	Si	125J	R110	A	
55	BSW43	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	180	6.0	8.0pΔ	N-E	Si	125J	R110	A	
56	BSW43A	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	180	6.0	8.0pΔ	N-E	Si	125J	R110	A	
57	BSX51	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	225	6.0	5.0p	N-PE	Si	175A	T018	A	
58	BSX51A	150MΔ	50n	20n	200n	50n	30m	4.5	2.0m	225	6.0	4.0p	N-PE	Si	175A	T018	A	
59	BSX52	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	540	6.0	5.0p	N-PE	Si	175A	T018	A	
60	BSX52A	150MΔ	50n	20n	200n	50n	300m	4.5	2.0m	540	6.0	4.0p	N-PE	Si	175A	T018	A	
61	D41D1	150MΔ	50n	75n	40n	1.0	1.0	2.0	1.0	10	1.0	10pΔ	PT	Si	150S	B15b	F	
62	D41D2	150MΔ	50n	75n	40n	1.0	1.0	2.0	1.0	20	1.0	10pΔ	PT	Si	150S	B15b	F	
63	D41D4	150MΔ	50n	75n	40n	1.0	1.0	2.0	1.0	10	1.0	10pΔ	PT	Si	150S	B15b	F	
64	D41D5	150MΔ	50n	75n	40n	1.0	1.0	2.0	1.0	20	1.0	10pΔ	PT	Si	150S	B15b	F	
65	D41D7	150MΔ	50n	75n	40n	1.0	1.0	2.0	1.0	10	2.0	10pΔ	PT	Si	150S	B15b	F	
66	D41D8	150MΔ	50n	75n	40n	1.0	1.0	2.0	1.0	20	2.0	10pΔ	PT	Si	150S	B15b	F	
67	MPS3903	150MΔ	50n	35n	800n	90n	625m	1.0	10m	150	20	4.0pΔ	N	Si	150J	T092	A	
68	TZ551	150MΔ	50n			150n	360m	10	10m	20	10	10pΔ	P-PL	Si	150J	T098	B	
69	TZ552	150MΔ	50n			150n	360m	10	10m	50	10	10pΔ	P-PL	Si	150J	T098	B	
70	TZ553	150MΔ	50n			175n	360m	10	10m	100	10	10pΔ	P-PL	Si	150J	T098	B	
71	40450	175MΔ	50n	25n	500n	75n	1.0	12	10m	200	1.2	20pΔ	N-PE	Si	175J	R119	A	
72	40451	175MΔ	50n	25n	500n	75n	1.0	12	10m	170	1.0	20pΔ	N-PE	Si	175J	R119	A	
73	2SC112	180M	50n		110n	17n	750m	2.0	20m	125	7.0	7.0p	N	Si	175	T05	A	
74	BCY77IX	180M	50n	35n	400n	80n	1.0	5.0	2.0m	350	7.0	7.0pΔ	P-PE	Si	200J	T018	A	
75	BCY77VII	180M	50n	35n	400n	80n	1.0	5.0	2.0m	170	7.0	7.0pΔ	P-PE	Si	200J	T018	A	
76	BCY77VIII	180M	50n	35n	400n	80n	1.0	5.0	2.0m	250	7.0	7.0pΔ	P-PE	Si	200J	T018	A	
77	BCY78IX	180M	50n	35n	400n	80n	1.0	5.0	2.0m	270	25	7.0pΔ	P-PE	Si	200J	T018	A0	
78	BCY78VII	180M	50n	35n	400n	80n	1.0	5.0	2.0m	140	25	7.0pΔ	P-PE	Si	200J	T018	A0	
79	BCY78VIII	180M	50n	35n	400n	80n	1.0	5.0	2.0m	200	25	7.0pΔ	P-PE	Si	200J	T018	A0	
80	BCY78X	180M	50n	35n	400n	80n	1.0	5.0	2.0m	340	25	7.0pΔ	P-PE	Si	200J	T018	A0	
81	BCY79IX	180M	50n	35n	400n	80n												

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-PNP N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L O A D E
								Vcb (V)	Ie (A)	hFE								
1#	BC212LA	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	100 Δ	10pΔ		PE	Si	150S	T092	B	
2#	BC212LB	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	200 Δ	10pΔ		PE	Si	150S	T092	B	
3#	BC213	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	80 Δ#	10pΔ		PE	Si	150S	R203	A	
4#	BC213A	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	100 Δ	10pΔ		PE	Si	150S	R203	A	
5#	BC213B	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	200 Δ	10pΔ		PE	Si	150S	R203	A	
6#	BC213C	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	350 Δ	10pΔ		PE	Si	150S	R203	A	
7#	BC213K	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	70 Δ	10pΔ		P-PE	Si	125A	R204a	A	
8#	BC213KA	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	300 Δ	10pΔ		P-PE	Si	125A	R204a	A	
9#	BC213KB	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	400 Δ	10pΔ		P-PE	Si	125A	R204a	A	
10#	BC213KC	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	600 Δ	10pΔ		P-PE	Si	125A	R204a	A	
11#	BC213L	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	80 Δ#	10pΔ		PE	Si	150S	T092	B	
12#	BC213LA	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	100 Δ	10pΔ		PE	Si	150S	T092	B	
13#	BC213LB	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	200 Δ	10pΔ		PE	Si	150S	T092	B	
14#	BC213LC	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	350 Δ	10pΔ		PE	Si	150S	T092	B	
15#	BC214	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	140 Δ#	10pΔ		PE	Si	150S	R203	A	
16#	BC214A	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	140 Δ	10pΔ		PE	Si	150S	R203	A	
17#	BC214B	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	200 Δ	10pΔ		PE	Si	150S	R203	A	
18#	BC214C	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	350 Δ	10pΔ		PE	Si	150S	R203	A	
19#	BC214K	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	125 Δ	10pΔ		P-PE	Si	125A	R204a	A	
20#	BC214KB	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	400 Δ	10pΔ		P-PE	Si	125A	R204a	A	
21#	BC214KC	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	600 Δ	10pΔ		P-PE	Si	125A	R204a	A	
22#	BC214L	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	140 Δ#	10pΔ		PE	Si	150S	T092	B	
23#	BC214LA	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	140 Δ	10pΔ		PE	Si	150S	T092	B	
24#	BC214LB	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	200 Δ	10pΔ		PE	Si	150S	T092	B	
25#	BC214LC	200MΔ	60nΔ			30nΔ	300m	5.0 Δ	2.0m Δ	350 Δ	10pΔ		PE	Si	150S	T092	B	
26	EN706	200MΔ	60nΔ			30nΔ	200m	1.0 Δ	10m Δ	20 Δ	6.0pΔ		N	Ge	125J	TO106	A	
27	2N963	250MΔ	60nΔ			120nΔ	150m	1.0 Δ	100m Δ	20 Δ	5.0pΔ		P	Si	100S	TO18	A	
28	2N967	250MΔ	60nΔ			120nΔ	150m	1.0 Δ	100m Δ	40 Δ	5.0pΔ		P	Si	100S	TO18	A	
29	2N3299	250MΔ	60nΔ			150nΔ	3.0 Δ	10 Δ	150m Δ	120 Δ#	8.0pΔ		N	Si	200J	TO5	A	
30	2N3300	250MΔ	60nΔ			150nΔ	3.0 Δ	10 Δ	150m Δ	300 Δ#	8.0pΔ		N	Si	200J	TO5	A	
31	2N3301	250MΔ	60nΔ			150nΔ	1.8 Δ	10 Δ	150m Δ	120 Δ#	8.0pΔ		N	Si	200J	TO18	A	
32	2N3302	250MΔ	60nΔ			150nΔ	360m	10 Δ	150m Δ	300 Δ#	8.0pΔ		N	Si	200J	TO18	A	
33	2N4437	250MΔ	60nΔ			150nΔ	500m Δ	10 Δ	150m Δ	300 Δ#	8.0pΔ		N	Si	125J	R124	A	
34#	2T600	250MΔ	60nΔ		130n	60nΔ	5.0 Δ	1.0 Δ	150m Δ	150 Δ	12pΔ		N-PL	Si	200S	TO5	A	
35#	2SA717	280MΔ	60nΔ		20n	160nΔ	5.0 Δ	1.0 Δ	50m Δ	80 Δ	18p		P-E	Si	175S	TO39	A	
36	2N2319	300MΔ	60nΔ			50nΔ	300m	3.0 Δ	1.0m Δ	20 Δ	5.0pΔ		N	Si	200S	TO46	A	
37#	BSX32	300MΔ	60nΔ			60nΔ	3.5 Δ	1.0 Δ	100m Δ	90 Δ	10pΔ		N-DPE	Si	200J	TO5	A	
38	BSX32	300MΔ	60nΔ			60nΔ	3.5 Δ	1.0 Δ	100m Δ	30 Δ	10pΔ		NAN	Si	200J	TO39	A	
39#	BSX35	300MΔ	60nΔ	30nΔ		60nΔ	300m	1.0 Δ	50m Δ	50 Δ#	4.0pΔ		P-DPE	Si	200J	TO18	A	
40#	BFR10	350MΔ	60nΔ		150nΔ	800m	10 Δ	10 Δ	150m Δ	60 Δ	5.0p		N	Si	200J	TO39	A	
41#	BFR11	350MΔ	60nΔ		150nΔ	400m	10 Δ	10 Δ	500 Δ	40 Δ	5.0p		N	Si	200J	TO18	A	
42#	BFB31	350MΔ	60nΔ			100nΔ	150m	1.0 Δ	100m Δ	15 Δ	8.0pΔ		PPE	Si	200J	S5a	P	
43#	BFB32	350MΔ	60nΔ			100nΔ	150m	1.0 Δ	100m Δ	10 Δ	8.0pΔ		PPE	Si	200J	S5a	P	
44#	BFX29	360MΔ	60nΔ			150nΔ	600m	10 Δ	100m Δ	90 Δ	2.6	12pΔ#	P-E	Si	200J	TO5	A	
45#	BFX87	360MΔ	60nΔ			150nΔ	600m	10 Δ	1.0m Δ	40 Δ	2.6	12pΔ#	P-E	Si	200J	TO5	A	
46#	BFX88	360MΔ	60nΔ			150nΔ	600m	10 Δ	1.0m Δ	40 Δ	2.6	12pΔ#	P-E	Si	200J	TO18	A	
47	2N2894	400MΔ	60nΔ			90nΔ	360m	.50 Δ	30m Δ	150 Δ#	6.0pΔ		P	Si	200J	TO18	A	
48	2N3012	400MΔ	60nΔ		75nΔ	1.2 Δ	30m Δ	.50 Δ	30m Δ	120 Δ#	6.0pΔ		P	Si	200J	TO18	A	
49	2N3209	400MΔ	60nΔ			90nΔ	380m	50m Δ	30m Δ	30 Δ#	6.0		P-E	Si	200J	TO18	A	
50	40217	400MΔ	60nΔ			300m	300m	1.0 Δ	10m Δ	20 Δ	5.0p		P-E	Si	175J	TO52	A	
51#	BFB81	400MΔ	60nΔ			90nΔ	300m	.50 Δ	30m Δ	40 Δ#	6.0pΔ		PPE	Si	200J	W5a	B	
52#	BFB81A	400MΔ	60nΔ			75nΔ	300m	.50 Δ	30m Δ	30 Δ#	6.0pΔ		PPE	Si	200J	W5a	B	
53#	BSV21	400MΔ	60nΔ			75nΔ	360m	.50 Δ	30m Δ	120 Δ#	6.0pΔ		PPE	Si	200J	TO18	A	
54#	BSV37	400MΔ	60nΔ			90nΔ	350m	500m Δ	30m Δ	150 Δ#	6.0pΔ		P	Si	175J	X155	F	
55#	BSX29	400MΔ	60nΔ			90nΔ	1.2 Δ	50m Δ	30m Δ	80 Δ#	5.0		P-DPE	Si	200J	TO18	A	
56#	TI550	400MΔ	60nΔ			90nΔ	360m	300m Δ	10m Δ	30 Δ#	6.0pΔ		P-E	Si	150J	TO92	F	
57#	ZTX510	400MΔ	60nΔ			90nΔ	250m	500m Δ	30m Δ	150 Δ#	6.0pΔ		P-PLT	Si	200J	X69	F	
58	2N3304	500MΔ	60nΔ			300m	300m	.30 Δ	10m Δ	63 Δ	10	3.5pΔ	N	Si	200J	TO18	A	
59	2N4449	500MΔ	60n	9.0n	12n	8.0n	300m	.35 Δ	10m Δ	30 Δ#	4.4pΔ		N	Si	200S	TO46	A	
60#	MA493	500MΔ	60nΔ			90nΔ	360m	1.0 Δ	30m Δ	30 Δ	4.0pΔ		P-E	Si	200J	TO18	A	
61#	ME0493	750MΔ	60nΔ	75nΔ		90nΔ	500m Δ	1.0 Δ	10m Δ	80 Δ	6.0p		P	Si	150J	R110c	A	
62	2N2894A	800MΔ	60nΔ		20n	90nΔ	360m	500m Δ	30m Δ	120 Δ#	4.5	480m	P	Si	200J	TO18	A	
63#	2SA316	800MΔ	63nΔ			210nΔ	300m	1.0 Δ	400m Δ	70 Δ	4.5	480m	N-PE	Si	200J	TO5	A	
64	2N4351	65n	45n		160nΔ	300m	300m				300 Δ	5pΔ	NS	Si	200S	TO72	DR	
65	2N4352	65n	45n		160nΔ	300m	300m				600 Δ	5pΔ	PS	Si	200S	TO72	DR	
66	3N155	65n	45n			100n	300m				600 Δ	5.0pΔ	PS	Si	175J	TO72	DR	
67	3N155A	65n	45n			100n	300m				400 Δ	5.0pΔ	PS	Si	175J	TO72	DR	
68	3N156	65n	45n			100n	300m				600 Δ	5.0pΔ	PS	Si	175J	TO72	DR	
69	3N156A	65n	45n			100n	300m				400 Δ	5.0pΔ	PS	Si	175J	TO72	DR	
70	MEM562	65n	35n		160nΔ	650m Δ	10	2.0m	1.0 Δ	25 Δ	300 Δ	5.0pΔ	N-MOS	Si	125J	TO72	DR	
71	2N3867	60MΔ	65n	35n	500n	100n	6.0 Δ	3.0 Δ	2.5 Δ	20 Δ	1.0	120pΔ	P	Si	200S	TO5	A	
72	2N3868	60MΔ	65n	35n	500n	100n	6.0 Δ	3.0 Δ	2.5 Δ	20 Δ	1.0	120pΔ	P	Si	200S	TO5	A	
73	2N6303	60MΔ	65n	35n	500n	100n	6.0 Δ	1.0 Δ	500m Δ	35 Δ#	500m Δ	120pΔ	P	Si	200S	TO5	A	
74	2N1958	100MΔ	65n Δ	25n	45n Δ	2.0 Δ	2.0 Δ	10 Δ	150m Δ	40 Δ	3.0	18pΔ	N	Si	175J	TO5	A	
75	2N1959	100MΔ	65n Δ	25n	45n Δ	2.0 Δ	2.0 Δ	10 Δ	150m Δ	120 Δ	3.0	18pΔ	N	Si	175J	TO5	A	
76#	BFB50	175MΔ	65n Δ		70n Δ	150m	10 Δ	500m Δ	15 Δ	3.3	12pΔ		NPE	Si	200J	S5a	F	
77	2N2410	200MΔ	65n Δ		40n	70n	2.5 Δ	10 Δ	150m Δ	30 Δ#	11pΔ		N	Si	200J	TO5	A	
78	2N2972	200MΔ	65n		175n	60n	500m Δ	10 Δ	150m Δ	100 Δ#	8.0pΔ		N	Si	125S	TO106	A	
79#	BFB85	200MΔ	65n Δ		40n	30n	360m	10 Δ	150m Δ	75 Δ#	11pΔ		NPE	Si	200J	W5a	B	
80#	JAN2N3867	240MΔ	65n	35n	500n	100n	10 Δ	5.0 Δ	3.0 Δ	20 Δ#	500m	120pΔ	P	Si	200S	TO5	A	
81#	JAN2N3868	240MΔ	65n	35n	500n	100n	10 Δ	5.0 Δ	3.0 Δ	20 Δ#	500m	120pΔ	P	Si	200S	TO5	A	
82	BSX48	250MΔ	65n Δ		110n Δ	1.0 Δ	1.0 Δ	1.0 Δ	1.0m Δ	30 Δ	4.5	4.5pΔ	NAN	Si	200J	TO18	A	
83#	BSX48	400MΔ	65n Δ		110n Δ	1.0 Δ	1.0 Δ	1.0 Δ	1.0m Δ	30 Δ#	4.5pΔ		N-DPE	Si				

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	3	TYPE No.	2	1	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L E A D E
										Vcb (V)	Ic (A)	hFE								
1		2N5321	50 OM Δ		80n \emptyset			800m \emptyset	10 \emptyset	4.0 \emptyset	500m \emptyset	250 \emptyset	1.6 #			N	Si	200J	T05	A \emptyset
2		2N6178	50M Δ		80n \emptyset			800m \emptyset	10 \emptyset	4.0 \emptyset	500m \emptyset	30 Δ #	1.0 #			N	Si	150J	B24	A \emptyset
3		2N6179	50M Δ		80n \emptyset			800m \emptyset	10 \emptyset	4.0 \emptyset	500m \emptyset	40 Δ #	1.6 #			N	Si	150J	B24	A \emptyset
4#		BSS15	50M Δ		80n \emptyset			800m \emptyset	10 \emptyset	4.0 \emptyset	500m \emptyset	30 Δ #				N-PE	Si		TO39	A \emptyset
5#		BSS16	50M Δ		80n \emptyset			800m \emptyset	10 \emptyset	4.0 \emptyset	500m \emptyset	40 Δ #				N-PE	Si		TO39	A \emptyset
6		RCP701A	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	A \emptyset
7		RCP701B	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
8		RCP701C	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
9		RCP701D	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
10		RCP703A	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
11		RCP703B	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
12		RCP703C	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
13		RCP703D	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	30 Δ #	1.6 #	20p \emptyset		N-DPE1	Si	150J	B12	P
14		RCP705	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	2.4 #	20p \emptyset		N-DPE1	Si	150J	B12	P
15		RCP705B	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	50 Δ #	2.4 #	20p \emptyset		N-DPE1	Si	150J	B12	P
16		RCP707	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	20 Δ #	2.4 #	20p \emptyset		N-DPE1	Si	150J	B12	P
17		RCP707B	50M Δ		80n \emptyset			800m \emptyset	1.7	4.0 \emptyset	500m \emptyset	20 Δ #	2.4 #	20p \emptyset		N-DPE1	Si	150J	B12	P
18#		2SC850	70 OM Δ		80n		800n	150n	500m	4.0 \emptyset	100m \emptyset	160				N	Si	175J	T018	
19#		BSS44	70M Δ		80n \emptyset			450m \emptyset	870m	2.0 \emptyset	20 \emptyset	70 #	100m#	100p \emptyset		N-PE	Si	200J	TO39	A
20#		2SC151H	80M Δ		80n \emptyset	50n \emptyset	150n \emptyset	80n \emptyset	750m \emptyset	6.0 \emptyset	10m \emptyset	20	70p			N-E	Si	175J	TO39	A
21#		2SC152H	80M Δ		80n \emptyset	50n \emptyset	150n \emptyset	80n \emptyset	750m \emptyset	6.0 \emptyset	10m \emptyset	20	70p			N-E	Si	175J	TO39	A
22#		2SC803	90 OM Δ		80n		2.0u	1.0u	5.0 \emptyset	4.0 \emptyset	400m \emptyset	70	1.0	9.0p		N-E	Si	175J	T05	A \emptyset
23#		2SC458K	100M Δ		80n \emptyset		220n \emptyset	300n \emptyset	200m	1.0 \emptyset	10m \emptyset	60 Δ	4.0	4.0p \emptyset		N-E	Si	125J	S8	B
24#		2SC1707AH	100M Δ		80n \emptyset		220n \emptyset	300n \emptyset	200m \emptyset	1.0 \emptyset	10m \emptyset	100 Δ	8.0	3.5p \emptyset		N-D	Si	175J	TO18	A
25#		2SC1707H	100M Δ		80n \emptyset		220n \emptyset	300m \emptyset	200m \emptyset	1.0 \emptyset	10m \emptyset	100 Δ	8.0	3.5p \emptyset		N-D	Si	175J	TO18	A
26#		ZT60	120M Δ		80n \emptyset			300m \emptyset	350m	6.0 \emptyset	10m \emptyset	38 Δ	4.0	8.0p \emptyset		N-PE \emptyset	Si	150J	T05	
27#		ZT61	120M Δ		80n \emptyset			300m \emptyset	350m	6.0 \emptyset	10m \emptyset	38 Δ	4.0	8.0p \emptyset		N-PE \emptyset	Si	150J	T05	
28#		ZT62	120M Δ		80n \emptyset			300m \emptyset	350m	6.0 \emptyset	10m \emptyset	35 Δ	8.0	8.0p \emptyset		N-PE \emptyset	Si	200J	T05	
29#		ZT63	120M Δ		80n \emptyset			300m \emptyset	350m	6.0 \emptyset	10m \emptyset	35 Δ	8.0	8.0p \emptyset		N-PE \emptyset	Si	200J	T05	
30#		ZT64	120M Δ		80n \emptyset			300m \emptyset	350m	6.0 \emptyset	10m \emptyset	75 Δ	8.0	8.0p \emptyset		N-PE \emptyset	Si	200J	T05	
31#		ZT65	120M Δ		80n \emptyset			300m \emptyset	350m	6.0 \emptyset	10m \emptyset	35 Δ	4.0	8.0p \emptyset		N-PE \emptyset	Si	200J	T05	
32#		ZT68	120M Δ		80n \emptyset			300m \emptyset	70m	6.0 \emptyset	10m \emptyset	35 Δ	4.0	8.0p \emptyset		N-PE \emptyset	Si	200J	T05	
33#		ZT80	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	162 \emptyset	4.0	8.0p \emptyset		N-PE	Si	150J	TO18	
34#		ZT81	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	162 \emptyset	4.0	8.0p \emptyset		N-PE	Si	150J	TO18	
35#		ZT82	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	162 \emptyset	4.0	8.0p \emptyset		N-PE	Si	150J	TO18	
36#		ZT83	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	250 \emptyset	2.0	8.0p \emptyset		N-PE	Si	200J	TO18	
37#		ZT84	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	85 \emptyset	4.0	8.0p \emptyset		N-PE	Si	200J	TO18	
38#		ZT86	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	85 \emptyset	4.0	8.0p \emptyset		N-PE	Si	200J	TO18	
39#		ZT87	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	85 \emptyset	4.0	8.0p \emptyset		N-PE	Si	200J	TO18	
40#		ZT88	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	250 \emptyset	2.0	8.0p \emptyset		N-PE	Si	200J	TO18	
41#		ZT89	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	250 \emptyset	2.0	8.0p \emptyset		N-PE	Si	200J	TO18	
42#		ZT110	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	170 \emptyset	4.0	8.0p \emptyset		N-PE \emptyset	Si	200J	TO18	
43#		ZT111	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	162 \emptyset	4.0	8.0p \emptyset		N-PE \emptyset	Si	150J	TO46	
44#		ZT112	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	162 \emptyset	4.0	8.0p \emptyset		N-PE \emptyset	Si	150J	TO46	
45#		ZT113	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	250 \emptyset	4.0	8.0p \emptyset		N-PE \emptyset	Si	200J	TO46	
46#		ZT114	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	170 \emptyset	2.0	8.0p \emptyset		N-PE \emptyset	Si	200J	TO46	
47#		ZT116	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	85 \emptyset	2.0	8.0p \emptyset		N-PE \emptyset	Si	200J	TO46	
48#		ZT117	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	250 \emptyset	2.0	8.0p \emptyset		N-PE \emptyset	Si	150J	TO46	
49#		ZT118	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	170 \emptyset	4.0	8.0p \emptyset		N-PE \emptyset	Si	200J	TO46	
50#		ZT119	120M Δ		80n \emptyset			300m \emptyset	300m	6.0 \emptyset	10m \emptyset	250 \emptyset	2.0	8.0p \emptyset		N-PE \emptyset	Si	200J	TO46	
51#		2N2478	200M Δ		80n		130n	300m	600m	1.5 \emptyset	150m \emptyset	40 Δ		12p		N-PE	Si	175A	T05	A \emptyset
52#		V405A	400M Δ		80n \emptyset			110m \emptyset	2.0 \emptyset	2.0 \emptyset	10m \emptyset	20 Δ #				P-DPE	Si	175J	TO18	
53#		2N2086	150M Δ		85n		130n	55n	2.0 \emptyset	1.5 \emptyset	150m \emptyset	20 #	4.5	12p \emptyset		N	Si	175J	T05	A \emptyset
54#		2N2087	150M Δ		85n		100n	55n	2.0 \emptyset	1.0 \emptyset	150m \emptyset	20 #	3.3	12p \emptyset		N	Si	175J	T05	A \emptyset
55#		2N4305			90n	50n	300n	100n	1.5	2.0 \emptyset	5.0m \emptyset	10 #	20 #	100p \emptyset		N	Si	200J	T05	A
56#		2N4306			90n	50n	300n	100n	4.0	2.0 \emptyset	5.0m \emptyset	10 #	20 #	100p \emptyset		N	Si	200J	T65	A
57#		2N4307			90n	50n	300n	100n	1.5	2.0 \emptyset	5.0m \emptyset	10 #	20 #	100p \emptyset		N	Si	200J	T05	A
58#		2N4308			90n	50n	300n	100n	4.0	2.0 \emptyset	5.0m \emptyset	10 #	20 #	100p \emptyset		N	Si	200C	T65	A
59#		2N4309			90n	50n	300n	100n	1.5	2.0 \emptyset	5.0m \emptyset	10 #	33 #	100p \emptyset		N	Si	200J	T05	A
60#		2N4310			90n	50n	300n	100n	4.0	2.0 \emptyset	5.0m \emptyset	10 #	33 #	100p \emptyset		N	Si	200C	T65	A
61#		2N4311			90n</															

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-NP N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	C O A D E
								V _{cb} (V)	I _e (A)	hFE								
1	UPT123	50MΔ	100n∅			250n∅	1.6	5.0 ∅	2.0 ∅	15 #	1.0 #	50p∅	N-PL	Si	200J	T066	C∅	
2	UPT124	50MΔ	100n∅			250n∅	1.6	5.0 ∅	2.0 ∅	15 #	1.0 #	50p∅	N-PL	Si	200J	T066	C∅	
3	UPT125	50MΔ	100n∅			250n∅	1.6	5.0 ∅	2.0 ∅	15 #	1.0 #	50p∅	N-PL	Si	200J	T066	C∅	
4	2N3021	60.0MΔ	100n∅		325n	75n	25 ∅	2.0 ∅	1.0m ∅	20 Δ	.50		P	Si	175C	T03	C∅	
5	2N3022	60.0MΔ	100n∅		325n	75n	25 ∅	2.0 ∅	1.0m ∅	20 Δ	.50		P	Si	175C	T03	C∅	
6	2N3023	60.0MΔ	100n∅		325n	75n	25 ∅	2.0 ∅	1.0m ∅	20 Δ	.50		P	Si	175C	T03	C∅	
7	2N3024	60.0MΔ	100n∅		325n	75n	25 ∅	2.0 ∅	1.0m ∅	50 Δ	.33		P	Si	175C	T03	C∅	
8	2N3025	60.0MΔ	100n∅		325n	75n	25 ∅	2.0 ∅	1.0m ∅	50 Δ	.33		P	Si	175C	T03	C∅	
9	2N3026	60.0MΔ	100n∅		325n	75n	25 ∅	2.0 ∅	1.0m ∅	50 Δ	.33		P	Si	175C	T03	C∅	
10	2N3719	60.0MΔ	100n∅			400n∅	6 ∅	1.5 ∅	1 ∅	25 #Δ			P	Si	200J	T05	A∅	
11	2N3720	60.0MΔ	100n∅			400n∅	6 ∅	1.5 ∅	1 ∅	25 #Δ			P	Si	200J	T05	A∅	
12	TIP501	60MΔ	100n∅			400n∅	6.0 ∅	1.5 ∅	500m ∅	20 #Δ		120p∅	N	Si	200J	T039	A∅	
13	TIP502	60MΔ	100n∅			400n∅	6.0 ∅	1.5 ∅	500m ∅	20 #Δ		120p∅	N	Si	200J	T039	A∅	
14	JAN2N702	70MΔ	100n∅			100n∅	600m ∅	5.0 ∅	10m ∅	60 #Δ	40 #	6.0p∅	N-DPL	Si	200S	T018	A∅	
15	JAN2N703	70MΔ	100n∅			100n∅	600m ∅	5.0 ∅	10m ∅	100 #Δ	40 #	6.0p∅	N-DPL	Si	200S	T018	A∅	
16	2N3340	70.0MΔ	100n∅			400m ∅	400m ∅	1.0 ∅	.01m ∅	100 Δ	20k	6.0p∅	N	Si	175A	T046	A∅	
17	2N4354	100MΔ	100n∅		400n∅	800m ∅	800m ∅	10 ∅	10m ∅	50 #Δ	1.0	30p∅	P	Si	125J	R124b	A	
18	2N4355	100MΔ	100n∅		400n∅	800m ∅	800m ∅	10 ∅	10m ∅	100 #Δ	1.0	30p∅	P	Si	125J	R124b	A	
19	2N4356	100MΔ	100n∅		400n∅	800m ∅	800m ∅	10 ∅	10m ∅	50 #Δ	1.0	30p∅	P	Si	125J	R124b	A	
20	A5T4026	100MΔ	100n∅			50n	625m	10 ∅	100m ∅	40 Δ	1.0	20p∅	P	Si	150S	R203	A	
21	A5T4027	100MΔ	100n∅			50n	625m	10 ∅	100m ∅	40 Δ	1.0	20p∅	P	Si	150S	R203	A	
22	A8T4026	100MΔ	100n∅		350n	50n	625m	10 ∅	100m ∅	40 Δ	1.0	20p∅	P	Si	150S	T092	A	
23	A8T4027	100MΔ	100n∅		350n	50n	625m	10 ∅	100m ∅	40 Δ	1.0	20p∅	P	Si	150S	T092	A	
24	BCW65EA	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	250 ∅	1.4	12p∅	N-PE	Si	150J	X156		
25	BCW65EB	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	400 ∅	1.4	12p∅	N-PE	Si	150J	X156		
26	BCW65EC	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	630 ∅	1.4	12p∅	N-PE	Si	150J	X156		
27	BCW66EF	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	250 ∅	1.4	12p∅	N-PE	Si	150J	X156		
28	BCW66EG	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	400 ∅	1.4	12p∅	N-PE	Si	150J	X156		
29	BCW66EH	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	630 ∅	1.4	12p∅	N-PE	Si	150J	X156		
30	BCW67DA	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	250 ∅	1.4	18p∅	P-PE	Si	150J	X156		
31	BCW67DB	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	400 ∅	1.4	18p∅	P-PE	Si	150J	X156		
32	BCW67DC	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	630 ∅	1.4	18p∅	P-PE	Si	150J	X156		
33	BCW68DF	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	250 ∅	1.4	18p∅	P-PE	Si	150J	X156		
34	BCW68DG	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	400 ∅	1.4	18p∅	P-PE	Si	150J	X156		
35	BCW68DH	100MΔ	100n∅			400n∅	350m ∅	1.0 ∅	100m ∅	630 ∅	1.4	18p∅	P-PE	Si	150J	X156		
36	BCW73-16	100MΔ	100n∅			400n∅	1.5 ∅*	1.0 ∅	100m ∅	250 ∅	3.0	8.0p∅	N-PE	Si	200J	T018	A∅	
37	BCW73-25	100MΔ	100n∅			400n∅	1.5 ∅*	1.0 ∅	100m ∅	400 ∅	3.0	8.0p∅	N-PE	Si	200J	T018	A∅	
38	BCW73-40	100MΔ	100n∅			400n∅	1.5 ∅*	1.0 ∅	100m ∅	630 ∅	3.0	8.0p∅	N-PE	Si	200J	T018	A∅	
39	BCW74-16	100MΔ	100n∅			400n∅	1.5 ∅*	1.0 ∅	100m ∅	250 ∅	3.0	8.0p∅	N-PE	Si	200J	T018	A∅	
40	BCW74-25	100MΔ	100n∅			400n∅	1.5 ∅*	1.0 ∅	100m ∅	400 ∅	3.0	8.0p∅	N-PE	Si	200J	T018	A∅	
41	BCW74-40	100MΔ	100n∅			400n∅	1.5 ∅*	1.0 ∅	100m ∅	630 ∅	3.0	8.0p∅	N-PE	Si	200J	T018	A∅	
42	BCW75-10	100MΔ	100n∅			400n∅	450m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T018	A	
43	BCW75-16	100MΔ	100n∅			400n∅	450m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T018	A	
44	BCW75-25	100MΔ	100n∅			400n∅	450m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T018	A	
45	BCW76-10	100MΔ	100n∅			400n∅	450m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T018	A	
46	BCW76-16	100MΔ	100n∅			400n∅	450m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T018	A	
47	BCW76-25	100MΔ	100n∅			400n∅	450m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T018	A	
48	BCW77-16	100MΔ	100n∅			400n∅	4.5 ∅*	1.0 ∅	100m ∅	250 ∅	3.0	8.0p∅	N-PE	Si	200J	T039	A∅	
49	BCW77-25	100MΔ	100n∅			400n∅	4.5 ∅*	1.0 ∅	100m ∅	400 ∅	3.0	8.0p∅	N-PE	Si	200J	T039	A∅	
50	BCW77-40	100MΔ	100n∅			400n∅	4.5 ∅*	1.0 ∅	100m ∅	630 ∅	3.0	8.0p∅	N-PE	Si	200J	T039	A∅	
51	BCW78-16	100MΔ	100n∅			400n∅	4.5 ∅*	1.0 ∅	100m ∅	250 ∅	3.0	8.0p∅	N-PE	Si	200J	T039	A∅	
52	BCW78-25	100MΔ	100n∅			400n∅	4.5 ∅*	1.0 ∅	100m ∅	400 ∅	3.0	8.0p∅	N-PE	Si	200J	T039	A∅	
53	BCW78-40	100MΔ	100n∅			400n∅	4.5 ∅*	1.0 ∅	100m ∅	630 ∅	3.0	8.0p∅	N-PE	Si	200J	T039	A∅	
54	BCW79-10	100MΔ	100n∅			400n∅	870m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T039	A	
55	BCW79-16	100MΔ	100n∅			400n∅	870m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T039	A	
56	BCW79-25	100MΔ	100n∅			400n∅	870m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T039	A	
57	BCW80-10	100MΔ	100n∅			400n∅	870m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T039	A	
58	BCW80-16	100MΔ	100n∅			400n∅	870m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T039	A	
59	BCW80-25	100MΔ	100n∅			400n∅	870m ∅	2.0 ∅	500m ∅	35 ∅	1.4m		P-PE	Si	200J	T039	A	
60	BCX73-16	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	250 ∅		8.0p∅	N-PLT	Si	150J	R204c	A	
61	BCX73-25	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	400 ∅		8.0p∅	N-PLT	Si	150J	R204c	A	
62	BCX73-40	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	630 ∅		8.0p∅	N-PLT	Si	150J	R204c	A	
63	BCX74-16	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	250 ∅		8.0p∅	N-PLT	Si	150J	R204c	A	
64	BCX74-25	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	400 ∅		8.0p∅	N-PLT	Si	150J	R204c	A	
65	BCX74-40	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	630 ∅		8.0p∅	N-PLT	Si	150J	R204c	A	
66	BCX75-16	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	250 ∅	2.5	12p∅	P-PE	Si	150J	R204c	A	
67	BCX75-25	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	400 ∅	2.5	12p∅	P-PE	Si	150J	R204c	A	
68	BCX75-40	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	630 ∅	2.5	12p∅	P-PE	Si	150J	R204c	A	
69	BCX76-25	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	400 ∅	2.5	12p∅	P-PE	Si	150J	R204c	A	
70	BCX76-40	100MΔ	100n∅			400n∅	625m ∅	1.0 ∅	100m ∅	630 ∅	2.5	12p∅	P-PE	Si	150J	R204c	A	
71	BFX38	100MΔ	100n∅		350n	50n	4.0m ∅	5.0 ∅	100m ∅	30 #Δ		20p∅	N-DPE	Si	200J	T05		
72	BFX38	100MΔ	100n∅		350n	50n	4.0 ∅	5.0 ∅	100m ∅	60 Δ	1.0 #	20p∅	PAN	Si	200J	T039	A	
73	BFX39	100MΔ	100n∅		350n	50n	4.0m ∅	5.0 ∅	100m ∅	15 #Δ		20p∅	N-DPE	Si	200J	T05		
74	BFX39	100MΔ	100n∅		350n	50n	4.0 ∅	5.0 ∅	100m ∅	30 Δ	1.0 #	20p∅	PAN	Si	200J	T039	A	
75	BFX40	100MΔ	100n∅		350n	50n	4.0m ∅	5.0 ∅	100m ∅	1.0 ∅	25 #Δ	20p∅	N-DPE	Si	200J	T05		
76	BFX40	100MΔ	100n∅		350n	50n	4.0 ∅	5.0 ∅	100m ∅	60 Δ	1.0 #	20p∅	PAN	Si	200J	T039	A	
77	BFX41	100MΔ	100n∅		350n	50n	4.0m ∅	5.0 ∅	100m ∅	1.0 ∅	10 #Δ	20p∅	N-DPE</					

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-NPN N-PNP	M A T	MAX. TEMP (°C)	DWG # s/a TO200 Ser.	L O D E
								V _{cb} (V)	I _e (A)	hFE								
1	TIP56A		130nt	40nt	1.5ut	200nt	50	2.0	5.0	6.0	250m#		N	Si	150J	B3	B0	
2	TIP57A		130nt	40nt	1.5ut	200nt	50	2.0	5.0	6.0	250m#		N	Si	150J	B3	B0	
3	TIP58A		130nt	40nt	1.5ut	200nt	50	2.0	5.0	6.0	250m#		N	Si	150J	B3	B0	
4	TIP558		130nt	40nt	1.5ut	200nt	100	2.0	5.0	6.0	250m#		N	Si	200J	TO3	C0	
5	TIP559		130nt	40nt	1.5ut	200nt	100	2.0	5.0	6.0	250m#		N	Si	200J	TO3	C0	
6	TIP560		130nt	40nt	1.5ut	200nt	100	2.0	5.0	6.0	250m#		N	Si	200J	TO3	C0	
7	TIP561		130nt	40nt	1.5ut	200nt	100	2.0	5.0	6.0	250m#		N	Si	200J	TO3	C0	
8#	SFT227	7.50m	130nt			130nt	150m	2.0	5.0	3.5	15		N-P	Si	200J	TO5	A0	
9#	2SC510	20m	130nt			200n	8.0	2.0	200m	150	3.0	40p	N-DPL	Si	175J	TO39	A0	
10#	2SC512	20m	130nt			200n	8.0	2.0	200m	150	3.0	40p	N-DPL	Si	175J	TO39	A0	
11#	2SC5120	20m	130nt			200n	8.0	2.0	200m	150	3.0	40p	N-DPL	Si	175J	TO39	A0	
12#	2SC512R	20m	130nt			200n	8.0	2.0	200m	90	3.0	40p	N-DPL	Si	175J	TO39	A0	
13#	2SC522	20m	130nt			200n	10	2.0	200m	150	3.0	25p	N-DPL	Si	175J	F17	A0	
14#	2SC524	20m	130nt			200n	10	2.0	200m	150	3.0	25p	N-DPL	Si	175J	F17	A0	
15	2N1508	50m	130nt			320nt	5.0	3.6	600m	20	#Δ	50p	N	Si	175J	TO39	A0	
16	2N1509	50m	130nt			320nt	5.0	3.6	600m	20	#Δ	50p	N	Si	175J	TO39	A0	
17	2N1679	50m	130nt			320nt	5.0	3.6	600m	40	#Δ	50p	N	Si	175J	TO39	A0	
18	2N1680	50m	130nt			320nt	5.0	3.6	600m	40	#Δ	50p	N	Si	175J	TO39	A0	
19	UPT211	70m	130nt			300nt	4.0	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO5	A	
20	UPT212	70m	130nt			300nt	4.0	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO5	A	
21	UPT213	70m	130nt			300nt	4.0	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO5	A	
22	UPT214	70m	130nt			300nt	4.0	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO5	A	
23	UPT215	70m	130nt			300nt	4.0	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO5	A	
24	UPT221	70m	130nt			300nt	1.6	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO66	C0	
25	UPT222	70m	130nt			300nt	1.6	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO66	C0	
26	UPT223	70m	130nt			300nt	1.6	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO66	C0	
27	UPT224	70m	130nt			300nt	1.6	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO66	C0	
28	UPT225	70m	130nt			300nt	1.6	5.0	5.0	10	#	500m#	N-PL	Si	200J	TO66	C0	
29#	2SA779K	110m	130nt			550nt	1.2	2.0	500m	60	Δ*	500m	P	Si	150J	B11	D	
30#	2SA778AK	50m	135nt			1.7ut	200m	3.0	15m	30	Δ	67	P	Si	125J	S8	B	
31#	2SA778K	50m	135nt			1.0u	200m	3.0	15m	40	Δ	67	P	Si	125J	S8	B	
32#	BCY92	15.0m	140nt	40nt		200nt	140nt	350m	6.0	1.0m	60	10	P-PE	Si	150J	TO18	A0	
33#	BCY92B	15.0m	140nt	40nt		200nt	140nt	400m	6.0	1.0m	60	10	P-PE	Si	150J	TO5	A0	
34#	BCY95	15.0m	140nt	40nt		200nt	140nt	350m	6.0	1.0m	60	10	P-PE	Si	150J	TO18	A0	
35#	BCY95B	15.0m	140nt	40nt		200nt	140nt	400m	6.0	1.0m	60	10	P-PE	Si	150J	TO5	A0	
36#	TCH98	15.0m	140nt	40nt		200nt	140nt	350m	6.0	1.0m	115	10	P-PE	Si	150J	TO18	A0	
37#	TCH98B	15.0m	140nt	40nt		200nt	140nt	400m	6.0	1.0m	115	10	P-PE	Si	150J	TO5	A0	
38#	TCH99	15.0m	140nt	40nt		200nt	140nt	350m	6.0	1.0m	115	10	P-PE	Si	150J	TO18	A0	
39#	TCH99B	15.0m	140nt	40nt		200nt	140nt	400m	6.0	1.0m	115	10	P-PE	Si	150J	TO5	A0	
40	T1486	50m	140nt			2.6ut	1.0	5.0	200m	20	Δ#	30p	N-DPL	Si	200C	TO5	A0	
41	T1487	50m	140nt			2.6ut	2.0	5.0	200m	20	Δ#	30p	N-DPL	Si	200C	T13	A0	
42#	2SC1516K	110m	140nt			600nt	10	2.0	1.5	35	Δ		N-PE	Si	150J	B11	A0	
43	2N3342		150nt			80n	200n	250m	1.0	5.0	0.0		P	Si	175S	TO5	A	
44	2N4065		150n	100n			400n	1.0	15	0.0			P	Si	175J	TO72	DM	
45	2N4120		150n	100n			400n	1.0	15	0.0			P	Si	175J	TO72	DM	
46	2N1012	3.0M	150nt			200n	150m	250m	100m	40	Δ	2.0	N	Ge	100S	TO5	A5	
47	2N861	7.5M	150n			100n	150n	150m	500m	5.0m	25	3.0	P	Si	140S	TO18	A	
48#	2SA671K	8.0m	150nt			950nt	850nt	25	4.0	1.0	35	Δ*	600m	P-D	Si	150J	Y22B	A
49	2N864A	16.0M	150n			150n	150n	300m	6.0	1.0m	350	17	P	Si	200S	TO18	A0	
50	2N3850	20m	150n	50n		700n	200n	30	2.0	2.0	30	#	N	Si	200C	TO59	A0	
51	2N3851	20m	150n	50n		700n	200n	30	2.0	2.0	20	#	N	Si	200C	TO59	A0	
52	2N3852	20m	150n	50n		700n	200n	30	2.0	2.0	30	#	N	Si	200C	TO59	A0	
53	2N3853	20m	150n	50n		700n	200n	30	2.0	2.0	20	#	N	Si	200C	TO59	A0	
54	SSP3850	20m	150n	50n		700n	200n	30	2.0	2.0	30	#	N-PL	Si	200J	TO111	A0	
55	SSP3851	20m	150n	50n		700n	200n	30	2.0	2.0	20	#	N-PL	Si	200J	TO111	G	
56	SSP3852	20m	150n	50n		700n	200n	30	2.0	2.0	20	#	N-PL	Si	200J	TO111	G	
57	SSP3853	20m	150n	50n		700n	200n	30	2.0	2.0	20	#	N-PL	Si	200J	TO111	G	
58	2N5658	30.0M	150nt			800nt	30	2.0	500m	40	#	150p	N	Si	200J	TO59	A0	
59	2N5659	30.0M	150nt			800nt	30	2.0	500m	40	#	150p	N	Si	200J	TO111	G	
60	SSP3200	30.0M	150nt			800nt	50	5.0	10	25	Δ	100m	N-PL	Si	200J	TO61	0	
61	SSP3201	30.0M	150nt			800nt	50	5.0	10	100m	100m	150p	N-PL	Si	200J	TO61	0	
62#	2SC1062	35m	150nt			5.4ut	6.4ut	700m	5.0	5.0	70	#	N-D	Si	175J	TO39	A0	
63	SSP3050	40m	150nt			1.0u	6.4ut	20	5.0	5.0	20	Δ	N-PL	Si	200J	TO66	C0	
64	2N3036	50.0M	150n	30n		1.0u	200n	5.0	10	10m	40	Δ	N	Si	200S	TO5	A0	
65	2N3037	50.0M	150n	30n		1.0u	200n	1.0	10	100u	15	Δ	N	Si	200S	TO50	A	
66	2N3038	50.0M	150n	30n		1.0u	200n	1.0	10	100u	30	Δ	N	Si	200S	TO50	A	
67#	2SC1706H	60m	150nt			2.0ut	1.5ut	200m	6.0	10m	30	Δ	N-D	Si	175J	TO18	A	
68	PT6940	75m	150nt				400nt	30	3.0	3.0	40	Δ	N-PL	Si	200A	TO5	A0	
69	PT6941	75m	150nt				400nt	35	5.0	1.0	40	Δ	N-PL	Si	200A	TO3	A0	
70	PT6942	75m	150nt				400nt	35	5.0	1.0	40	Δ	N-PL	Si	200A	TO3	C0	
71	PT6943	75m	150nt				400nt	35	5.0	1.0	30	Δ	N-PL	Si	200A	TO3	C0	
72	PT7903	75m	150nt				400nt	35	5.0	1.0	30	Δ	N-PL	Si	200A	TO3	C0	
73	PT7904	75m	150nt				400nt	35	5.0	1.0	40	Δ	N-PL	Si	200A	TO3	C0	
74	PT7905	75m	150nt				400nt	35	5.0	1.0	30	Δ	N-PL	Si	200A	TO3	C0	
75	PT7906	75m	150nt				400nt	35	5.0	1.0	30	Δ	N-PL	Si	200A	TO3	C0	
76	PT7907	75m	150nt				400nt	35	5.0	1.0	40	Δ	N-PL	Si	200A	TO3	C0	
77	PT7908	75m	150nt				400nt	35	5.0	1.0	30	Δ	N-PL	Si	200A	TO3	C0	
78	PT7909	75m	150nt				400nt	35	5.0	1.0	15	Δ	N-PL	Si	200A	TO3	C0	
79	PT7910	75m	150nt				400nt	35	5.0	1.0	30	Δ	N-PL	Si	200A	TO3	C0	
80	PT7911	75m	150nt				400nt	35	5.0	1.0	15	Δ	N-PL	Si	200A	TO3	C0	
81	PT7956	75m	150nt				400nt	35	5.0	1.0	10	Δ	N-PL	Si	200A	TO3	C0	
82	PT7957	75m	150nt				400nt	35	5.0	1.0	10	Δ	N-PL	Si	200A	TO3	C0	
83	2N5326	80.0M	150nt				400nt	20	1.0	1.0	50	#	N	Si	200J	TO59	A	
84	BDY60	100m	150nt	10nt		200nt	80nt	15	10	500m	45	Δ	N-PE	Si	175J	TO3	A0	
85	BDY61	100m	150nt	10nt		200nt	80nt	15	10	500m	45	Δ	N-PE	Si	175J	TO3	C0	
86	BDY62	100m	150nt	10nt		200nt	80nt	15	10	500m	45	Δ	N-PE	Si	175J	TO3	C0	
87#	BCY58A	125m	150nt				800nt	1.0	5.0	10								

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-PNP	M A T	MAX. TEMP (°C)	DWG # s/a TO200 Ser.	L E A D E
								Vcb (V)	Ic (A)	hFE								
1	2N6520	40MΔ	200n			3.5u	625m	10	10	30	30	6.0p	P	Si	150S	T092	A	
2	UPT311	40MΔ	200n			800n	1.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T05	A	
3	UPT312	40MΔ	200n			800n	1.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T05	A	
4	UPT313	40MΔ	200n			800n	1.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T05	A	
5	UPT314	40MΔ	200n			800n	1.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T05	A	
6	UPT315	40MΔ	200n			800n	1.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T05	A	
7	UPT321	40MΔ	200n			800n	2.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T066	C	
8	UPT322	40MΔ	200n			800n	2.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T066	C	
9	UPT323	40MΔ	200n			800n	2.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T066	C	
10	UPT324	40MΔ	200n			800n	2.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T066	C	
11	UPT325	40MΔ	200n			800n	2.0	5.0	3.0	10	500m	50p	N-PL	Si	200J	T066	C	
12	JAN2N696	50.0MΔ	200n			1.0u	2.0	5.0	3.0	10	500m	50p	N	Si	200J	T066	A	
13	BSX47	50MΔ	200n		700n	150n	5.0	1.0	1.0	63	Δ#	10	N	Si	200J	T039	A	
14	U2T301	50MΔ	200n	100n	800n	300n	1.0	5.0	2.0	1.0k	#	750m	N-PL	Si	200J	T033	KD	
15	U2T401	50MΔ	200n	100n	800n	300n	2.0	5.0	2.0	1.0k	#	750m	N-PL	Si	200J	F24	KH	
16	JAN2N697	60.0MΔ	200n			1.0u	2.0	1.0	500m	2.0	Δ#	25p	N	Si	200S	T05	A	
17	2N3108	60.0MΔ	200n		600n	600n	5.0	1.0	150m	40	#Δ	20p	N	Si	200S	T05	A	
18	2N3110	60.0MΔ	200n		600n	600n	5.0	1.0	150m	40	#Δ	20p	N	Si	200S	T05	A	
19	2N5344	60MΔ	200n			700n	40	5.0	1.0	7.0	Δ#	3.0	P	Si	200J	T066	C	
20	2N5345	60MΔ	200n			700n	40	5.0	1.0	7.0	Δ#	3.0	P	Si	200J	T066	C	
21	2N5412	60.0MΔ	200n	25n	300n	300n	100	5.0	2.0	2.0	Δ#	10	N	Si	175J	T06	A	
22	B148000	60.0MΔ	200n	25n	300n	300n	100	5.0	0.2m	160	#	10	N	Si	175J	T061	A	
23	B148001	60.0MΔ	200n	25n	300n	300n	100	5.0	0.2m	160	#	10	N	Si	175J	T061	A	
24	B148002	60.0MΔ	200n	25n	300n	300n	100	5.0	0.2m	160	#	10	N	Si	175J	T061	A	
25	B148003	60.0MΔ	200n	25n	300n	300n	100	5.0	0.2m	160	#	10	N	Si	175J	T061	A	
26	B148004	60.0MΔ	200n	25n	300n	300n	100	5.0	0.2m	160	#	10	N	Si	175J	T061	A	
27	B148005	60.0MΔ	200n	25n	300n	300n	100	5.0	0.2m	160	#	10	N	Si	175J	T061	A	
28	BD121	60MΔ	200n	30n	350n	150n	45	1.0	1.0	30	Δ#	650m	N-D	Si	175J	T03	C	
29	BD123	60MΔ	200n	30n	350n	150n	45	1.0	1.0	30	Δ#	650m	N-D	Si	175J	T03	C	
30	BSX33	60.0MΔ	200n	30n	350n	600n	1.8	1.0	1.0	40	Δ#	25p	N-DPE	Si	200J	T018	C	
31	SVT200-20	60MΔ	200n	100n	900n	300n	5.0	5.0	2.0	15	Δ	50m	N-PL	Si	200J	T03	C	
32	SVT250-20	60MΔ	200n	100n	900n	300n	5.0	5.0	2.0	15	Δ	50m	N-PL	Si	200J	T03	C	
33	SVT300-20	60MΔ	200n	100n	900n	300n	5.0	5.0	2.0	15	Δ	50m	N-PL	Si	200J	T03	C	
34	2N3107	70.0MΔ	200n			1u	5.0	1.0	1.0m	35	Δ	20p	N	Si	200J	T05	A	
35	2N3109	70.0MΔ	200n			1u	5.0	1.0	1.0m	35	Δ	20p	N	Si	200J	T05	A	
36	2SA624	70MΔ	200n		600n	800n	7.0	4.0	500m	35	#Δ	1.0	P-PET	Si	125J	B15a	P	
37	2SA647	70MΔ	200n		600n	800n	7.0	4.0	300m	20	#Δ	2.0	P-PET	Si	125J	B15a	P	
38	2SC1013	70MΔ	200n		1.0u	1.2u	7.0	4.0	500m	35	#Δ	1.0	N-PET	Si	150J	B15a	P	
39	2SC1014	70MΔ	200n		1.0u	1.2u	7.0	4.0	500m	35	#Δ	1.0	N-PET	Si	150J	B15a	P	
40	PTC193-RT	70MΔ	200n		1.2u	7.0	7.0	4.0	500m	35	#Δ	1.0	N	Si	150J	B15a	P	
41	PT5929	75MΔ	200n			53	5.0	5.0	5.0	85	Δ	250m	N-PL	Si	200A	T059	A	
42	2N1838	90.0MΔ	200n		800n	800n	2.0	1.4	100m	10	Δ	14	N	Si	175J	T05	A	
43	2N1839	90.0MΔ	200n		600n	600n	2.0	1.4	150m	10	Δ	9.3	N	Si	175J	T05	A	
44	2N5327	100MΔ	200n			900n	5.0	5.0	5.0	50	Δ	.50	N	Si	200J	T05	A	
45	2N5328	100MΔ	200n			900n	3.0	5.0	5.0	50	Δ	.12	N	Si	200J	T059	A	
46	PT2993	100MΔ	200n			800n	44	2.0	3.0	100	Δ	150p	N	Si	200A	T03	C	
47	PT6944	100MΔ	200n			800n	80	3.0	5.0	40	Δ	150p	N	Si	200A	T03	C	
48	PT6945	100MΔ	200n			800n	80	3.0	5.0	40	Δ	150p	N	Si	200A	T03	C	
49	PT6946	100MΔ	200n			800n	80	3.0	5.0	30	Δ	150p	N	Si	200A	T03	C	
50	PT7912	100MΔ	200n			800n	80	3.0	5.0	200	Δ	150p	N	Si	200A	T03	C	
51	PT7913	100MΔ	200n			800n	80	3.0	5.0	50	Δ	150p	N	Si	200A	T03	C	
52	PT7914	100MΔ	200n			800n	80	3.0	5.0	30	Δ	150p	N	Si	200A	T03	C	
53	PT7915	100MΔ	200n			800n	80	3.0	5.0	200	Δ	150p	N	Si	200A	T03	C	
54	PT7916	100MΔ	200n			800n	80	3.0	5.0	50	Δ	150p	N	Si	200A	T03	C	
55	PT7917	100MΔ	200n			800n	80	3.0	5.0	30	Δ	150p	N	Si	200A	T03	C	
56	PT7918	100MΔ	200n			800n	80	3.0	5.0	100	Δ	150p	N	Si	200A	T03	C	
57	PT7919	100MΔ	200n			800n	80	3.0	5.0	30	Δ	150p	N	Si	200A	T03	C	
58	PT7920	100MΔ	200n			800n	80	3.0	5.0	20	Δ	150p	N	Si	200A	T03	C	
59	PT7958	100MΔ	200n			800n	80	3.0	5.0	10	Δ	150p	N	Si	200A	T03	C	
60	PT7959	100MΔ	200n			800n	80	3.0	5.0	10	Δ	150p	N	Si	200A	T03	C	
61	2N1837	140MΔ	200n		500n	500n	2.0	8.0	150m	10	Δ	5.3	N	Si	175J	T05	A	
62	2N1837A	140MΔ	200n		500n	500n	2.8	8.0	150m	10	Δ	5.3	N	Si	175J	T05	A	
63	BSX66	200MΔ	200n	50n	100n	400n	260m*	0.0	100m	25	Δ	5p	NPE	Si	175J	T018	A	
64	BSX67	200MΔ	200n	50n	100n	400n	260m*	0.0	100m	35	Δ	5p	NPE	Si	175J	T018	A	
65	2SC129	8.0MΔ	220n	45n	880n	420n	125m	5.0	100m	45	Δ	5p	N-A	Ge	75J	T05	A	
66	BF556	86.0MΔ	225n			625n	5.0m	1.0	100m	15	Δ	25p	N-DPE	Si	200J	T05	A	
67	2N2945	10.0MΔ	230n		150n	230n	4.0m	6.0	200m	200	Δ	9.0p	P-DE	Si	200J	T046	A	
68	2N696A	4.0MΔ	230n		300n	800m	1.0	150m	20	Δ	.10	35p	N	Si	200J	T05	A	
69	2N598	5.6MΔ	240n		900n	330n	250m	1.0	200m	50	Δ	20	P	Ge	100J	T05	A	
70	JAN2N598	5.6MΔ	240n		900n	330n	250m	1.0	200m	160	Δ	20	P	Ge	100S	T05	A	
71	JAN2N600	5.6MΔ	240n		900n	330n	750m	1.0	200m	160	Δ	20	P	Ge	100S	T05	A	
72	2N1998	6.6MΔ	240n	60n	750n	330n	250m	1.0	100m	225	Δ	20	P	Ge	100S	T05	A	
73	2N600	8.0MΔ	240n		900n	330n	750m	1.0	100m	125	Δ	20	P-A	Ge	100J	T60	A	
74	DTS2000		250n		300n	180n	720m		2.0k	2.0	Δ	15p	N	Si	150J	T092	KC	
75	DTS2001		250n		300n	180n	720m		400m	2.0	Δ	12p	N	Si	150J	T092	KC	
76	DTS2002		250n		300n	180n	720m		2.0k	2.0	Δ	12p	N	Si	150J	T092	KC	
77	DTS2003		250n		300n	180n	720m		300m	2.0	Δ	12p	N	Si	150J	T092	KC	
78	DTS410	2.0MΔ	250n		600n	150n	100	5.0	2.5	10	Δ	800m	N-D	Si	150J	Y204a	C	
79	TIP51	2.5MΔ	250n			5.0u	100	1.0	200m	30	Δ		N	Si	150J	B19	B	
80	TIP52	2.5MΔ	250n			5.0u	100	1.0	200m	30	Δ		N	Si	150J	B19	B	
81	TIP53	2.5MΔ	250n			5.0u	100	1.0	200m	30	Δ		N	Si	150J	B19	B	
82	TIP54	2.5MΔ	250n			5.0u	100	1.0	200m	30	Δ		N	Si	150J	B19	B	
83	SDT410	4.0MΔ	250n		600n	150n	80	5.0	2.5	10	Δ		N-ME	Si	200J	T03	C	
84	SDT411	4.0MΔ	250n		600n	150n	100	5.0	2.5	10	Δ		N-ME	Si	200J	T03	C	
85	SDT423	4.0MΔ	250n		600n	150n	100	5.0	2.5	10	Δ		N-ME	Si	200J	T03	C	
86	SDT424	4.0MΔ	250															

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-N-P N-N-P-N	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E
								Vcb (V)	Ic (A)	hFE								
1	TIP32B	3.0MΔ	300n∅			1.0u∅	40 ∅	10	500m∅	20 ∅	400m#		P-DM	Si	150J	B1	B∅	
2	TIP32C	3.0MΔ	300n∅			1.0u∅	40 ∅	10	500m∅	20 ∅	400m#		P-DM	Si	150J	B1	B∅	
3	2N2946	5.00M	300n∅		150n	300n	400m	6.0	200uΔ	200		9.0p	P-DE	Si	200J	TO46	A∅	
4#	2SC1061K	6.0MΔ	300n∅			2.5u∅	25 ∅	4.0	1.0 ∅	35 ∅	1.0		N-D	Si	150J	Y220b	D∅	
5#	ASY74-RT	6.0MΔ	300n∅	55n		200n	500m	0.0	50u	40 Δ			N-A	Ge	85J	TO5	A∅	
6#	2SD219	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	80			N-D	Si	150J	TO5	A∅	
7#	2SD220	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	80	1.0		N-D	Si	150J	TO5	A∅	
8#	2SD221	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	80	1.0		N-D	Si	150J	TO5	A∅	
9#	2SD223	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	80	1.0		N-D	Si	150J	F43	A∅	
10#	2SD236	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	60	1.0		N-D	Si	150J	TO66	C∅	
11#	2SD237	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	60	1.0		N-D	Si	150J	TO66	C∅	
12#	2SD238	8.0M	300n	40n	2.4u	2.6u	500m	4.0	200m	60	1.0		N-D	Si	150J	TO66	C∅	
13	IR5251	8.0MΔ	300n∅			1.0u∅	100 ∅	5.0	3.0 ∅	140 Δ	300m		ND	Si	150J	TO3	KF∅	
14	IR5252	8.0MΔ	300n∅			1.0u∅	100 ∅	5.0	3.0 ∅	140 Δ	300m		ND	Si	150J	TO3	KF∅	
15	IR5253	8.0MΔ	300n∅			1.0u∅	100 ∅	5.0	3.0 ∅	140 Δ	300m		ND	Si	150J	TO3	KF∅	
16	2N440	10MΔ	300n		600n	200n	100m	1.0	50m∅	70	5.0	20pΔ	N-A	Ge	85J	TO5	A∅	
17	2N440A	10MΔ	300n		600n	200n	150m	1.0	50m∅	70	5.0	20pΔ	A	Ge	85J	TO5	A∅	
18	2N2648	10MΔ	300n		900n	500n	300m	5.0	1.0 ∅	500	400m		P	Ge	100C	TO5	A∅	
19	2N5050	10MΔ	300n			1.2u	40 ∅	5.0	1.0 ∅	25 Δ#		250p∅	N	Si	175J	TO66	C∅	
20	2N5051	10MΔ	300n			1.2u	40 ∅	5.0	1.0 ∅	25 Δ#		250p∅	N	Si	175J	TO66	C∅	
21	2N5052	10MΔ	300n			1.2u	40 ∅	5.0	1.0 ∅	25 Δ#		250p∅	N	Si	175J	TO66	C∅	
22#	2SC91	10M	300n			250n	100m	.30	200m	220		25p	N	Ge	85	TO5	A∅	
23#	ASY29-RT	10MΔ	300n	75n		800n	150m	1.0	10m∅	113	20	16pΔ	N-A	Ge	85J	TO5	A∅	
24	2N397	12M	300n	170n	700n	280n	150m	350m	200m∅	20 Δ	4.0	12p	P-A	Ge	100S	TO5	A∅	
25	2N1357	12.0M	300n∅			280n∅	200m	1.0	10m∅	85	4.0	12p	P-A	Ge	85J	TO5	A∅	
26	2N2424	15.0M	300n∅			200n	375m	1.0	25m∅	25 Δ	20	14p	P-A	Si	160S	TO5	A∅	
27#	JAN2N2880	20MΔ	300n	60n	1.7u	300n	30 ∅	5.0	5.0 ∅	15 Δ#		150p∅	N	Si	200A	ZA30	A∅	
28#	JAN2N3749	20MΔ	300n	60n	1.7u	300n	30 ∅	5.0	5.0 ∅	15 Δ#		150p∅	N	Si	200A	T53e	M C	
29#	SDT12301	20MΔ	300n∅			1.5u	350n	220	10 ∅	10 Δ	400m		N-PL	Si	200J	TO3	C∅	
30#	SDT12302	20MΔ	300n∅			1.5u	350n	220	10 ∅	10 Δ	400m		N-PL	Si	200J	TO3	C∅	
31#	SDT12303	20MΔ	300n∅			1.5u	350n	220	10 ∅	10 Δ	400m		N-PL	Si	200J	TO3	C∅	
32#	2SD536	27MΔ	300n∅			1.5u∅	300n∅	100	5.0 ∅	50	300m		N-DM	Si	175J	TO3	C∅	
33#	2SD537	27MΔ	300n∅			1.5u∅	300n∅	100	5.0 ∅	50	300m		N-DM	Si	175J	TO3	C∅	
34	2N5731	30MΔ	300n			3.0u	600n	75 ∅	5.0 ∅	5.0 Δ	120m	350p∅	N	Si	200J	TO61	A∅	
35	2N5732	30MΔ	300n			3.0u	600n	75 ∅	5.0 ∅	5.0 Δ	120m	350p∅	N	Si	200J	TO3	A∅	
36	1723-0410	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
37	1723-0610	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
38	1723-0810	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
39	1723-1010	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
40	1723-1210	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
41	1723-1410	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
42	1723-1610	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
43	1723-1810	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	125m#	800p∅	N-E	Si	200J	TO66	C∅	
44	1743-0810	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
45	1743-1210	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
46	1743-1610	30MΔ	300n∅			500n	300n	85 ∅	4.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
47	1748-0610	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
48	1748-0810	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
49	1748-1010	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
50	1748-1210	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
51	1748-1410	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
52	1748-1610	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
53	1748-1810	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
54	1763-0610	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
55	1763-0810	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
56	1763-1010	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
57	1763-1210	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
58	1763-1410	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
59	1763-1610	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
60	1763-1810	30MΔ	300n∅			500n	300n	85 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO3	C∅	
61	1768-0610	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
62	1768-0810	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
63	1768-1010	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
64	1768-1210	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
65	1768-1410	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
66	1768-1610	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
67	1768-1810	30MΔ	300n∅			500n	300n	100 ∅	2.0 ∅	20 Δ#	800p∅		N-E	Si	200J	TO63	A∅	
68	1814-2001	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
69	1814-2201	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
70	1814-2501	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
71	1814-2701	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
72	1814-3001	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
73	1814-3201	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
74	1814-3501	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
75	1814-3701	30MΔ	300n		600n	300n	44	4.0	1.0 ∅	20 Δ#	600m#	250p∅	N-E	Si	150J	TO66	C∅	
76#	BSX62-10	30MΔ	300n∅			1.5u∅	875m	1.0	100m∅	110	700m	70p∅	N-PE	Si	200J	TO39	A∅	
77#	BSX62-16	30MΔ	300n∅			1.5u∅	875m	1.0	100m∅	180	700m	70p∅	N-PE	Si	200J	TO39	A∅	
78#	BSX63-10	30MΔ	300n∅			1.5u∅	875m	1.0	100m∅	110	700m	70p∅	N-PE	Si	200J	TO39	A∅	
79#	BSX63-16	30MΔ	300n∅			1.5u∅	875m	1.0	100m∅	180	700m	70p∅	N-PE	Si	200J	TO39	A∅	
80#	BSX64-10	30MΔ	300n∅															

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-NPN N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a T0200 Ser.	L C O D E
								V _{cb} (V)	I _e (A)	h _{FE}								
1	2N1892	5.0MΔ	350n	150n	1.2u	650n	150m	350m	200m	15 Δ	2.0	20p	P	N-DMt	Ge	85J	T05	A
2	TIP73	5.0MΔ	350n	20n	500n	400n	2.0	4.0	15	5.0 Δ#	260m#		N-DMt	Si	150J	B1	B	
3	TIP73A	5.0MΔ	350n	20n	500n	400n	2.0	4.0	15	5.0 Δ#	260m#		N-DMt	Si	150J	B1	B	
4	TIP73B	5.0MΔ	350n	20n	500n	400n	2.0	4.0	15	5.0 Δ#	260m#		N-DMt	Si	150J	B1	B	
5	TIP73C	5.0MΔ	350n	20n	500n	400n	2.0	4.0	15	5.0 Δ#	260m#		N-DMt	Si	150J	B1	B	
6	ASY27-RT	6.0MΔ	350n	75n	1.5u	620n	150m	1.0	10m	80 Δ	20	16p	P-A	Ge	85J	T05	A	
7	2N3216	9.0MΔ	350n		250n	150m	2.2	200m	60 Δ	1.1	20p	P	N-DMt	Ge	100S	T05	A	
8	2G605	9.40M	350n	160n	440n	280n	150m	.25	4.5m	75	12p	P-A	Ge	85J	T05	A		
9	2N3445	10.0MΔ	350n		350n	115	5.0	3.0m	60	75	500m	400p	N-EA	Si	200J	T03	C	
10	2N3446	10.0MΔ	350n		2.0u	350n	115	5.0	3.0m	60	75	500m	N-EA	Si	200J	T03	C	
11	2N3447	10.0MΔ	350n		2.0u	350n	115	5.0	5.0m	120	300m	400p	N-EA	Si	200J	T03	C	
12	2N3448	10.0MΔ	350n		2.0u	350n	115	5.0	5.0m	120	300m	400p	N-EA	Si	200J	T03	C	
13	2N3487	10MΔ	350n		2.0u	350n	115	5.0	500m	20 Δ	4.0	550p	N	Si	200C	T061	A	
14	2N3488	10MΔ	350n		2.0u	350n	115	5.0	500m	20 Δ	4.0	550p	N	Si	200C	T061	A	
15	2N3489	10MΔ	350n		2.0u	350n	115	5.0	500m	20 Δ	4.0	550p	N	Si	200C	T061	A	
16	2N3490	10MΔ	350n		2.0u	350n	115	5.0	500m	40 Δ	3.3	550p	N	Si	200C	T061	A	
17	2N3491	10MΔ	350n		2.0u	350n	115	5.0	500m	40 Δ	3.3	550p	N	Si	200C	T061	A	
18	2N3492	10MΔ	350n		2.0u	350n	115	5.0	500m	40 Δ	3.3	550p	N	Si	200C	T061	A	
19	JAN2N337	12.5MΔ	350n		200n	200n	125m	5.0	10m	20 Δ	150	3.0p	N	Si	150A	T05	A	
20	2N907	12.5MΔ	350n		200n	200n	150m	5.0	10m	20 Δ	150	3.0p	N	Si	175S	R218	A	
21	JAN2N338	25MΔ	350n		350n	350n	125m	5.0	10m	45 Δ	150	3.0p	N	Si	150A	T05	A	
22	2N6377	25MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	50m#	1.5n	P	Si	200J	F11a	C	
23	2N6378	25MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	50m#	1.5n	P	Si	200J	F11a	C	
24	2N6379	25MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	50m#	1.5n	P	Si	200J	F11a	C	
25	2N6380	25MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	60m#	1.5n	P	Si	200J	T063	A	
26	2N6381	25MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	60m#	1.5n	P	Si	200J	T063	A	
27	2N6382	25MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	60m#	1.5n	P	Si	200J	T063	A	
28	2N6495	25MΔ	350n		350n	70	3.0	1.0	10 Δ#	150m#			N	Si	200J	T066	C	
29	2N6274	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	F11a	C	
30	2N6275	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	F11a	C	
31	2N6276	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	F11a	C	
32	2N6277	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	F11a	C	
33	2N6278	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	T063	A	
34	2N6279	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	T063	A	
35	2N6280	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	T063	A	
36	2N6281	30MΔ	350n		800n	250n	250	4.0	1.0	50 Δ#	600p		N	Si	200J	T063	A	
37	BUY24	50.0MΔ	350n		650n	15	2.0	500u	100	35	75m		N-DPE	Si	150J	T03	C	
38	2N5584	70MΔ	350n		1.2m	1.0k	3.0	20	15 Δ				N	Si	200J	T063	A	
39	BDY90	70MΔ	350n		200n	40	2.0	1.0	35	150m			N	Si	175J	T03	C	
40	BDY91	70MΔ	350n		200n	40	2.0	1.0	35	150m			N	Si	175J	T03	C	
41	BDY92	70MΔ	350n		200n	40	2.0	1.0	35	100m			N	Si	175J	T03	C	
42	2N5329	80.0MΔ	350n		1.1u	65	3.0	20	10 Δ	.09			N	Si	200J	T061	A	
43	2N5330	80.0MΔ	350n		1.2u	80	3.0	30	10 Δ	.06			N	Si	200J	T061	A	
44	2N5331	80.0MΔ	350n		1.2u	100	3.0	30	10 Δ	.06			N	Si	200J	T063	A	
45	PT3993	100MΔ	350n		1.0u	200	2.0	20	15 Δ		600p		N	Si	200A	T063	A	
46	PT5955	100MΔ	350n		1.0u	175	5.0	15	25 Δ		600p		N	Si	200A	T063	A	
47	PT6909	100MΔ	350n		1.0u	175	2.0	10	20 Δ		600p		N	Si	200A	T061	A	
48	PT6910	100MΔ	350n		1.0u	175	2.0	10	20 Δ		600p		N	Si	200A	T063	A	
49	PT6939	100MΔ	350n		1.0u	100	5.0	5.0	40 Δ		600p		N	Si	200A	T061	A	
50	PT6950	100MΔ	350n		1.0u	175	5.0	10	40 Δ		600p		N	Si	200A	T03	C	
51	PT7930	100MΔ	350n		1.0u	175	5.0	10	30 Δ		600p		N	Si	200A	T03	C	
52	PT7931	100MΔ	350n		1.0u	175	5.0	10	40 Δ		600p		N	Si	200A	T03	C	
53	PT7932	100MΔ	350n		1.0u	175	5.0	10	30 Δ		600p		N	Si	200A	T03	C	
54	PT7933	100MΔ	350n		1.0u	175	5.0	10	30 Δ		600p		N	Si	200A	T03	C	
55	PT7934	100MΔ	350n		1.0u	175	5.0	10	40 Δ		600p		N	Si	200A	T03	C	
56	PT7935	100MΔ	350n		1.0u	175	5.0	10	30 Δ		600p		N	Si	200A	T03	C	
57	PT7936	100MΔ	350n		1.0u	175	5.0	10	20 Δ		600p		N	Si	200A	T03	C	
58	PT7937	100MΔ	350n		1.0u	175	5.0	10	30 Δ		600p		N	Si	200A	T03	C	
59	PT7938	100MΔ	350n		1.0u	175	5.0	10	20 Δ		600p		N	Si	200A	T03	C	
60	PT5956	125MΔ	360n		1.0u	175	5.0	10	20 Δ		600p		N	Si	200A	T063	A	
61	PT5961	125MΔ	360n		1.0u	175	5.0	5.0	40 Δ		600p		N	Si	200A	T063	A	
62	PT7939	125MΔ	360n		1.0u	220	5.0	20	20 Δ		600p		N	Si	200A	T03	C	
63	PT7940	125MΔ	360n		1.0u	220	5.0	20	30 Δ		600p		N	Si	200A	T03	C	
64	PT7941	125MΔ	360n		1.0u	220	5.0	20	20 Δ		600p		N	Si	200A	T03	C	
65	PT7942	125MΔ	360n		1.0u	220	5.0	20	20 Δ		600p		N	Si	200A	T03	C	
66	PT7943	125MΔ	360n		1.0u	220	5.0	20	30 Δ		600p		N	Si	200A	T03	C	
67	PT7944	125MΔ	360n		1.0u	220	5.0	20	20 Δ		600p		N	Si	200A	T03	C	
68	PT7945	125MΔ	360n		1.0u	220	5.0	20	20 Δ		600p		N	Si	200A	T03	C	
69	PT7946	125MΔ	360n		1.0u	220	5.0	20	30 Δ		600p		N	Si	200A	T03	C	
70	PT7947	125M	360n		1.0u	220	5.0	20	20 Δ		600p		N	Si	200A	T03	C	
71	2N447B		400n		700n	150m	.25	20m	80 Δ				N	Ge	100S	T05	A	
72	2SC1055H		400n		3.5u	4.0u	25	4.0	30 Δ		333m		N-D	Si	150J	T066	C	
73	2SC1227		400n		1.8u	2.3u	100	5.0	50		150m		N-DM	Si	175J	T03	C	
74	2SD558		400n		1.0u	2.0u	1.0	2.0	1.0	4.0k#	1.5 #		NE	Si	150J	Y221b	D	
75	SDM6000		400n		3.0u	1.0u	80	5.0	10	100 Δ	140m		N	Si	200J	T03	KF	
76	SDM6001		400n		3.0u	1.0u	80	5.0	10	100 Δ	140m		N	Si	200J	T03	KF	
77	SDM6002		400n		3.0u	1.0u	80	5.0	10	100 Δ	140m		N	Si	200J	T03	KF	
78	SDM6003		400n		3.0u	1.0u	80	5.0	10	100 Δ	140m		N	Si	200J	T03	KF	
79	SDM6004		400n		3.0u	1.0u	80	5.0	10	100 Δ	140m		N	Si	200J	T03	KF	
80	TIP2955		400n		400n	90	4.0	1.0	15 Δ		16	25p	P-DM	Si	150J	B19	B	
81	MA4404	1.0MΔ	400n	130n	1.1u	600n	300m	200m	12m	80			P	Ge	100J	T05	A	
82	IR409	2.5MΔ	400n		200n	125	5.0	1.0	15 Δ		1.2		N-D	Si	150J	T03	C	
83	RCA29	3.0MΔ	400n		1.2u	30	10	200m	20 Δ				N-ET	Si	150J	Y220b	X	
84	RCA29A	3.0MΔ	400n		1.2u	30	10	200m	20 Δ				N-ET	Si	150J	Y220b	X	
85	RCA29B	3.0MΔ	400n		1.2u	30	10	200m	20 Δ				N-ET	Si	150J	Y220b	X	
86	RCA29C	3.0MΔ	400n		1.2u	30	10	200m	20									

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L O A D E
								Vcb (V)	Ic (A)	hFE								
1#	BDX45	1.0G\$	400n			2.0u	1.2	10	150m	10kΔ	1.6		P-PL	Si	150J	TO126	KB	
2#	BDX46	1.0G\$	400n			2.0u	1.2	10	150m	1.0kΔ	1.6		P-PL	Si	150J	TO126	KB	
3#	BSS60	1.0G\$	400n			2.0u	800m	10	150m	1.0kΔ	2.6		P-PL	Si	200J	TO39	KC	
4#	BSS61	1.0G\$	400n			2.0u	800m	10	150m	1.0kΔ	2.6		P-PL	Si	200J	TO39	KC	
5	2N1683	80.0M\$	410n			150m	150m	500m	40m	85 ↑		8.0p	P-ME	Ge	85	TO5	A	
6	2N3713	4.00M\$Δ	450nf		300nf	400nf	150	2.0	1	25 Δ			N	Si	200J	TO3	C	
7	2N3714	4.00M\$Δ	450nf		300nf	400nf	150	2.0	1	25 Δ			N	Si	200J	TO3	C	
8	2N3715	4.00M\$Δ	450nf		300nf	400nf	150	2.0	1	50 Δ			N	Si	200J	TO3	C	
9	2N3716	4.00M\$Δ	450nf		300nf	400nf	150	2.0	1	50 Δ			N	Si	200J	TO3	C	
10	2N1284	5.0MΔ	450n	180n	900n	350n	150m	1.0	10m	30 Δ	20	20p	P-A	Ge	85J	TO5	A	
11#	NKT734	5.00M	450n		500n	600n	150m	1.35	2	15 Δ	20	20p	N	Si	85J	TO5	A	
12▼	SDT14304	7.0M\$Δ	450n		2.5u	450n	220	5.0	5.0	15 Δ	70m		N-PL	Ge	200J	TO3	C	
13▼	SDT14305	7.0M\$Δ	450n		2.5u	450n	220	5.0	5.0	15 Δ	70m		N-PL	Si	200J	TO3	C	
14#	2S033	25.0M\$	450n	2.0u	2.0u	1.0u	4.0	10	3.0u	10 #		120p	N-DM	Si	175	TO3		
15#	2S034	25.0M\$	450n	2.0u	2.0u	1.0u	4.0	10	3.0u	25 #		120p	N-DM	Si	175	TO3		
16#	2S035	25.0M\$	450n	2.0u	2.0u	1.0u	4.0	10	3.0u	10 #		120p	N-DM	Si	175	TO3		
17#	2S036	25.0M\$	450n	2.0u	2.0u	1.0u	4.0	10	3.0u	25 #		120p	N-DM	Si	175	TO3		
18	1743-0620	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
19	1743-1020	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
20	1743-1420	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
21	1763-0620	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
22	1763-0820	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
23	1763-1020	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
24	1763-1220	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
25	1763-1420	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
26	1763-1620	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
27	1763-1820	30M\$Δ	450n		550n	350n	85	2.5	20	20 #Δ		800p	N-E	Si	200J	TO3	C	
28	1768-0620	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
29	1768-0820	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
30	1768-1020	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
31	1768-1220	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
32	1768-1420	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
33	1768-1620	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
34	1768-1820	30M\$Δ	450n		550n	350n	100	2.5	20	20 #Δ		800p	N-E	Si	200J	TO63	A	
35	UPT1021	50M\$	450nf		350nf	2.5	5.0	15	15	15 #	100m#		N-PL	Si	200J	TO66	C	
36	UPT1022	50M\$	450nf		350nf	2.5	5.0	15	15	15 #	100m#		N-PL	Si	200J	TO66	C	
37	UPT1023	50M\$	450nf		350nf	2.5	5.0	15	15	15 #	100m#		N-PL	Si	200J	TO66	C	
38	UPT1024	50M\$	450nf		350nf	2.5	5.0	15	15	15 #	100m#		N-PL	Si	200J	TO66	C	
39	UPT1025	50M\$	450nf		350nf	2.5	5.0	15	15	15 #	100m#		N-PL	Si	200J	TO66	C	
40	UPT1031	50M\$	450nf		350nf	3.5	5.0	15	15	15 #	133m#		N-PL	Si	200J	TO3	C	
41	UPT1032	50M\$	450nf		350nf	3.5	5.0	15	15	15 #	133m#		N-PL	Si	200J	TO3	C	
42	UPT1033	50M\$	450nf		350nf	3.5	5.0	15	15	15 #	133m#		N-PL	Si	200J	TO3	C	
43	UPT1034	50M\$	450nf		350nf	3.5	5.0	15	15	15 #	133m#		N-PL	Si	200J	TO3	C	
44	UPT1035	50M\$	450nf		350nf	3.5	5.0	15	15	15 #	133m#		N-PL	Si	200J	TO3	C	
45	2N1042	250k\$Δ	480nf	200nf	290nf	2.1u	1.1	1.0	3.0	60	250m	100p	P-A	Ge	100S	T28		
46	2N1043	250k\$Δ	480nf	200nf	290nf	2.1u	1.1	1.0	3.0	60	250m	100p	P-A	Ge	100S	T28		
47	2N1044	250k\$Δ	480nf	200nf	290nf	2.1u	1.1	1.0	3.0	60	250m	100p	P-A	Ge	100S	T28		
48	2N1045	250k\$Δ	480nf	200nf	290nf	2.1u	1.1	1.0	3.0	60	250m	100p	P-A	Ge	100S	T28		
49#	ASY26-RT	4.0M\$Δ	490n	90n	1.3u	730n	150m	1.0	10m	45	20	16p	P-A	Ge	85J	TO5	As	
50	2N545		500n			800n	5	6.0	500m	10	10	100p	N	Si	200S	TO5	A	
51	JAN2N545		500n			600m	6.0	6.0	500m	15 Δ	10	100p	N	Si	175S	TO5	A	
52	2N546		500n			800n	5.0	6.0	500m	80	6.0	100p	N	Si	200S	TO5	A	
53	2N672		500n	400n		600n	300m						N	Si	85J	R2	A	
54	2N673		500n	400n		600n	1.0						N	Si	85J	TO26	A	
55	JAN2N1173		500n			2.0u	250m	1.0	10m	200	7.5	25p	N	Ge	100S	TO29	A	
56	JAN2N1174		500n			2.0u	250m	1.0	10m	200	7.5	25p	N	Ge	100S	TO29	A	
57#	ZSC1485		500nf	3.0uf		1.0uf	350m	4.0	10m	90	20		N-DM	Si	175J	TO18	A	
58#	ZSC1610		500nf	1.5u		2.0u	100	5.0	5.0	30 Δ			N-EM	Si	175J	TO3	C	
59#	ZSC1672		500nf	1.5u		2.0u	120	2.0	13	20 Δ	77m		N-EM	Si	175J	TO39	C	
60#	ZSC1879H		500nf	4.2u		8.0	2.0	2.0	2.0	1.0kΔ	750m		N-E	Si	175J	TO39	KC	
61#	ZSD560		500nf	2.0u		1.5	2.0	5.0	500	Δ#	400m#		NE	Si	150J	Y220b	D	
62	GT8000		500n	3.0u		1.0u	90	5.0	10	50	200m		N	Si	150J	TO3	C	
63	GT8001		500n	3.0u		1.0u	90	5.0	10	50	200m		N	Si	150J	TO3	C	
64	GT8002		500n	3.0u		1.0u	90	5.0	10	50	200m		N	Si	150J	TO3	C	
65	ID18000		500n	3.0u		1.0u	90	5.0	10	50 Δ	200m		N	Si	150J	TO3	C	
66	ID18001		500n	3.0u		1.0u	90	5.0	10	50 Δ	200m		N	Si	150J	TO3	C	
67	ID18002		500n	3.0u		1.0u	90	5.0	10	50 Δ	200m		N	Si	150J	TO3	C	
68	MJ10000		500n	200n	3.0u	1.8u	175	5.0	10	40 Δ	150m	325p	N	Si	200J	TO3	KF	
69	MJ10001		500n	200n	3.0u	1.8u	175	5.0	10	40 Δ	150m	325p	N	Si	200J	TO3	KF	
70	MJ10002		500n	100n	2.5u	1.0u	150	5.0	5.0	30 Δ	290m	275p	N	Si	200J	TO3	KF	
71	MJ10003		500n	100n	2.5u	1.0u	150	5.0	5.0	30 Δ	290m	275p	N	Si	200J	TO3	KF	
72	MJ10004		500n	200n	1.2u	350n	175	5.0	10	40 Δ	150m	325p	N	Si	200J	TO3	KF	
73	MJ10005		500n	200n	1.2u	350n	175	5.0	10	40 Δ	150m	325p	N	Si	200J	TO3	KF	
74	MJ10006		500n	100n	1.1u	250n	150	5.0	5.0	30 Δ	290m	275p	N	Si	200J	TO3	KF	
75	MJ10007		500n	100n	1.1u	250n	150	5.0	5.0	30 Δ	290m	275p	N	Si	200J	TO3	KF	
76	TIP562		500nf	50nf	1.2u	300nf	100	4.0	10	8.0 Δ#	120m#		N	Si	200J	TO3	C	
77	TIP563		500nf	50nf	1.2u	300nf	100	4.0	10	8.0 Δ#	120m#		N	Si	200J	TO3	C	
78	MJE33	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
79	MJE33A	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
80	MJE33B	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
81	MJE33C	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
82	MJE34	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
83	MJE34A	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
84	MJE34B	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
85	MJE34C	2.0M\$Δ	500n			1.0u	80	4.0	1.0	40 Δ	333m		N	Si	150J	B16h	D	
86	MJE41	2.0M\$Δ																

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	3	TYPE No.	2	1	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L E O A D E
										Vcb (V)	le (A)	hFE								
1		1843-2020	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
2		1843-2205	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
3		1843-2210	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
4		1843-2220	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
5		1843-2505	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
6		1843-2510	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
7		1843-2520	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
8		1843-2705	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
9		1843-2710	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
10		1843-2720	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
11		1843-3005	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
12		1843-3010	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
13		1843-3020	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
14		1843-3205	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
15		1843-3210	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
16		1843-3220	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
17		1843-3505	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
18		1843-3510	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
19		1843-3520	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
20		1843-3705	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	5.0	20	200m	600p	N-EM	Si	200J	T03	C	
21		1843-3710	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	10	15	125m	600p	N-EM	Si	200J	T03	C	
22		1843-3720	25MΔ	500n	1.5u	1.0u	1.0u	85	5	5.0	20	10	87m	600p	N-EM	Si	200J	T03	C	
23		2N5312	30.0MΔ	500n	750n	500n	500n	50	5	5.0	20	5	500p	500p	P	Si	200J	T061	A	
24		2N5313	30.0MΔ	500n	1.0u	500n	500n	50	5	5.0	20	5	500p	500p	P	Si	200J	T061	A	
25		2N5314	30.0MΔ	500n	750n	500n	500n	50	5	5.0	20	5	500p	500p	P	Si	200J	T061	A	
26		2N5315	30.0MΔ	500n	1.0u	500n	500n	50	5	5.0	20	5	500p	500p	P	Si	200J	T061	A	
27		2N5929	30MΔ	500n	500n	300m	100	100	5	4.0	30	8.0	40	500p	N	Si	200J	F4f	C	
28		2N5930	30MΔ	500n	500n	300n	100	100	5	4.0	30	8.0	40	500p	N	Si	200J	F4f	C	
29		2N5931	30MΔ	500n	500n	300n	100	100	5	4.0	30	8.0	40	500p	N	Si	200J	F4f	C	
30		JAN2N6378	30MΔ	500n	1.0u	500n	143	143	5	4.0	50	10	60m	1.5n	N	Si	200J	T03	C	
31		JAN2N6379	30MΔ	500n	1.0u	500n	143	143	5	4.0	50	10	60m	1.5n	N	Si	200J	T03	C	
32		1743-0610	30MΔ	500n	500n	300n	100	100	5	4.0	30	8.0	40	800p	N-E	Si	200A	T03	C	
33		1743-0830	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	100m	800p	N-E	Si	200J	T03	C	
34		1743-1010	30MΔ	500n	500n	300n	100	100	5	4.0	30	8.0	40	800p	N-E	Si	200A	T03	C	
35		1743-1230	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	100m	800p	N-E	Si	200J	T03	C	
36		1743-1410	30MΔ	500n	500n	300n	100	100	5	4.0	30	8.0	40	800p	N-E	Si	200A	T03	C	
37		1743-1630	30MΔ	500n	600n	400n	150	150	5	3.0	30	20	100m	800p	N-EM	Si	200J	T03	C	
38		1743-1810	30MΔ	500n	500n	300n	100	100	5	4.0	30	8.0	40	800p	N-E	Si	200A	T03	C	
39		1748-0630	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	100m	800p	N-E	Si	200J	T063	A	
40		1748-0830	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	100m	800p	N-E	Si	200J	T063	A	
41		1748-1030	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	100m	800p	N-E	Si	200J	T063	A	
42		1748-1230	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	100m	800p	N-E	Si	200J	T063	A	
43		1748-1430	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	100m	800p	N-E	Si	200J	T063	A	
44		1748-1630	30MΔ	500n	600n	400n	175	175	5	3.0	30	20	100m	800p	N-EM	Si	200J	T063	A	
45		1748-1830	30MΔ	500n	600n	400n	175	175	5	3.0	30	20	100m	800p	N-EM	Si	200J	T063	A	
46		1763-0630	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	800p	800p	N-E	Si	200J	T03	C	
47		1763-0830	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	800p	800p	N-E	Si	200J	T03	C	
48		1763-1030	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	800p	800p	N-E	Si	200J	T03	C	
49		1763-1230	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	800p	800p	N-E	Si	200J	T03	C	
50		1763-1430	30MΔ	500n	600n	400n	85	85	5	3.0	30	20	800p	800p	N-E	Si	200J	T03	C	
51		1768-0630	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	800p	800p	N-E	Si	200J	T063	A	
52		1768-0830	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	800p	800p	N-E	Si	200J	T063	A	
53		1768-1030	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	800p	800p	N-E	Si	200J	T063	A	
54		1768-1230	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	800p	800p	N-E	Si	200J	T063	A	
55		1768-1430	30MΔ	500n	600n	400n	100	100	5	3.0	30	20	800p	800p	N-E	Si	200J	T063	A	
56		1814-2005	30MΔ	500n	700n	400n	44	44	5	4.0	5.0	20	150m	250p	N-E	Si	150J	T066	C	
57		1814-2205	30MΔ	500n	700n	400n	44	44	5	4.0	5.0	20	150m	250p	N-E	Si	150J	T066	C	
58		1814-2505	30MΔ	500n	700n	400n	44	44	5	4.0	5.0	20	150m	250p	N-E	Si	150J	T066	C	
59		1814-2705	30MΔ	500n	700n	400n	44	44	5	4.0	5.0	20	150m	250p	N-E	Si	150J	T066	C	
60		1814-3005	30MΔ	500n	700n	400n	44	44	5	4.0	5.0	20	150m	250p	N-E	Si	150J	T066	C	
61		1814-3205	30MΔ	500n	700n	400n	44	44	5	4.0	5.0	20	150m	250p	N-E	Si	150J	T066	C	
62		SDT3101	30.0MΔ	500n	750n	500n	3.0	3.0	5	5.0	10u	90	500p	500p	P-PE	Si	200J	T061	A	
63		SDT3102	30.0MΔ	500n	750n	500n	3.0	3.0	5	5.0	10u	90	500p	500p	P-PE	Si	200J	T061	A	
64		SDT3103	30.0MΔ	500n	750n	500n	3.0	3.0	5	5.0	10u	90	500p	500p	P-PE	Si	200J	T061	A	
65		SDT3104	30.0MΔ	500n	750n	500n	3.0	3.0	5	5.0	10u	90	500p	500p	P-PE	Si	200J	T061	A	
66		SDT3201	30.0MΔ	500n	1.0u	500n	3.0	3.0	5	5.0	10u	90	500p	500p	N-PE	Si	200J	T061	A	
67		SDT3202	30.0MΔ	500n	1.0u	500n	3.0	3.0	5	5.0	10u	90	500p	500p	N-PE	Si	200J	T061	A	
68		SDT3203	30.0MΔ	500n	1.0u	500n	3	3	5	5.0	0.1m	90	500p	500p	N-PE S	Si	200J	T061	A	
69		SDT3204	30.0MΔ	500n	1.0u	500n	3	3	5	5.0	0.1m	90	500p	500p	N-PE S	Si	200J	T061	A	
70		ST74049	30MΔ	500n	1.0u	1.0u	7.5	7.5	5	5.0	10	40	60p	60p	N-PL	Si	200J	T05	C	
71		ST74050	30MΔ	500n	1.0u	1.0u	7.5	7.5	5	5.0	10	40	60p	60p	N-PL	Si	200J	T05	C	
72		ST74051	30MΔ	500n	1.0u	1.0u	7.5	7.5	5	5.0	10	40	60p	60p	N-PL	Si	200J	T05	C	
73		UPT931	30MΔ	500n	1.2u	1.2u	3.5	3.5	5	5.0	10	10	150m	50p	N-PL	Si	200J	T03	C	
74		UPT932	30MΔ	500n	1.2u	1.2u	3.5	3.5	5	5.0	10	10	150m	50p	N-PL	Si	200J	T03	C	
75		UPT933	30MΔ	5																

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN	M A T	MAX. TEMP (°C)	DWG # s/a TO200 Ser.	L O D E
								Vcb (V)	Ie (A)	hFE								
1	TIP41C	3.0MΔ	600n	230n	400n	1.4u	65	1.0	500m	20	333m	12p	150n	N-Ef	Si	150J	Y220b	X
2	2N1353	3.50M	600n		400n	350n	200m	1.0	10m	70	40		N-P-A	Si	85J	T05	A	
3	2N5970	4.0MΔ	600n		400n	500n	85	1.5	1.0	20			N	Si	200J	T03	C	
4	2N5971	4.0MΔ	600n		400n	500n	85	1.5	1.0	20			N	Si	200J	T03	C	
5	2N5972	4.0MΔ	600n		400n	500n	85	1.5	1.0	20			N	Si	200J	T03	C	
6	2N5973	4.0MΔ	600n		400n	500n	85	1.5	1.0	20			N	Si	200J	T03	C	
7	2N6306	5.0MΔ	600n		400n	400n	125	5.0	8.0	4.0	250p		N	Si	200J	T03	C	
8	2N6307	5.0MΔ	600n		400n	400n	125	5.0	8.0	4.0	250p		N	Si	200J	T03	C	
9	2N6308	5.0MΔ	600n		400n	400n	125	5.0	8.0	4.0	250p		N	Si	200J	T03	C	
10	RCS579	5.0MΔ	600n	100n	600n	600n	125	5.0	3.0	12	625m	250p	N-E	Si	200J	T05	C	
11	2N2001	6.0MΔ	600n		650n	650n	300m	.50	500m	60	20	35p	P	Ge	100S	T05	A	
12	2N388	8.00M	600n		600n	150n	150m	.50	30m	150	15p		N-A	Ge	100J	T05	A	
13	2N815	8.00M	600n		400n	400n	75m	750m	200m	80	14p		N-FA	Ge	85J	R180		
14	2N816	8.00M	600n		400n	400n	75m	750m	200m	80	14p		N-FA	Ge	85J	R181		
15	IR5000	8.0MΔ	600n		14u	3.0u	125	5.0	5.0	140	150m		D	Si	150J	T03	KF	
16	IR5001	8.0MΔ	600n		14u	3.0u	125	5.0	5.0	140	150m		D	Si	150J	T03	KF	
17	IR5002	8.0MΔ	600n		14u	3.0u	125	5.0	5.0	140	150m		D	Si	150J	T03	KF	
18	2N1694	9.00M	600n	300n	600n	400n	75m	1.0	2.0m	25	6.5	2.5p	N-A	Si	85J	T05	A	
19	2N1317	10.0MΔ	600n		800n	600n	200m	.25	1.0m	85	.20	14p	P-A	Si	85J	T05	A	
20	2N5048	10.0MΔ	600n		1.5u	600n	100	4.0	1.0m	15			N-P-A	Si	200S	T061	A	
21	2N317	20M	600n		800n	600n	100m	250m	400m	30	14p		P-A	Si	85S	T05	A	
22	2N6211	20MΔ	600n		2.5u	600n	20	3.0	1.0	10	1.4		P	Si	200J	T066	C	
23	2N6212	20MΔ	600n		2.5u	600n	20	3.2	1.0	10	1.6		P	Si	200J	T066	C	
24	2N6213	20MΔ	600n		2.5u	600n	20	3.0	1.0	10	2.0		P	Si	200J	T066	C	
25	1756-0660	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
26	1756-0860	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
27	1756-1060	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
28	1756-1260	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
29	1756-1460	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
30	1756-1660	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
31	1756-1860	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063		
32	1776-0460	20MΔ	600n		700n	450n	150	3.0	60	15	25m		N-E	Si	200J	T063	A	
33	1776-0660	20MΔ	600n		700n	450n	150	3.0	60	15	25m		N-EM	Si	200J	T063	A	
34	1776-0860	20MΔ	600n		700n	450n	150	3.0	60	15	25m		N-EM	Si	200J	T063	A	
35	1776-1060	20MΔ	600n		700n	450n	150	3.0	60	15	25m		N-EM	Si	200J	T063	A	
36	1776-1260	20MΔ	600n		700n	450n	150	3.0	60	15	25m		N-EM	Si	200J	T063	A	
37	1776-1460	20MΔ	600n		700n	450n	150	3.0	60	15	25m		N-EM	Si	200J	T063	A	
38	1776-1660	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063	A	
39	1776-1860	20MΔ	600n		700n	450n	240	3.0	60	15	1.6n		N-EM	Si	200J	T063	A	
40	BUX66	20MΔ	600n		2.5u	600n	35	5.0	1.0	10	2.5	220p	P	Si	200J	T066	C	
41	BUX66A	20MΔ	600n		2.5u	600n	35	5.0	1.0	10	2.5	220p	P	Si	200J	T066	C	
42	BUX66B	20MΔ	600n		2.5u	600n	35	5.0	1.0	10	2.5	220p	P	Si	200J	T066	C	
43	BUX66C	20MΔ	600n		2.5u	600n	35	5.0	1.0	10	2.5	220p	P	Si	200J	T066	C	
44	BUX97	20MΔ	600n		2.0u	500n	60	5.0	1.0	10	1.0		N-PE	Si	175J	T03	C	
45	BUX97A	20MΔ	600n		2.0u	500n	60	5.0	1.0	10	1.0		N-PE	Si	175J	T03	C	
46	BUX97B	20MΔ	600n		2.0u	500n	60	5.0	1.0	10	1.0		N-PE	Si	175J	T03	C	
47	2N5932	30MΔ	600n		550n	350n	100	4.0	30	12			N	Si	200J	F41	C	
48	2N5933	30MΔ	600n		550n	350n	100	4.0	30	12			N	Si	200J	F41	C	
49	2N5934	30MΔ	600n		550n	350n	100	4.0	30	12			N	Si	200J	F41	C	
50	2N6046	30MΔ	600n		550n	350n	114	4.0	30	12			N	Si	200J	T063	A	
51	2N6047	30MΔ	600n		550n	350n	114	4.0	30	12			N	Si	200J	T063	A	
52	2N6048	30MΔ	600n		550n	350n	114	4.0	30	12			N	Si	200J	T063	A	
53	JAN2N6306	30MΔ	600n		3.0u	62	62	4.0	500m	5.0	266m	250p	N	Si	175A	T03	C	
54	JAN2N6308	30MΔ	600n		3.0u	62	62	4.0	500m	5.0	266m	250p	N	Si	175A	T03	C	
55	1743-0820	30MΔ	600n		550n	350n	100	4.0	30	12	100m	800p	N-E	Si	200A	T03	C	
56	1743-1220	30MΔ	600n		550n	350n	100	4.0	30	12	50m	800p	N-E	Si	200A	T03	C	
57	1743-1620	30MΔ	600n		550n	350n	100	4.0	30	12	50m	800p	N-E	Si	200A	T03	C	
58	1743-1820	30MΔ	600n		550n	350n	100	4.0	30	12	50m	800p	N-E	Si	200A	T03	C	
59	1748-0820	30MΔ	600n		550n	350n	114	4.0	30	12	50m	800p	N-E	Si	200A	T063	A	
60	1748-1220	30MΔ	600n		550n	350n	114	4.0	30	12	50m	800p	N-E	Si	200A	T063	A	
61	1748-1620	30MΔ	600n		550n	350n	114	4.0	30	12	50m	800p	N-E	Si	200A	T063	A	
62	1748-1820	30MΔ	600n		550n	350n	114	4.0	30	12	50m	800p	N-E	Si	200A	T063	A	
63	2N5218	40.0MΔ	600n	600n	4.5u	1.0u	50	5.0	50m	5.0	.30		N	Si	200C	T06	A	
64	BFX34	70MΔ	600n		1.2u	1.2u	5.0	2.0	2.0	150			N-PE	Si	200J	T039	A	
65	SDM3100	70MΔ	600n		2.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
66	SDM3101	70MΔ	600n		2.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
67	SDM3102	70MΔ	600n		2.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
68	SDM3103	70MΔ	600n		2.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
69	SDM3104	70MΔ	600n		2.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
70	SDM3105	70MΔ	600n		2.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
71	SDM3200	70MΔ	600n		1.5u	20	20	5.0	5.0	1.0k	600m	50p	N	Si	200J	F24a		
72	SDM3201	70MΔ	600n		1.5u	20	20	5.0	5.0	1.0k	600m	50p	P	Si	200J	F24a		
73	SDM3202	70MΔ	600n		1.5u	20	20	5.0	5.0	1.0k	600m	50p	P	Si	200J	F24a		
74	SDM3203	70MΔ	600n		1.5u	20	20	5.0	5.0	1.0k	600m	50p	P	Si	200J	F24a		
75	SDM																	

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E
								Vcb (V)	Ie (A)	hFE								
1	2N6575	15M Δ	900n	150n	2.5u	700n	71 ϕ \$	5.0 ϕ	10 ϕ	5.0 Δ	500m	220p \square	N	Si	200J	T03	C ϕ	
2	2N1681	5.00M Δ	950n		950n		180m	25 ϕ	10 ϕ	75 Δ	100J	20p \square	P-A	Ge	85S	T05	C ϕ	
3	2N801		1.0u		600n	550n	75m	350m	100m ϕ	10 Δ	3.2	20p \square	P	Ge	85S	R180	C ϕ	
4	2N802		1.0u		600n	550n	75m	350m	100m ϕ	10 Δ	3.2	20p \square	P	Ge	85S	R181	C ϕ	
5	25C1863		1.0u		2.0u	1.0u	40 ϕ	5.0 ϕ	3.0 ϕ	20 Δ #	200m#		NEM	Si	150J	F12b	C ϕ	
6	25C1864		1.0u		2.0u	1.0u	40 ϕ	5.0 ϕ	3.0 ϕ	20 Δ #	200m#		NEM	Si	150J	F12b	C ϕ	
7	25C1865		1.0u		2.0u	1.0u	40 ϕ	5.0 ϕ	3.0 ϕ	15 Δ #	200m#		NDM	Si	150J	F12b	C ϕ	
8	25C1866		1.0u		2.0u	1.0u	40 ϕ	5.0 ϕ	3.0 ϕ	20 Δ #	200m#		NEM	Si	150J	T03	C ϕ	
9	25C1867		1.0u		2.0u	1.0u	80 ϕ	5.0 ϕ	3.0 ϕ	20 Δ #	200m#		NEM	Si	150J	T03	C ϕ	
10	25C1868		1.0u		2.0u	1.0u	80 ϕ	5.0 ϕ	3.0 ϕ	15 Δ #	200m#		NDM	Si	150J	T03	C ϕ	
11	25C1869		1.0u		2.0u	1.0u	100 ϕ	5.0 ϕ	5.0 ϕ	20 Δ #	100m#		NEM	Si	150J	T03	C ϕ	
12	25C1870		1.0u		2.0u	1.0u	100 ϕ	5.0 ϕ	5.0 ϕ	20 Δ #	100m#		NEM	Si	150J	T03	C ϕ	
13	25C1871		1.0u		2.0u	1.0u	100 ϕ	5.0 ϕ	5.0 ϕ	15 Δ #	100m#		NEM	Si	150J	T03	C ϕ	
14	25C1881K		1.0u		5.0u ϕ	30 ϕ	15 ϕ	1.5 ϕ	1.0k Δ	480m			N-D	Si	150J	B17	KE	
15	25C2126		1.0u		2.0u	1.0u	30 ϕ	3.0 ϕ	3.0 ϕ	42	330m		ND	Si	150J	T066	C ϕ	
16	25C2127		1.0u		2.0u	1.0u	100 ϕ	3.0 ϕ	3.0 ϕ	10 ϕ	100m		ND	Si	150J	T03	C ϕ	
17	25C2128		1.0u		2.0u	1.0u	200 ϕ	3.0 ϕ	3.0 ϕ	22	30m		ND	Si	150J	F29a	C ϕ	
18	25D160		1.0u		500n ϕ	3.0u ϕ	25 ϕ	10 ϕ	750m ϕ	50	1.0		N-D	Si	175J	T08	A ϕ	
19	25D423		1.0u		1.0u	600n ϕ	30 ϕ	5.0 ϕ	3.0 ϕ	20	400m		N-DPL	Si	175J	T066	C ϕ	
20	PM26K380		1.0u		1.0u	500n	150 ϕ	3.0 ϕ	5.0 ϕ	10 Δ	300m		N	Si	150J	T03	C ϕ	
21	PM29K380		1.0u		1.0u	500n	150 ϕ	3.0 ϕ	5.0 ϕ	10 Δ	300m		N	Si	150J	T03	C ϕ	
22	DT1510	25k	1000n	300n	4.5u	1.0u	800m	6.0 ϕ	300m ϕ	25	7.0		N	Si	150S	T05		
23	DT1511	25k	1000n	300n	4.5u	1.0u	800m	6.0 ϕ	300m ϕ	25	7.0		N	Si	150S	T05		
24	DT1512	25k	1000n	300n	4.5u	1.0u	800m	6.0 ϕ	300m ϕ	25	7.0		N	Si	150S	T05		
25	DT1610	.50M	1000n	300n	4.5u	1.0u	600m	6.0 ϕ	200m ϕ	10 Δ	7.0		N	Si	115S	T05		
26	2N2033	1.0M Δ	1.0u		1.5u ϕ	1.5u ϕ	5.0 ϕ \$	4.0 ϕ	500m ϕ	60 \square	800m		N	Si	200C	T05	A ϕ	
27	2N2034	1.0M Δ	1.0u		1.5u ϕ	1.5u ϕ	5.0 ϕ \$	4.0 ϕ	1.0 ϕ	60 \square	300m		N	Si	200C	T05	A ϕ	
28	2N2035	1.0M Δ	1.0u		1.5u ϕ	1.5u ϕ	14 ϕ \$	4.0 ϕ	1.5 ϕ	60 \square	300m		N	Si	200C	T08	A ϕ	
29	2N2036	1.0M Δ	1.0u		1.5u ϕ	1.5u ϕ	10 ϕ \$	4.0 ϕ	2.0 ϕ	20 Δ	500m		N	Si	200C	T037	A ϕ	
30	PT3516	1.0M Δ	1.0u		2.0u	1.2u	325 ϕ	4.0 ϕ	10 ϕ	10	40	4.0n	N	Si	200	T063		
31	PT3526	1.0M Δ	1.0u		2.0u	1.2u	325 ϕ	4.0 ϕ	10 ϕ	2.0	40	4.0n	N	Si	200	T063		
32	PTC129A-RT	1.0M Δ	1.0u		1.0u	1.0u	100 ϕ	4.0 ϕ	2.0 ϕ	8.0 Δ		160p	N	Si	175J	T03	C ϕ	
33	25D184	1.50M	1000n ϕ		500n ϕ	3.0u ϕ	25 ϕ	4.0 ϕ	750u ϕ	50	2.0		N-ME	Si	175J	T08		
34	25D185	1.50M	1000n ϕ		500n ϕ	3.0u ϕ	25 ϕ	4.0 ϕ	750u ϕ	50	2.0		N-ME	Si	175J	T08		
35	2N5301	2.0M Δ	1.0u		2.0u	1.0u	200	2.0 ϕ	1.0 ϕ	40 Δ #	75m		N	Si	200J	F41	C ϕ	
36	2N5302	2.0M Δ	1.0u		2.0u	1.0u	200	2.0 ϕ	1.0 ϕ	40 Δ #	100m		N	Si	200J	F41	C ϕ	
37	2N5303	2.0M Δ	1.0u		2.0u	1.0u	200	2.0 ϕ	1.0 ϕ	40 Δ #	100m		N	Si	200J	F41	C ϕ	
38	2N5745	2.0M Δ	1.0u		2.0u	1.0u	200	2.0 ϕ	2.0 ϕ	5.0 Δ #			N-P	Si	200J	F41	C ϕ	
39	DT1520	2.00M	1000n	300n	4.5u	1.0u	800m	6.0 ϕ	300m ϕ	120 \square	7.0		N	Si	150S	T05		
40	DT1521	2.00M	1000n	300n	4.5u	1.0u	800m	6.0 ϕ	300m ϕ	120 \square	7.0		N	Si	150S	T05		
41	DT1522	2.00M	1000n	300n	4.5u	1.0u	800m	6.0 ϕ	300m ϕ	120 \square	7.0		N	Si	150S	T05		
42	SPT5303	2.0M Δ	1.0u		2.0u	1.0u	200	2.0 ϕ	1.0 ϕ	40 Δ #	100m#		N	Si	200J	T03	C ϕ	
43	25C1131	3.0M Δ	1.0u		2.0u	2.0u	80 ϕ	5.0 ϕ	2.0 ϕ	15 ϕ	600m	150p	N-P	Si	150J	T03	C ϕ	
44	2N4396	4.0M Δ	1000n ϕ		2.0u ϕ	2.0u ϕ	63 ϕ	1.0 ϕ	1.0 ϕ	60 Δ	18		N	Si	150J	T03	C ϕ	
45	BDX91	4.0M Δ	1.0u		2.0u ϕ	2.0u ϕ	90 ϕ	10 ϕ	500m ϕ	40 Δ	266m		NE	Si	200J	T03	C ϕ	
46	BDX92	4.0M Δ	1.0u		2.0u ϕ	2.0u ϕ	90 ϕ	10 ϕ	500m ϕ	40 Δ	266m		NE	Si	200J	T03	C ϕ	
47	BDX93	4.0M Δ	1.0u		2.0u ϕ	2.0u ϕ	90 ϕ	10 ϕ	500m ϕ	40 Δ	266m		NE	Si	200J	T03	C ϕ	
48	BDX94	4.0M Δ	1.0u		2.0u ϕ	2.0u ϕ	90 ϕ	10 ϕ	500m ϕ	40 Δ	266m		NE	Si	200J	T03	C ϕ	
49	BDX95	4.0M Δ	1.0u		2.0u ϕ	2.0u ϕ	90 ϕ	10 ϕ	500m ϕ	40 Δ	266m		NE	Si	200J	T03	C ϕ	
50	BDX96	4.0M Δ	1.0u		2.0u ϕ	2.0u ϕ	90 ϕ	10 ϕ	500m ϕ	40 Δ	266m		NE	Si	200J	T03	C ϕ	
51	MJE13006	4.0M Δ	1.0u	100n	3.0u	700n	2.0	5.0 ϕ	2.0 ϕ	8.0 Δ #	500m#	110p	N	Si	150J	Y220b	X ϕ	
52	MJE13007	4.0M Δ	1.0u	100n	3.0u	700n	2.0	5.0 ϕ	2.0 ϕ	8.0 Δ #	500m#	110p	N	Si	150J	Y220b	X ϕ	
53	MJE13008	4.0M Δ	1.0u	100n	3.0u	700n	2.0	5.0 ϕ	5.0 ϕ	8.0 Δ #	250m#	180p	N	Si	150J	Y220b	X ϕ	
54	MJE13009	4.0M Δ	1.0u	100n	3.0u	700n	2.0	5.0 ϕ	5.0 ϕ	8.0 Δ #	250m#	180p	N	Si	150J	Y220b	X ϕ	
55	2N1624	5.0M Δ	1.0u		700n	700n	150m	1.0 ϕ	30m ϕ	180 \square	3.2	25p \square	N	Ge	100J	T05	A	
56	2N426	6.0M	1.0u		1.1u ϕ	1.1u ϕ	1.0u	350m ϕ	10m Δ	18	14p		P-FA	Ge	85J	T05	A	
57	2N1344	7.00M Δ	1000n	60n	500n	800n	150m	1.0 ϕ	20m ϕ	90	12p		P-A	Ge	85J	T05	A	
58	2N388A	8.00M	1000n ϕ		700n	700n	150m	.50 ϕ	30m ϕ	180 \square		20p \square	N	Ge	100J	T05	A	
59	2N576A	8.00M	1000n		200m	200m	.40 ϕ	400m	30 Δ	30 Δ	15p		N-A	Ge	100J	T05	A	
60	DTS4062	8.0M Δ	1.0u		1.8u ϕ	3.0u ϕ	100 ϕ	1.0 ϕ	200m ϕ	80 Δ	200m	200p \square	N-D	Ge	150S	T05	KF ϕ	
61	DTS4072	8.0M Δ	1.0u		1.5u ϕ	500n ϕ	100 ϕ	1.0 ϕ	200m ϕ	80 Δ	175m	200p \square	N-D	Ge	150S	T05	KF ϕ	
62	2N1316	10.0M Δ	1000n		800n	1.0u	200m	.25 ϕ	1.0m	95	250m	14p	P-A	Ge	85J	T05	A	
63	2N5049	10.0M Δ	1000n		2.5u	1.0u	100	4.0 ϕ	100u ϕ	15 Δ	250m	14p	N	Ge	200S	T061	A ϕ	
64	25C2139	10M Δ	1.0u		2.0u	1.0u	100 ϕ	5.0 ϕ	5.0 ϕ	10 Δ #	300m#		N	Si	150J	T03		
65	25C2200	10M Δ	1.0u		2.0u	1.0u	40 ϕ	5.0 ϕ	3.0 ϕ	10 Δ #	500m#		N	Si	150J	T03		
66	MJE13002	10M Δ	1.0u	100n	4.0u	700n	1.4	2.0 ϕ	500m ϕ	8.0 Δ #	2.0 #	21p	N	Si	150J	T0126	D	
67	MJE13003	10M Δ	1.0u	100n	4.0u	700n	1.4	2.0 ϕ	500m ϕ	8.0 Δ #	2.0 #	21p	N	Si	150J	T0126	D	
68	SDM21301	10M Δ	1.0u	175n	1.1u	800n	100 ϕ	5.0 ϕ	5.0 ϕ	1.0k Δ	350m	300p	P	Si	200J	F4q	KC ϕ	
69	SDM21302	10M Δ	1.0u	175n	1.1u	800n	100 ϕ	5.0 ϕ	5.0 ϕ	1.0k Δ	350m	300p	P	Si	200J	F4q	KC ϕ	
70																		

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	3 TYPE No.	2 fab	1 MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE M P-NPN N-PPN	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L E O D E
								Vcb (V)	Ic (A)	hFE							
1	SDT55956	2.0MΔ	1.4u		2.6u	1.3u	700	5.0	4.0	10 Δ	37m		N-PL	Si	200J T145	A0	
2	SDT55960	2.0MΔ	1.4u		2.6u	1.3u	700	5.0	4.0	10 Δ	37m		N-PL	Si	200J T145	A0	
3	2G527	3.30M	1400n	420n	1.5u	1.1u	225	2.5	1.0m	20	95	27p	P-A	Ge	85J T05	A5	
4	2N404	13.0M	1400n				150m	25	24m	40	6.3	12p	P-A	Ge	85A T05	A5	
5	2N1605	14.0M	1400n				150m	25	20m	125		13p	N-A	Ge	100J T05	A5	
6	2G1027	3.30M	1440n	420n	1.4u	1.3u	225m	1.0	20m	95		27p	P-A	Ge	85J T05	A5	
7	2SC1228		1.5u		1.6u	700n	100	5.0	5.0	15	300m		N-DM	Si	175J T03	C0	
8	2SC1299		1.5u		2.5u	3.5u	200	5.0	10	40	100m		N-DM	Si	175J F1a	C0	
9	TIP120		1.5u			8.5u	2.0	3.0	500m	1.0kΔ	800m		N	Si	150J B1	KB0	
10	TIP121		1.5u			8.5u	2.0	3.0	500m	1.0kΔ	800m		N	Si	150J B1	KB0	
11	TIP122		1.5u			8.5u	2.0	3.0	500m	1.0kΔ	800m		N	Si	150J B1	KB0	
12	TIP125		1.5u			8.5u	2.0	3.0	500m	1.0kΔ	800m		P	Si	150J B1	KB0	
13	TIP126		1.5u			8.5u	2.0	3.0	500m	1.0kΔ	800m		P	Si	150J B1	KB0	
14	TIP127		1.5u			8.5u	2.0	3.0	500m	1.0kΔ	800m		P	Si	150J B1	KB0	
15	IR3773	1.0MΔ	1.5u		2.0u	1.8u	200	4.0	1.0	40 Δ	100m		N-D	Si	200J T03	C0	
16	IR6302	1.0MΔ	1.5u		2.0u	1.8u	150	4.0	1.0	40 Δ	100m		N-D	Si	200J T03	C0	
17	MJ3773	1.0MΔ	1.5u		2.0u	1.8u	200	4.0	1.0	40 Δ	100m		N-D	Si	200J T03	C0	
18	MJ6302	1.0MΔ	1.5u		2.0u	1.8u	150	4.0	1.0	40 Δ	100m		N-D	Si	200J T03	C0	
19	2N2580M	2.0MΔ	1500n			3.2u	150	5.0	10	4.0 Δ	140m		N-D	Si	150J T036	C0	
20	2G526	3.00M	1500n	450n	1.4u	1.4u	225	3.0	1.0m	20	73	27p	P-A	Ge	85J T05	A0	
21	2N6510	3.0MΔ	1.5u	200n	5.0u	1.5u	68	3.0	4.0	10 Δ	500m	200p	N	Si	200J T03	C0	
22	2N6511	3.0MΔ	1.5u	200n	5.0u	1.5u	68	3.0	4.0	10 Δ	375m	200p	N	Si	200J T03	C0	
23	2N6512	3.0MΔ	1.5u	200n	5.0u	1.5u	68	3.0	4.0	10 Δ	375m	200p	N	Si	200J T03	C0	
24	2N6513	3.0MΔ	1.5u	200n	5.0u	1.5u	68	3.0	4.0	10 Δ	375m	200p	N	Si	200J T03	C0	
25	2N6514	3.0MΔ	1.5u	200n	5.0u	1.5u	68	3.0	4.0	10 Δ	300m	200p	N	Si	200J T03	C0	
26	2SC1142	3.0MΔ	1.5u			3.0u	125	5.0	5.0	15 #	400m	270p	N-P	Si	150J T03	C0	
27	2SC1143	3.0MΔ	1.5u			3.0u	125	5.0	5.0	15 #	400m	270p	N-P	Si	150J T03	C0	
28	2N1343	4.0MΔ	1.5u				150m	350m	10m	15 Δ		20p	P-A	Ge	85J T05	A0	
29	2N5838	5.0MΔ	1.5u		3.0u	1.5u	57	2.0	3.0	8.0 Δ			N	Si	200J T03	C0	
30	2N5839	5.0MΔ	1.5u		3.7u	1.5u	57	3.0	2.0	10 Δ			N	Si	200J T03	C0	
31	2SC1136	8.0MΔ	1.5u			5.0u	200	5.0	10	20 #	100m	650p	N-P	Si	150J F29	C0	
32	2SC1138	8.0MΔ	1.5u			5.0u	200	5.0	10	20 #	100m	650p	N-P	Si	150J F29	C0	
33	2SC1139	8.0MΔ	1.5u			5.0u	200	5.0	10	20 #	100m	650p	N-P	Si	150J F29	C0	
34	2SC1140	8.0MΔ	1.5u			5.0u	150	5.0	7.5	15 #	266m	350p	N-P	Si	150J T03	C0	
35	2SC1141	8.0MΔ	1.5u			5.0u	150	5.0	7.5	15 #	266m	350p	N-P	Si	150J T03	C0	
36	2SC1144	8.0MΔ	1.5u			5.0u	200	5.0	10	20 #	100m	650p	N-D	Si	150J F29	C0	
37	2SC1145	8.0MΔ	1.5u			2.5u	175	5.0	10	20 #	200m	650p	N-D	Si	150J F29	C0	
38	BUX10	8.0MΔ	1.5u		1.2u	200n	150	4.0	2.0	10 Δ	60m		N-DM	Si	200J T03	C0	
39	BUX11	8.0MΔ	1.5u		1.2u	500n	150	4.0	12	10 Δ	125m		N-DM	Si	200J T03	C0	
40	BUX12	8.0MΔ	1.5u		1.5u	500n	150	4.0	10	10 Δ	150m		N-DM	Si	200J T03	C0	
41	BUX20	8.0MΔ	1.5u		1.2u	200n	250	4.0	40	10 Δ	30m		N-DM	Si	200J T03	C0	
42	BUX21	8.0MΔ	1.5u		1.2u	500n	250	4.0	25	10 Δ	60m		N-DM	Si	200J T03	C0	
43	BUX22	8.0MΔ	1.5u		1.5u	500n	250	4.0	20	10 Δ	75m		N-DM	Si	200J T03	C0	
44	BUX39	8.0MΔ	1.5u		1.0u	200n	120	4.0	20	10 Δ	80m		N-DM	Si	200J T03	C0	
45	BUX41	8.0MΔ	1.5u		1.5u	800n	120	4.0	8.0	8.0 Δ	200m		N-DM	Si	200J T03	C0	
46	BUX42	8.0MΔ	1.5u		1.5u	1.0u	120	4.0	6.0	8.0 Δ	266m		N-DM	Si	200J T03	C0	
47	BUX43	8.0MΔ	1.5u		1.5u	1.0u	120	4.0	5.0	8.0 Δ	320m		N-DM	Si	200J T03	C0	
48	IR4040	8.0MΔ	1.5u		3.0u	1.8u	125	5.0	3.0	250 Δ	133m		D	Si	150J T03	KF0	
49	IR4045	8.0MΔ	1.5u		3.0u	1.8u	125	5.0	5.0	100 Δ	120m		D	Si	150J T03	KF0	
50	IR4050	8.0MΔ	1.5u		3.0u	1.8u	125	5.0	15	8.0 Δ	133m		D	Si	150J T03	KF0	
51	IR4055	8.0MΔ	1.5u		3.0u	1.8u	125	5.0	3.0	50 Δ	120m		D	Si	150J T03	KF0	
52	IR4060	8.0MΔ	1.5u		3.0u	1.8u	125	5.0	5.0	200 Δ	133m		D	Si	150J T03	KF0	
53	IR4065	8.0MΔ	1.5u		3.0u	1.8u	125	5.0	15	15 Δ	120m		D	Si	150J T03	KF0	
54	2N6060	1.0MΔ	1.5u		2.0u	2.0u	225	10	1.0	40 Δ	50m	850p	N	Si	200J T063	A0	
55	2N6061	1.0MΔ	1.5u		2.0u	2.0u	225	10	1.0	40 Δ	55m	1.3n	P	Si	200J T063	A0	
56	2N6062	1.0MΔ	1.5u		2.0u	2.0u	225	10	1.0	40 Δ	50m	850p	N	Si	200J T063	A0	
57	2N6063	1.0MΔ	1.5u		2.0u	2.0u	225	10	1.0	40 Δ	55m	1.3n	P	Si	200J T063	A0	
58	2N6569	15MΔ	1.5u	400n	5.0u	1.5u	60	4.0	12	5.0 Δ	333m	750p	N	Si	200J T03	C0	
59	2SC1230	15MΔ	1.5u		1.6u	700n	100	5.0	5.0	15	300m		N-DM	Si	175J T03	C0	
60	JAN2N3715	20MΔ	1.5u		2.0u	2.0u	85	4.0	10	5.0 Δ		500p	N	Si	200A T03	C0	
61	JAN2N3716	20MΔ	1.5u		2.0u	2.0u	85	4.0	10	5.0 Δ		500p	N	Si	200A T03	C0	
62	JAN2N3791	20MΔ	1.5u		2.0u	2.0u	85	4.0	10	5.0 Δ		500p	P	Si	200A T03	C0	
63	JAN2N3792	20MΔ	1.5u		2.0u	2.0u	85	4.0	10	5.0 Δ		500p	P	Si	200A T03	C0	
64	2N5540	2.0MΔ	1.5u	1.5u	1.5u	1.5u	50	5.0	5.0	2.0 Δ			N	Si	200J T061	A0	
65	JAN2N5683	2.0MΔ	1.5u		2.0u	3.0u	171	5.0	5.0	5.0 Δ		2.0n	P	Si	200S F6c	C0	
66	JAN2N5684	2.0MΔ	1.5u		2.0u	3.0u	171	5.0	5.0	5.0 Δ		2.0n	P	Si	200S F6c	C0	
67	JAN2N5685	2.0MΔ	1.5u		2.0u	3.0u	171	5.0	5.0	5.0 Δ		1.2n	N	Si	200S F6c	C0	
68	JAN2N5686	2.0MΔ	1.5u		2.0u	3.0u	171	5.0	5.0	5.0 Δ		1.2n	N	Si	200S F6c	C0	
69	JAN2N5838	2.0MΔ	1.5u		4.5u	100	100	5.0	500m	20 Δ	333m	150p	N	Si	200J T03	C0	
70	JAN2N5839	2.0MΔ	1.5u		5.2u	100	100	5.0	500m	20 Δ	750m	150p	N	Si	200J T03	C0	
71	2N6594	25MΔ	1.5u	400n	5.0u	1.5u	57	4.0	12	5.0 Δ	375m	1.0f	P	Si	200J T03	C0	
72	2SC1301	25MΔ	1.5u		2.5u	1.0u	200	5.0	10	40	100m		N-DM	Si	175J F1a	C0	
73	2SD518	30MΔ	1.5u		1.5u	1.0u	30	5.0	3.0	20	400m		N-DPL	Si	175J T066	C0	
74	PT1949	50.0MΔ	1500n		3.0u	50	2.0	5.0m	25	Δ			N-PL	Si	150J W39	C0	
75	JAN2N3739	60MΔ	1.5u		3.5u	10	10	10	10m	30 Δ	10 #	20p	N	Si	175A T066	C0	
76	JAN2N6060	80MΔ	1.5u		2.0u	2.0u	150	10	2.0	40 Δ			N	Si	200J T063	A0	

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-NPN N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O A D E
								Vcb (V)	Ic (A)	hFE								
1	PT602	1.0M	3.0u	2.0n	2.0u	2.0u	350	2.0	60	10	100m	1.8n	N	Si	200J	T0114		
2	PT7503	1.0M	3.0u	2.0n	2.0u	2.0u	350	2.0	30	10	100m	1.8n	N	Si	200J	T063		
3	PT7506	1.0M	3.0u	2.0n	2.0u	2.0u	350	2.0	40	10	100m	1.8n	N	Si	200J	T063		
4	PT7508	1.0M	3.0u	2.0n	2.0u	2.0u	350	2.0	50	10	100m	1.8n	N	Si	200J	T063		
5	PT8502	1.0M	3.0u	2.0n	2.0u	2.0u	350	2.0	100	10	100m	1.8n	N	Si	200J	T0114		
6#	2G524	2.00M	3000n	600n	1.0u	1.6u	225m	1.0	20	35	27p		P-A	Ge	85J	T05		
7#	2G1024	2.00M	3000n	600n	1.2u	1.6u	150m	1.5	3.0m	30	27p		P-A	Ge	85J	T05		
8#	2N679	3.00M	3000n				150m	1.5	3.0m	30			N-A	Ge	85J	R5		
9	JAN2N2034	6.0M	3.0u				6.0u	7.5	250m	35	200p		N	Si	200A	T05	A0	
10	JAN2N2858	6.0M	3.0u				6.0u	7.5	250m	35	200p		N	Si	200A	T05	A0	
11	JAN2N2859	6.0M	3.0u				6.0u	7.5	250m	35	200p		N	Si	200A	T05	A0	
12	JAN2N2911	6.0M	3.0u				6.0u	7.5	250m	35	200p		N	Si	200A	T05	A0	
13	2N3584	10MS	3.0u		4.0u	3.0u	35	2.0	1.0	80	750m		N	Si	200C	T066	C0	
14	2N3585	10MS	3.0u		4.0u	3.0u	35	2.0	1.0	80	750m		N	Si	200C	T066	C0	
15	2N6421	10MS	3.0u		4.0u	3.0u	35	2.0	1.0	8.0	750m#		P	Si	200J	T066	C0	
16	2N6422	10MS	3.0u		4.0u	3.0u	35	2.0	1.0	8.0	750m#		P	Si	200J	T066	C0	
17#	BDY45	10MS	3.0u			1.0u	95	2.0	1.0	5.0	200p		N	Si	200J	T03	C0	
18#	BDY46	10MS	3.0u			1.0u	95	2.0	1.0	5.0	100m	200p	N	Si	200J	T03	C0	
19#	BDY47	10MS	3.0u			1.0u	95	2.0	1.0	5.0	100m	200p	N	Si	200J	T03	C0	
20#	BUX67	10MS	3.0u		4.0u	3.0u	35	5.0	1.0	10	2.5	120p	N	Si	200J	T066	C0	
21#	BUX67A	10MS	3.0u		4.0u	3.0u	35	5.0	1.0	10	2.5	120p	N	Si	200J	T066	C0	
22#	BUX67B	10MS	3.0u		4.0u	3.0u	35	5.0	1.0	10	2.5	120p	N	Si	200J	T066	C0	
23#	BUX67C	10MS	3.0u		4.0u	3.0u	35	5.0	1.0	10	2.5	120p	N	Si	200J	T066	C0	
24	MJ3584	10MS	3.0u		4.0u	3.0u	35	10	1.0	25	750m	120p	P	Si	200J	T066	C0	
25	MJ3585	10MS	3.0u		4.0u	3.0u	35	10	1.0	25	750m	120p	P	Si	200J	T066	C0	
26	JAN2N3584	75MS	3.0u			7.0u	35	10	100m	40	120p		N	Si	200J	T066	C0	
27	JAN2N3585	75MS	3.0u			7.0u	35	10	100m	40	120p		N	Si	200J	T066	C0	
28	2N556		3.5u			20u	100m	200m	1.0m	70	2.5	20p	N	Ge	85J	T05	A	
29	2N558		3.5u			2.0u	100m	200m	1.0m	70	3.7	20p	N-A	Ge	85J	T05	A	
30#	2SD231		3.5u		6.0u	5.0u	125	4.0	10	25	100m		N-D	Si	175J	T03	C0	
31	CDT1319	.006M	3500n		6.5u	2.5u	45m	2.0	2.0m	40	.30		P-A	Ge	100J	T03	C0	
32	CDT1320	.006M	3500n		6.5u	2.5u	45m	2.0	2.0m	40	.30		P-A	Ge	100J	T03	C0	
33	CDT1321	.006M	3500n		6.5u	2.5u	45m	2.0	2.0m	40	.30		P-A	Ge	100J	T03	C0	
34	CDT1322	.006M	3500n		6.5u	2.5u	45m	2.0	2.0m	40	.30		P-A	Ge	100J	T03	C0	
35	CDT1310	.008M	3500n		6.5u	2.5u	45m	2.0	2.0m	80	.30		P-A	Ge	100J	T03	C0	
36	CDT1311	.008M	3500n		6.5u	2.5u	45m	2.0	2.0m	80	.30		P-A	Ge	100J	T03	C0	
37	CDT1312	.008M	3500n		6.5u	2.5u	45m	2.0	2.0m	80	.30		P-A	Ge	100J	T03	C0	
38	CDT1313	.008M	3500n		6.5u	2.5u	45m	2.0	2.0m	80	.30		P-A	Ge	100J	T03	C0	
39#	ASY48IV	1.2MS	3.5u		1.1u	2.1u	300m	500m	100m	45	25p		P-A	Ge	150J	T01	B	
40#	ASY48V	1.2MS	3.5u		1.1u	2.1u	300m	500m	100m	75	25p		P-A	Ge	150J	T01	B	
41#	ASY48VI	1.2MS	3.5u		1.1u	2.1u	300m	500m	100m	110	25p		P-A	Ge	150J	T01	B	
42#	ASY70IV	1.5MS	3.5u		1.1u	2.1u	300m	500m	100m	45	25p		P-A	Ge	150J	T01	A	
43#	ASY70V	1.5MS	3.5u		1.1u	2.1u	300m	500m	100m	75	25p		P-A	Ge	150J	T01	A	
44#	ASY70VI	1.5MS	3.5u		1.1u	2.1u	300m	500m	100m	110	25p		P-A	Ge	150J	T01	A	
45	2N1759	15.0MT	3500n				28m	2.0	.50m	105	27		P-A	Ge	95J	F35		
46	2N1760	15.0MT	3500n				28m	2.0	.50m	105	27		P-A	Ge	95J	F35		
47	JAN2N2528		4000n	250nt	3.0u	2.0u	85	2.0	3.0m	20	80m		P	Ge	110J	F4f	C0	
48#	BDY10	10kt	4000nt		1.5ut	3.0ut	150	2.0	200m	20	350m		N-D	Si	175J	T03	C0	
49#	BDY11	10kt	4000nt	250nt	1.5ut	3.0ut	150	2.0	200m	20	350m		N-D	Si	175J	T03	C0	
50	2N3429	20kt	4000n		4.0u	8.0u	150	2.0	5.0	10	200m		N	Si	175J	T52	B	
51	2N3430	20kt	4000n		4.0u	8.0u	150	2.0	5.0	10	200m		N	Si	175J	T52	B	
52	2N3431	20kt	4000n		4.0u	8.0u	150	2.0	5.0	10	200m		N	Si	175J	T52	B	
53	2N3432	20kt	4000n		4.0u	8.0u	150	2.0	5.0	10	200m		N	Si	175J	T52	B	
54	2N3433	20kt	4000n		4.0u	8.0u	150	2.0	5.0	10	200m		N	Si	175J	T52	B	
55	2N2832	10.0MS	4000n		6.0u	2.5u	85	2.0	1.0m	50	25m		P	Ge	110C	T03	C0	
56	2N2833	10.0MS	4000n		6.0u	2.5u	85	2.0	1.0m	50	25m		P	Ge	110C	T03	C0	
57	2N2834	10.0MS	4000n		6.0u	2.5u	85	2.0	1.0m	50	25m		P	Ge	110C	T03	C0	
58	JAN2N2834	10.0MS	4000n		6.0u	2.5u	85	2.0	1.0m	25	150m		P	Ge	110J	F4e	C0	
59	2N3846	10.0MS	4000n			7.0u	4.0	3.0	10	10	80m	750f	N	Si	175C	T063	0	
60	2N3847	10.0MS	4000n			7.0u	4.0	3.0	10	10	80m	750f	N	Si	175C	T063	0	
61	2N3848	10.0MS	4000n			7.0u	4.0	4.0	15	10	670u	750f	N	Si	175C	T063	0	
62	2N3849	10.0MS	4000n			7.0u	4.0	4.0	15	10	670u	750f	N	Si	175C	T063	0	
63	2N1755	15.0MT	4000n				28m	2.0	.50m	52	23		P-A	Ge	95J	F35		
64	2N1756	15.0MT	4000n				28m	2.0	.50m	52	23		P-A	Ge	95J	F35		
65	2N1757	15.0MT	4000n				28m	2.0	.50m	52	23		P-A	Ge	95J	F35		
66	2N1758	15.0MT	4000n				28m	2.0	.50m	52	23		P-A	Ge	95J	F35		
67	JAN2N3846	35MS	4.0u			7.0u	150	3.0	5.0	40	750p		N	Si	175A	T063	A0	
68	JAN2N3847	35MS	4.0u			7.0u	150	3.0	5.0	40	750p		N	Si	175A	T063	A0	
69#	2G103	300M	4000n				150m	5.0	10m	40			P-ME	Ge	100J	T018		
70	2N463	4.0kt	4.6ut		4.0ut	1.5ut		2.0	2.0	27	80m	310p	P-A	Si	100	T032	A0	
71	2N3795	50MS	5.0u			5.0m		2.0	10m	12			P	Si	200J	T05	A0	
72	1401-0415	500k	5.0u			10u	625	4.0	150	10	20		N-D	Si	200J	T14a	C	
73	1401-0420	500k	5.0u			10u	625	4.0	200	10			N-D	Si	200J	T14a	C	
74	1401-0425	500k	5.0u			10u	625	4.0	250	10			N-D	Si	200J	T14a	C	
75	1401-0615	500k	5.0u			10u	625	4.0	150	10			N-D	Si	200J	T14a	C	
76	1401-0625	500k	5.0u			10u	625	4.0	250	10			N-D	Si	200J	T14a	C	
77	1401-0815	500k	5.0u			10u	625	4.0	150	10			N-D	Si	200J	T14a	C	
78	1401-0820	500k	5.0u			10u	625	4.0	200	10			N-D	Si	200J	T14a	C	
79	1401-0825	500k	5.0u			10u	625	4.0	250	10			N-D	Si	200J	T14a	C	
80	1401-1015	500k	5.0u			10u	625	4.0	150	10			N-D	Si	200J	T14a	C	
81	1401-1020	500k	5.0u			10u	625	4.0	200	10			N-D	Si	200J	T14a	C	
82	1401-1025	500k	5.0u			10u	625	4.0	250	10			N-D	Si	200J	T14a	C	
83	1401-1215	500k	5.0u			10u	625	4.0	150	10			N-D	Si	200J	T14a	C	
84	1441-0405	50MS	5000n		10u		350m	4.0	50	10			N-D	Si	200J	T0114		
85	1441-0407	50MS	5000n		10u		350m	4.0	75	10			N-D	Si	200J	T0114		
86	1441-0410	50MS	5000n		10u		350m	4.0	100	10			N-D	Si	200J	T0114		
87	1441-0605	50MS	5000n		10u		350											

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L E O D E
								Vcb (V)	Ic (A)	hFE								
1	2N2773		7.0u			13u	200 s	4.0	20	10 Δ			N	Si	175C	T33	A	
2	2N2774		7.0u			13u	200 s	4.0	20	10 Δ			N	Si	175C	T33	A	
3	JAN2N5926		7.0u		4.0u	6.0u	300 s #	4.0	90	5.0 Δ #			N	Si	200A	T69d	A	
4	JAN2N5927		7.0u		4.0u	6.0u	300 s #	4.0	120	5.0 Δ #			N	Si	200A	T69c	B	
5	2N5928		7.0u		3.0u		200 s	2.0	100	10 Δ #			N	Si	200J	T114	A	
6	151-04SPC		7.0u			14n	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
7	151-08SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
8	151-08SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
9	151-10SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
10	151-12SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
11	151-14SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
12	151-16SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
13	151-18SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
14	151-20SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
15	151-22SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-A	Si	150J	T1	B	
16	151-26SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-F	Si	150J	T1		
17	151-28SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-F	Si	150J	T1		
18	151-30SPC		7.0u			14u	100	4.0	1.5m	11 Δ	870m		N-F	Si	150J	T1		
19	152-04SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
20	152-06SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
21	152-08SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
22	152-10SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
23	152-12SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
24	152-14SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
25	152-16SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
26	152-18SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
27	152-20SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
28	152-22SPC		7.0u			14u	100	4.0	1.5m	18 Δ	870m		N-A	Si	150J	T1	B	
29	152-26SPC		7.0u			14u	100	4.0	1.5m	18 Δ	830m		N-F	Si	150J	T1		
30	152-28SPC		7.0u			14u	100	4.0	1.5m	18 Δ	830m		N-F	Si	150J	T1		
31	152-30SPC		7.0u			14u	100	4.0	1.5m	18 Δ	830m		N-F	Si	150J	T1		
32	2N4296	20.0mΔ	7000n		10u		20m	10	50m	150		6.0p	N	Si	175	TO66	C	
33	2N4297	20.0mΔ	7000n		10u		20m	10	50m	150		6.0p	N	Si	175	TO66	C	
34	2N4298	20.0mΔ	7000n		10u		20m	10	50m	150		6.0p	N	Si	175	TO66	C	
35	2N4299	20.0mΔ	7000n		10u		20m	10	50m	150		6.0p	N	Si	175	TO66	C	
36	2N2775		8000n		14u		2.0m	12	6.2m	20 Δ	.06		N	Si	175C	T33	A	
37	2N2776		8000n		14u		2.0m	12	6.2m	20 Δ	.06		N	Si	175C	T33	A	
38	2N2777		8000n		14u		2.0m	12	6.2m	20 Δ	.06		N	Si	175C	T33	A	
39	2N2778		8000n		14u		2.0m	12	6.2m	20 Δ	.06		N	Si	175C	T33	A	
40	2N2779		8.0u			14u	200 s	4.0	25	10 Δ			N	Si	175C	T33	A	
41	2N2780		8.0u			14u	200 s	4.0	25	10 Δ			N	Si	175C	T33	A	
42	MP1534		8000n		3.0u	5.0u	90	2.0	33.0	35 Δ	400m		P-A	Ge	110J	TO41	C	
43	MP1535		8000n		3.0u	5.0u	90	2.0	33.0	35 Δ	400m		P-A	Ge	110J	TO41	C	
44	MP1536		8000n		3.0u	5.0u	90	2.0	33.0	35 Δ	400m		P-A	Ge	110J	TO41	C	
45	MP1537		8000n		3.0u	5.0u	90	2.0	33.0	35 Δ	400m		P-A	Ge	110J	TO41	C	
46	MP1538		8000n		3.0u	5.0u	90	2.0	33.0	35 Δ	400m		P-A	Ge	110J	TO41	C	
47	2N3863	.50mΔ	8.0u			16u	117	2.0	3	30 Δ	.33		N	Si	200C	TO3	C	
48	2N3864	.50mΔ	8.0u			16u	117	2.0	3	30 Δ	.33		N	Si	200C	TO3	C	
49	2N3865	.50mΔ	8.0u			16u	117	2.0	3	30 Δ	.33		N	Si	200C	TO3	C	
50	JAN2N3772	3.0m	8.0u			10u	150	4.0	10	10 # Δ		1.2n	N	Si	200J	TO3	C	
51	DTG2000	250k	9.0u			10u	60	2.0	8.0	25 Δ	36m		P	Ge	110J	Y204a	C	
52	DTG2100	250k	9.0u			10u	60	2.0	8.0	25 Δ	36m		P	Ge	110J	Y204a	C	
53	DTG2200	250k	9.0u			10u	60	2.0	8.0	25 Δ	36m		P	Ge	110J	Y204a	C	
54	DTG2300	250k	9.0u			10u	60	2.0	8.0	25 Δ	36m		P	Ge	110J	Y204a	C	
55	DTG2400	250k	9.0u			10u	60	2.0	8.0	25 Δ	36m		P	Ge	110J	Y204a	C	
56	2N4950		9.5u	10u	10u	10u	300 s #	3.0	50	10 Δ #	30 #		N	Si	200C	T69	A	
57	JAN2N1553A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
58	JAN2N1554A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
59	JAN2N1555A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
60	JAN2N1556A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
61	JAN2N1557A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
62	JAN2N1558A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
63	JAN2N1559A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
64	JAN2N1560A		10u	2.0u	5.0u	30u	90	2.0	10	60			P	Ge	100J	TO3	C	
65	JAN2N1651		10u		6.0u	100	100	1.5	25	20 Δ	26m		P	Ge	110S	TO41	C	
66	JAN2N1652		10u		6.0u	100	100	1.5	25	20 Δ	26m		P	Ge	110S	TO41	C	
67	JAN2N1653		10u		6.0u	100	100	1.5	25	20 Δ	26m		P	Ge	110S	TO41	C	
68	2N2294		10u			10u	60	5.0	2.0	40 Δ	200m		P	Ge	110C	TO41	C	
69	2N2295		10u			10u	60	5.0	2.0	40 Δ	200m		P	Ge	110C	TO41	C	
70	2N2296		10u			10u	60	5.0	2.0	40 Δ	200m		P	Ge	110C	TO41	C	
71	2N2526		10u	5.0u		4.0u	85	12	500m	10 Δ	80m		P	Ge	110C	F4j	C	
72	2N2527		10u	5.0u		4.0u	85	12	500m	10 Δ	80m		P	Ge	110C	F4j	C	
73	2N2528		10u	5.0u		4.0u	85	12	500m	10 Δ	80m		P	Ge	110C	F4j	C	
74	2N5578		10u			15u	150	3.0	40	10 Δ #	37m #		N	Si	175J	F23	C	
75	2N6064		10u			15u	56	12	500m	10 Δ	80m		P	Ge	110J	R155	A	
76	MP600		10u		6.0u	13u	85	2.0	50	50 Δ	30m		PADE	Ge	110J	F4r	C	
77	MP600A		10u		6.0u	13u	85	2.0	50	50 Δ	30m		P-D	Ge	110J	F4s	C	
78	MP601		10u		6.0u	13u	85	2.0	50	50 Δ	30m		PADE	Ge	110J	F4r	C	
79	MP601A		10u		6.0u	13u	85	2.0	50	50 Δ	30m		P-D	Ge	110J	F4s	C	
80	MP602		10u		6.0u	13u	85	2.0	50	50 Δ	30m		PADE	Ge	110J	F4r	C	
81	MP602A		10u		6.0u	13u	85	2.0	50	50 Δ	30m		P-D	Ge	110J	F4s	C	
82	MP603		10u		6.0u	13u	85	2.0	50	50 Δ	30m		PADE	Ge	110J	F4r	C	
83	MP603A		10u		6.0u	13u	85	2.0	50	50 Δ	30m		P-D	Ge	110J	F4s	C	
84	MP1529		10u	2.0u	5.0u	90	90	2.0	33.0	35 Δ	500m		P-A	Ge	110J	TO41	C	
85	MP1530		10u	2.0u	5.0u	90	90	2.0	33.0	35 Δ	500m		P-A	Ge	110J	TO41	C	
86	MP1531		10u	2.0u	5.0u	90	90	2.0	33.0	35 Δ	500m		P-A	Ge	110J	TO41	C	
87	MP1532		10u	2.0u	5.0u	90	90	2.0	33.0	35 Δ	500m		P-A	Ge	110J	TO41	C	
88	MP1533		10u	2.0u	5.0u	90	90	2.0	33.0	35 Δ	500m		P-A	Ge	110J	TO41	C	
89	2N1159	10k	10u			10u	20 s	2.0	100	100	200m		P	Ge	95J	TO3	C	
90	2N1160	10k	10u			10u	20 s	2.0	100	100	200m		P	Ge	95J	TO3	C	
91	2N663	15k	10u		10u	10	10											

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab &
(3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L E A D E
								Vcb (V)	Ie (A)	hFE								
1	2N2132		20u∅			25u∅	250 ∅	4.0 ∅	25 ∅	10 ∆	60m		N	Si	175J	T17	F	
2	2N2133		20u∅			25u∅	250 ∅	4.0 ∅	25 ∅	10 ∆	60m		N	Si	175J	T17	F	
3	2N5692		20u		8.0u	15u	120 ∅	2.0 ∅	40	10 ∆			P	Ge	110J			
4	2N5693		20u		8.0u	15u	120 ∅	2.0 ∅	40	10 ∆			P	Ge	110J			
5	2N5694		20u		8.0u	15u	120 ∅	2.0 ∅	40	10 ∆			P	Ge	110J			
6	2N5695		20u		8.0u	15u	120 ∅	2.0 ∅	40	10 ∆			P	Ge	110J			
7	2N5696		20u		8.0u	15u	120 ∅	2.0 ∅	40	10 ∆			P	Ge	110J			
8	2N4048	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO36	C∅	
9	2N4049	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO36	C∅	
10	2N4050	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO36	C∅	
11	2N4051	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO36	C∅	
12	2N4052	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO36	C∅	
13	2N4053	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO36	C∅	
14	2N4276	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
15	2N4277	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
16	2N4278	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
17	2N4279	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
18	2N4280	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
19	2N4281	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
20	2N4282	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
21	2N4283	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO3	C∅	
22	MP4276	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
23	MP4277	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
24	MP4278	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
25	MP4279	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
26	MP4280	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
27	MP4281	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
28	MP4282	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
29	MP4283	2.0kTΔ	20u∅			100u∅	170 ∅	2.0 ∅	15 ∅	60 ∆#			P	Ge	110J	TO41	C∅	
30	2N3132	3.0kTΔ	20u∅			20u∅	90 ∅	2.0 ∅	250m∅	100 ∆	300m		P	Ge	100C	TO3	C∅	
31	2N5156	.15M\$Δ	20.0u		25u	40u	93 ∅	2.0 ∅	5 ∅	25 ∆	.10		P	Ge	100J	TO3	C∅	
32#	OC28	200k\$	20u		15u	40u	30 ∅	1.0 ∅	6 ∅	15 ∆	.60		PA	Ge	90J	TO3	C∅	
33#	OC35	220k\$	20u		15u	40u	30 ∅	1.0 ∅	6 ∅	20 ∆	.60		PA	Ge	90J	TO3	C∅	
34#	OC36	220k\$	20u		15u	40u	30 ∅	1.0 ∅	6 ∅	20 ∆	.60		PA	Ge	90J	TO3	C∅	
35#	OC29	250k\$	20u		15u	40u	30 ∅	1.0 ∅	6 ∅	35 ∆	.60		PA	Ge	90J	TO3	C∅	
36	2N375	5.0M+Δ	20ut		5.0ut	40ut	45 ∅	4.0 ∅	3.0 ∅	22 ∆	500m		P	Ge	95J	TO3	C∅	
37	2N618	5.0M+Δ	20ut		5.0ut	40ut	45 ∅	4.0 ∅	3.0 ∅	35 ∆	400m		P	Ge	95J	TO3	C∅	
38#	ADY26		25u			75u∅	100 ∅	12 ∅	1.0 ∅	1.0 ∆			P-A	Ge	90J	ZA4	C∅	
39	2N2728	3.0kTΔ	25u		20u	15u	170 ∅	2.0 ∅	20u∅	40 ∆	2.0m		P	Ge	110C	TO36	C∅	
40	2N378	5.0kTΔ	25ut			40ut	25 ∅#	2.0 ∅	2.0 ∅	40 ∆			PA	Ge	100S	TO3	C∅	
41	2N379	5.0kTΔ	25ut			40ut	25 ∅#	2.0 ∅	2.0 ∅	20 ∆			PA	Ge	100S	TO3	C∅	
42	2N459	5.0kTΔ	25ut			40ut	25 ∅#	2.0 ∅	2.0 ∅	20 ∆			P-A	Ge	100S	TO3	C∅	
43	JAN2N2079A	5.0kTΔ	25u			25u	150 ∅	2.0 ∅	12m∅	12 ∆	60m	5.0p[P	Ge	100S	TO36	C∅	
44	2N2490	5.0kΔ	25u∅			15u∅	170 ∅	2.0 ∅	12 ∅	8.0 ∆	58m		P	Ge	110C	TO36	C∅	
45	2N2491	5.0kΔ	25u∅			15u∅	170 ∅	2.0 ∅	12 ∅	12 ∆	58m		P	Ge	110C	TO36	C∅	
46	2N2492	5.0kΔ	25u∅			15u∅	170 ∅	2.0 ∅	12 ∅	10 ∆	50m		P	Ge	110C	TO36	C∅	
47	2N2493	5.0kΔ	25u∅			15u∅	170 ∅	2.0 ∅	12 ∅	10 ∆	41m		P	Ge	110C	TO36	C∅	
48#	ASZ15	200k\$	25u	2.0u	10u	20u	30 ∅*	1.0 ∅	6.0 ∅	15 ∆	40m	190p\$	P	Ge	90J	TO3	C∅	
49#	ASZ17	220k\$	25u	2.0u	10u	20u	30 ∅*	1.0 ∅	6.0 ∅	20 ∆	40m	190p\$	P	Ge	90J	TO3	C∅	
50#	ASZ18	220k\$	25u	2.0u	10u	20u	30 ∅*	1.0 ∅	6.0 ∅	20 ∆	40m	190p\$	P	Ge	90J	TO3	C∅	
51#	ASZ16	250k\$	25u	2.0u	10u	20u	30 ∅*	1.0 ∅	6.0 ∅	35 ∆	40m	190p\$	P	Ge	90J	TO3	C∅	
52	2N456		26u			80u	50 ∅	1.5 ∅	1.0 ∅	130	48m		P-A	Ge	95S	TO3	C∅	
53	2N457		26u			80u	50 ∅	1.5 ∅	1.0 ∅	130	48m		P-A	Ge	95S	TO3	C∅	
54	2N458		26u			80u	50 ∅	1.5 ∅	1.0 ∅	130	48m		P-A	Ge	95S	TO3	C∅	
55	2N1667	2.0kTΔ	30u		25u	50u	30 ∅*	2.0 ∅	6.0 ∅	35 ∆	83m		P	Ge	90C	TO3	C∅	
56	2N1668	2.0kTΔ	30u		25u	50u	30 ∅*	2.0 ∅	6.0 ∅	20 ∆	83m		P	Ge	90C	TO3	C∅	
57	2N1669	2.0kTΔ	30u		25u	50u	30 ∅*	2.0 ∅	6.0 ∅	20 ∆	83m		P	Ge	90C	TO3	C∅	
58	2N2446	3.0k\$Δ	30u∅			35u∅	90 ∅	2.0 ∅	5.0 ∅	15 ∆	214m		P	Ge	100C	TO3	C∅	
59	2N1358A	100kΔ	30u		30u	30u	50 ∅\$	2.0 ∅	1.2 ∅	40 ∆	58m		P	Ge	100C	TO36	A∅	
60	2N2691	60k\$Δ	700u		3.0u	3.0u	100 ∅	1.5 ∅	20 ∅	100 #	32m		P	Ge	110C	TO41	C∅	
61	2N2691A	.60M\$Δ	700u		3.0u	3.0u	170 ∅	1.5 ∅	20m∅	100 #	.03		P	Ge	110C	TO41	A∅	

13. DARLINGTON TRANSISTORS

IN ORDER OF (1) MIN DERATING FACTOR
(2) MIN hFE (3) IC TEST (4) TYPE No.

LINE No.	TYPE No.	POL. & MAT. N-PNP	1 MIN. DERATE J TO C (W/C)	hFE		I-hfe		ABSOLUTE MAX RATINGS @ 25°C								MAX COLL (CASE) DISS-Pc (W)	M A X T °C	MAX ICBO @ 25°C (A)	ft (Hz)	MAX SAT RES (Ω)	S T U R R E	D W G No	L C O A D E
				2 MIN ∅-TYP	MAX ∅-TYP	VCE ∅VBC	IC ∅IB	∅-IE (A)	IB ∅-IE (A)	BVCB (V)	BVEBO (V)	∅BVCE (V)	∅BVCE (V)										
1	BD879	NSi	10m	2.0k		5.0	500m	1.0	100m	100	5.0	80	1.2	\$J	100m	200M	1.8	PE	T0126	KB			
2	2N2724	NSi	10m	2.0k		5.0	500m	1.0	100m	80	12	60	1.2	\$S	100m	100M	1.8	PE	T072	KA			
3	TIS151	NSi	10m	10k	50k	5.0	200m	1.0	100m	80	12	55	1.2	\$S	50m	150M	666m	#	R210a	A			
4	TIS150	NSi	10m	20k	70k	5.0	200m	1.0	100m	50	12	40	1.2	\$S	50m	150M	666m	#	R210a	A			
5	2N6521	PSi	11m	10k	25k	10	150m	1.0	100m	60	10	40	2.0	\$S	10m	175M	10	#	R176c	KA			
6	2N6522	PSi	11m	20k	50k	10	150m	1.0	100m	60	10	40	2.0	\$S	10m	175M	10	#	R176c	KA			
7	MPSD04	NSi	12m	1.0k		5.0	300m	300m			10	25	1.5	\$J	100m	100M	10m	#	T092	CC			
8	MPSD54	PSi	12m	1.0k		5.0	300m	300m			10	25	1.5	\$J	100m	100M	10m	#	T092	CC			
9	MPSA65	PSi	12m	20k		5.0	100m	300m			30	8.0	1.5	\$J	100m	175M	15	#	T092	CC			
10	MPSA66	PSi	12m	40k		5.0	100m	300m			30	8.0	1.5	\$J	100m	175M	15	#	T092	CC			
11	2N6549	NSi	16m	15k	150k	5.0	200m	2.0	100m	50	12	40	2.0	\$J	100m	100M	2.0	#	Y202c	CC			
12	2N6548	NSi	16m	25k	150k	5.0	200m	2.0	100m	50	12	40	2.0	\$J	100m	100M	2.0	#	Y202c	CC			
13	2N6042	PSi	17m	1.0k	2.0k	4.0	3.0	8.0	120m	100	5.0	100	2.2	\$J	500u	4.0M	500m	#	B23a	KE			
14	2N6045	NSi	17m	1.0k	2.0k	4.0	3.0	8.0	120m	100	5.0	100	2.2	\$J	500u	4.0M	500m	#	B23	KE			
15	2N6040	PSi	17m	1.0k	2.0k	4.0	4.0	8.0	120m	60	5.0	60	2.2	\$J	500u	4.0M	500m	#	B23a	KE			
16	2N6041	PSi	17m	1.0k	2.0k	4.0	4.0	8.0	120m	80	5.0	60	2.2	\$J	500u	4.0M	500m	#	B23a	KE			
17	2N6043	PSi	17m	1.0k	2.0k	4.0	4.0	8.0	120m	60	5.0	60	2.2	\$J	500u	4.0M	500m	#	B23	KE			
18	2N6044	NSi	17m	1.0k	2.0k	4.0	4.0	8.0	120m	80	5.0	60	2.2	\$J	500u	4.0M	500m	#	B23	KE			
19	BSR501	NSi	18m	1.0k		10	150m	2.0	100m	60	5.0	45	800m	\$J	50m	350M	1.6	PL	R221a	B			
20	BSR511	NSi	18m	1.0k		10	150m	2.0	100m	80	5.0	60	800m	\$J	50m	350M	1.6	PL	R221a	B			
21	BSR601	PSi	18m	1.0k		10	150m	2.0	100m	60	5.0	45	800m	\$J	50m	1.0G	2.2	PL	R221a	B			
22	BSR611	PSi	18m	1.0k		10	150m	2.0	100m	80	5.0	60	800m	\$J	50m	1.0G	2.2	PL	R221a	B			
23	92PU45	NSi	20m	25k		5.0	200m	2.0	500m	50	12	40	1.2	\$J	100m	100M		PLT	B32	KA			
24	92PU45A	NSi	20m	25k		5.0	200m	2.0	500m	60	12	50	1.2	\$J	100m	100M		PLT	B32	KA			
25	SDN301	NSi	23m	1.0k		2.0	1.0	2.0				60	4.0	\$J	1.0u	50M	750m		T033	KM			
26	SDN305	NSi	23m	1.0k		2.0	1.0	2.0				150	4.0	\$J	1.0u	50M	1.2		T033	KM			
27	SDP351	PSi	23m	1.0k		2.0	1.0	2.0				60	4.0	\$J	1.0u	50M	750m		T033	KM			
28	SDP355	PSi	23m	1.0k		2.0	1.0	2.0				120	4.0	\$J	1.0u	50M	1.2		T033	KM			
29	SDN105	NSi	28m	1.0k		2.0	1.0	5.0				150	5.0	\$J	1.0u	50M	500m		T033	KM			
30	SDP155	PSi	28m	1.0k		2.0	1.0	5.0				120	5.0	\$J	1.0u	50M	600m		T033	KM			
31	BSS501	NSi	28m	1.5k		10	500m	1.0	100m	60	5.0	45	5.0	\$J	50m	350M	1.6	PL	T039	CC			
32	BSS511	NSi	28m	1.5k		10	500m	1.0	100m	80	5.0	60	5.0	\$J	50m	350M	1.6	PL	T039	CC			
33	BSS521	NSi	28m	1.5k		10	500m	1.0	100m	100	5.0	80	5.0	\$J	50m	350M	1.6	PL	T039	CC			
34	BCX211	NSi	28m	2.0k		10	150m	1.0	100m	60	10	45	3.5	\$J	50m	350M	2.6	PL	T039	CC			
35	SDN101	NSi	28m	2.0k		2.0	1.0	5.0				80	5.0	\$J	1.0u	50M	300m		T033	KM			
36	SDP151	PSi	28m	2.0k		2.0	1.0	5.0				80	5.0	\$J	1.0u	50M	500m		T033	KM			
37	BSS601	PSi	29m	1.5k		10	500m	1.0	100m	60	5.0	45	5.0	\$J	50m	1.0G		PL	T039	CC			
38	BSS611	PSi	29m	1.5k		10	500m	1.0	100m	80	5.0	60	5.0	\$J	50m	1.0G		PL	T039	CC			
39	BSS621	PSi	29m	2.0k		10	500m	1.0	100m	100	5.0	80	5.0	\$J	50m	1.0G	2.8	PL	T039	CC			
40	PA70031	NSi	30m	2.0k		5.0	5.0	5.0				80	12	\$S	1.0u*	50M	440m	#	T05	A			
41	PA70141	NSi	30m	2.0k		5.0	5.0	5.0				60	12	\$S	1.0u*	50M	440m	#	T05	A			
42	U2T3011	NSi	40m	1.0k	10k	2.0	1.0	2.0	500m			60	4.0	\$A	1.0u*	50M	750m	#	PL	T033	KD		
43	U2T3051	NSi	40m	1.0k	10k	2.0	1.0	2.0	500m	12	150	40	4.0	\$A	1.0u*	50M	1.2	#	PL	T033	KD		
44	U2T1051	NSi	50m	1.0k	10k	2.0	1.0	5.0	500m	12	150	50	5.0	\$A	1.0u*	50M	500m	#	PL	T033	KD		
45	U2T712	N	50m	1.0k		5.0	1.0	2.0	500m	12	200	50	5.0	\$S	10u*				PL	T033	KD		
46	U2T713	N	50m	1.0k		5.0	1.0	2.0	500m	12	300	50	5.0	\$S	10u*				PL	T033	KD		
47	SDM33031	NSi	50m	1.0k		5.0	2.5	5.0	500m	60	10	40	5.0	\$J	1.0u	70M	800m		R176e	CC			
48	SDM33041	NSi	50m	1.0k		5.0	2.5	5.0	500m	80	10	60	5.0	\$J	1.0u	70M	800m		R176e	CC			
49	SDM33051	NSi	50m	1.0k		5.0	2.5	5.0	500m	100	10	60	5.0	\$J	1.0u	70M	800m		R176e	CC			
50	SDM34031	PSi	50m	1.0k		5.0	2.5	5.0	500m	60	10	40	5.0	\$J	1.0u	70M	800m		R176e	CC			
51	SDM34041	PSi	50m	1.0k		5.0	2.5	5.0	500m	80	10	60	5.0	\$J	1.0u	70M	800m		R176e	CC			
52	SDM34051	PSi	50m	1.0k		5.0	2.5	5.0	500m	100	10	60	5.0	\$J	1.0u	70M	800m		R176e	CC			
53	2N63511	NSi	50m	1.0k	10k	5.0	5.0	10	500m	150	12	150	5.0	\$J	50m	50M	500m		T033	KD			
54	JAN2N63511	NSi	50m	1.0k	10k	5.0	5.0	5.0	500m	150	12	150	5.0	\$J	50m	50M	300m	#	T033	KD			
55	SDM33001	NSi	50m	1.0k		5.0	5.0	5.0	500m	60	10	40	5.0	\$J	1.0u	70M	600m		R176e	CC			
56	SDM33011	NSi	50m	1.0k		5.0	5.0	5.0	500m	80	10	60	5.0	\$J	1.0u	70M	600m		R176e	CC			
57	SDM33021	NSi	50m	1.0k		5.0	5.0	5.0	500m	100	10	60	5.0	\$J	1.0u	70M	600m		R176e	CC			
58	SDM34001	PSi	50m	1.0k		5.0	5.0	5.0	500m	60	10	40	5.0	\$J	1.0u	70M	600m		R176e	CC			
59	SDM34011	PSi	50m	1.0k		5.0	5.0	5.0	500m	80	10	60	5.0	\$J	1.0u	70M	600m		R176e	CC			
60	SDM34021	PSi	50m	1.0k		5.0	5.0	5.0	500m	100	10	60	5.0	\$J	1.0u	70M	600m		R176e	CC			
61	U2T1011	NSi	50m	2.0k	10k	2.0	1.0	5.0	500m	12	80	5.0	5.0	\$A	1.0u*	50M	300m	PL	T033	KD			
62	2N63501	NSi	50m	2.0k	10k	5.0	5.0	5.0	500m	80	12	80	5.0	\$J	50m	50M	300m		T033	KD			
63	JAN2N63501	NSi	50m	2.0k	10k	5.0	5.0	5.0	500m	80	12	80	5.0	\$J	50m	50M	300m		T033	KD			
64	D40C1	NSi	50m	10k		5.0	200m	500m				30	13	30	6.2	\$A	500m	75M	PE	B15b	CC		
65	D40C4	NSi	50m	10k		5.0	200m	500m				40	13	40	6.2	\$A	500m	75M	PE	B15b	CC		
66	D40C7	NSi	50m	10k		5.0	200m	500m				50	13	50	6.2	\$A	500m	75M	PE	B15b	CC		
67	D40C2	NSi	50m	40k		5.0	200m	500m				30	13	30	6.2	\$A	500m	75M	PE	B15b	CC		
68	D40C5	NSi	50m	40k		5.0	200m	500m				40	13	40	6.2	\$A	500m	75M	PE	B15b	CC		
69	D40C8	NSi	50m	40k		5.0	200m	500m				50	13	50	6.2	\$A	500m	75M	PE	B15b	CC		
70	D40C3	NSi	50m	90k		5.0	200m	500m				30	13	30	6.2	\$A	500m	75M	PE	B15b	CC		
71	2SC1882HT	NSi	53m	1.0k	20k	2.0	1.0	5.0	500m	120	12	120	8.0	\$J	1.0u*	50M	500m	E	R90b	KM			
72	2SC1879HT	NSi	53m	1.0k		2.0	2.0	2.0				120	7.0	120	8.0	\$J	100u	750m	E	T039	CC		
73	2SC2165H	NSi	53m	1.0k	20k	5.0	5.0	5.0	1.0	120	7.0	120	8.0	\$J	100u		400m	#	DE	T033</			

13. DARLINGTON TRANSISTORS

IN ORDER OF (1) MIN DERATING FACTOR
(2) MIN hFE (3) IC TEST (4) TYPE No.

LINE No.	4 TYPE No.	POL. & MAT. N-PNP P-PNP	1 MIN. DERATE J TO C (W/C)	hFE		TEST		ABSOLUTE MAX RATINGS @ 25°C						MAX COLL (CASE) DISS-Pc (W)	M A X T °C	ICBO @ MAXVCB @ 25°C (A)	ft (Hz)	MAX SAT RES (Ω)	S T U R E U C	DWG No	L C O A D E			
				2 MIN	MAX	VCE	IC	IC	IB	BVCBO	VEBEO	BVCES												
				∅-TYP	∅-TYP	(V)	∅IB (A)	∅IE (A)	(A)	(V)	(V)	∅BVCES (V)												
1	TIP117†	PSi	400m\$	500	#	4.0	2.0	2.0	†	50m	100	†	5.0†	100	50	†	1.0m	1.2 #	†	B1	KB			
2	BD677‡	NSi	400m	750	#	4.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16f	KB			
3	BD678‡	PSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16f	KB			
4	BD679‡	NSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16f	KB			
5	BD680‡	PSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
6	MJE700	PSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
7	MJE702	NSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
8	MJE800	NSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
9	MJE802	NSi	400m	750	#	3.0	1.5	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
10	BD675A	NSi	400m	750	#	3.0	2.0	4.0		100m	45		5.0	45	40	†	200m	1.0MΔ	†	B16f	KB			
11	BD676A	PSi	400m	750	#	3.0	2.0	4.0		100m	45		5.0	45	40	†	200m	1.0MΔ	†	B16f	KB			
12	BD677A	NSi	400m	750	#	3.0	2.0	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16f	KB			
13	BD678A	PSi	400m	750	#	3.0	2.0	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16f	KB			
14	BD679A	NSi	400m	750	#	3.0	2.0	4.0		100m	80		5.0	80	40	†	200m	1.0MΔ	†	B16f	KB			
15	BD680A	PSi	400m	750	#	3.0	2.0	4.0		100m	80		5.0	80	40	†	200m	1.0MΔ	†	B16f	KB			
16	MJE701	PSi	400m	750	#	3.0	2.0	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
17	MJE703	PSi	400m	750	#	3.0	2.0	4.0		100m	80		5.0	80	40	†	200m	1.0MΔ	†	B16e	KB			
18	MJE801	NSi	400m	750	#	3.0	2.0	4.0		100m	60		5.0	60	40	†	200m	1.0MΔ	†	B16e	KB			
19	MJE803	NSi	400m	750	#	3.0	2.0	4.0		100m	80		5.0	80	40	†	200m	1.0MΔ	†	B16e	KB			
20 #	ESM213	NSi	400m	750	#	3.0	4.0	5.0		100m	60		5.0	60	50	∅	∅	200u	1.0MΔ	666m#	E	Y220b		
21 #	ESM214	NSi	400m	750	#	3.0	4.0	5.0		100m	60		5.0	60	50	∅	∅	200u	1.0MΔ	666m#	E	Y220b		
22 #	ESM259	PSi	400m	1.0k	#	3.0	4.0	5.0	†	100m	60	†	5.0	60	50	∅	∅	200u	1.0MΔ	666m#	E	Y220b		
23 #	ESM260	PSi	400m	1.0k	#	3.0	4.0	5.0	†	100m	80	†	5.0	80	50	∅	∅	200u	1.0MΔ	666m#	E	Y220b		
24	D44E1†	NSi	400m	1.0k#		5.0	5.0	10			40		7.0	40	50	∅	∅	10u\$	666m#	PE	B22	KE		
25	D44E2†	NSi	400m	1.0k#		5.0	5.0	10			60		7.0	60	50	∅	∅	10u\$	666m#	PE	B22	KE		
26	D44E3†	NSi	400m	1.0k#		5.0	5.0	10			80		7.0	80	50	∅	∅	10u\$	666m#	PE	B22	KE		
27	D45E1†	NSi	400m	1.0k#		5.0	5.0	10			40		7.0	40	50	∅	∅	10u\$	666m#	PE	B22	KE		
28	D45E2†	PSi	400m	1.0k#		5.0	5.0	10			60		7.0	60	50	∅	∅	10u\$	666m#	PE	B22	KE		
29	D45E3†	PSi	400m	1.0k#		5.0	5.0	10			80		7.0	80	50	∅	∅	10u\$	666m#	PE	B22	KE		
30 #	2SC1884HT	NSi	400m	1.0k		2.0	8.0	8.0			120		7.0	120	50	∅	∅	∅	100u	187m	D	TO66	KE	
31 #	2SD459†	Si	400m	1.5k		5.0	5.0	7.0		500m	80		4.0	80	50	∅	∅	100u	20k\$	300m		B26b	KE	
32 #	2SD460†	Si	400m	1.5k		5.0	5.0	7.0		500m	100		4.0	100	50	∅	∅	100u	20k\$	300m		B26b	KE	
33 #	2SD643*	N	416m	150		5.0	30	30		2.0	300		5.0	200	300	∅	∅	600u			DMΔ	F44	C∅	
34 #	2SD644*	N	416m	150		5.0	30	30		2.0	600		5.0	450	300	∅	∅	600u			DMΔ	F44	C∅	
35	2N6298	PSi	428m	750		3.0	4.0	8.0		120m	60	†	5.0†	60	75	∅	∅	500uΔ	4.0MΔ			TO66	KF∅	
36	2N6299	PSi	428m	750		3.0	4.0	8.0		120m	80	†	5.0†	80	75	∅	∅	500uΔ	4.0MΔ			TO66	KF∅	
37	2N6300	NSi	428m	750		3.0	4.0	8.0		120m	60	†	5.0†	60	75	∅	∅	500uΔ	4.0MΔ			TO66	KF∅	
38	2N6301	NSi	428m	750		3.0	4.0	8.0		120m	80	†	5.0†	80	75	∅	∅	500uΔ	4.0MΔ			TO66	KF∅	
39	MJ4000	NSi	428m	1.0k		3.0	1.5	4.0		50m	60		5.0	60	75	∅	∅	200u				TO3	KF∅	
40	MJ4001	NSi	428m	1.0k		3.0	1.5	4.0		50m	60		5.0	60	75	∅	∅	200u				TO3	KF∅	
41	MJ4010	PSi	428m	1.0k		3.0	1.5	4.0		50m	60		5.0	60	75	∅	∅	200u				TO3	KF∅	
42	MJ4011	PSi	428m	1.0k		3.0	1.5	4.0		50m	80		5.0	80	75	∅	∅	200u				TO3	KF∅	
43 #	BD266	PSi	480m	750		3.0	3.0	8.0			60		6.0	60	60	∅	∅	∅	7.0M		E	Y220b	KE	
44 #	BD266A	PSi	480m	750		3.0	3.0	8.0			80		6.0	80	60	∅	∅	∅	7.0M			Y220b	KE	
45 #	BD267	NSi	480m	750		3.0	3.0	8.0			80		6.0	80	60	∅	∅	∅	7.0M			Y220b	KE	
46 #	BD267A	NSi	480m	750		3.0	3.0	8.0			100		6.0	100	60	∅	∅	∅	7.0M			Y220b	KE	
47 #	BD267B	NSi	480m	750		3.0	3.0	8.0			120		6.0	120	60	∅	∅	∅	7.0M			Y220b	KE	
48 #	BD331	NSi	480m	750		3.0	3.0	6.0		150m	60		5.0	60	60	∅	∅	∅	7.0M	666m		B13	KE	
49 #	BD332	PSi	480m	750		3.0	3.0	6.0		150m	60		5.0	60	60	∅	∅	∅	7.0M	666m		B13	KE	
50 #	BD333	NSi	480m	750		3.0	3.0	6.0		150m	80		5.0	80	60	∅	∅	∅	7.0M	666m		B13	KE	
51 #	BD334	NSi	480m	750		3.0	3.0	6.0		150m	80		5.0	80	60	∅	∅	∅	7.0M	666m		B13	KE	
52 #	BD335	NSi	480m	750		3.0	3.0	6.0		150m	100		5.0	100	60	∅	∅	∅	7.0M	666m		B13	KE	
53 #	BD336	NSi	480m	750		3.0	3.0	6.0		100	100		5.0	100	60	∅	∅	∅	7.0M	666m		B13	KE	
54	NSP695	NSi	480m	750		3.0	3.0	8.0		100m	45		5.0	45	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
55	NSP696	PSi	480m	750		3.0	3.0	8.0		100m	45		5.0	45	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
56	NSP697	NSi	480m	750		3.0	3.0	8.0		100m	60		5.0	60	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
57	NSP698	PSi	480m	750		3.0	3.0	8.0		100m	60		5.0	60	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
58	NSP699	NSi	480m	750		3.0	3.0	8.0		100m	80		5.0	80	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
59	NSP700	PSi	480m	750		3.0	3.0	8.0		100m	80		5.0	80	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
60	NSP701	NSi	480m	750		3.0	3.0	8.0		100m	100		5.0	100	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
61	NSP702	PSi	480m	750		3.0	3.0	8.0		100m	100		5.0	100	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
62	NSP2090	PSi	480m	750		3.0	3.0	8.0		100m	60		5.0	60	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
63	NSP2092	PSi	480m	750		3.0	3.0	8.0		100m	80		5.0	80	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
64	NSP2100	NSi	480m	750		3.0	3.0	8.0		100m	60		5.0	60	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
65	NSP2102	NSi	480m	750		3.0	3.0	8.0		100m	80		5.0	80	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
66	NSP695A	NSi	480m	750		3.0	4.0	8.0		100m	45		5.0	45	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
67	NSP696A	PSi	480m	750		3.0	4.0	8.0		100m	45		5.0	45	60	∅	∅	∅	200u	1.0MΔ			Y220b	KD
68	NSP697A	NSi	480m	750		3.0	4.0	8.0		100m	60		5.0	60	60	∅	∅	∅	200u					

13. DARLINGTON TRANSISTORS

IN ORDER OF (1) MIN DERATING FACTOR
(2) MIN hFE (3) IC TEST (4) TYPE No.

LINE No.	TYPE No.	POL. & MAT. P-NPN	1 MIN. DERATE J TO C (W/C)	hFE			ABSOLUTE MAX RATINGS @ 25°C					MAX COLL (CASE) DISS-Pc (W)	M A X T °C	MAX ICBO @ MAX VCB @ 25°C (A)	ft (Hz)	MAX SAT RES (Ω)	S T R U C T U R E	DWG No	L C O A D E	
				2 MIN	MAX	TEST	IC	IB	BVCBO	BVEBO	BVCES									
				∅-TYP	∅-TYP	VCE ∅VCB (V)	3 IC ∅IB (A)	∅-IE (A)	∅-IE (A)	(V)	(V)									∅BVCES (V)
1#	BDX85A	NSi	571m	750	18k	3.0	4.0	10	100m	80	5.0	80	100	\$J	500u	10M	666m	T03	CØ	
2#	BDX85B	NSi	571m	750	18k	3.0	4.0	10	100m	80	5.0	80	100	\$J	500u	10M	666m	T03	CØ	
3#	BDX85C	NSi	571m	750	18k	3.0	4.0	10	100m	100	5.0	100	100	\$J	500u	10M	666m	T03	CØ	
4#	BDX86	PSi	571m	750	18k	3.0	4.0	10	100m	45	5.0	45	100	\$J	500u	10M	666m	T03	CØ	
5#	BDX86A	PSi	571m	750	18k	3.0	4.0	10	100m	60	5.0	60	100	\$J	500u	10M	666m	T03	CØ	
6#	BDX86B	PSi	571m	750	18k	3.0	4.0	10	100m	80	5.0	80	100	\$J	500u	10M	666m	T03	CØ	
7#	BDX86C	PSi	571m	750	18k	3.0	4.0	10	100m	100	5.0	100	100	\$J	500u	10M	666m	T03	CØ	
8#	AD7501	NSi	571m	750	18k	3.0	4.0	10	100m	100	5.0	100	100	\$J	500u*	10M	666m	T03	CØ	
9#	JAN2N63831	NSi	571m	1.0k	20k#	3.0	5.0	10	250m	40	5.0	40	100	\$J	1.0m	20MΔ	400m#	T03	CØ	
10#	JAN2N63841	NSi	571m	1.0k	20k#	3.0	5.0	10	250m	60	5.0	60	100	\$J	1.0m	20MΔ	400m#	T03	CØ	
11#	JAN2N63851	NSi	571m	1.0k	20k#	3.0	5.0	10	250m	80	5.0	80	100	\$J	1.0mΔ	20MΔ	400m#	T03	CØ	
12	RCAR8350	PSi	571m	1.0k	20k#	3.0	5.0	10	250m	40	5.0	40	70	\$J	1.0mΔ	20MΔ	400m#	T03	KFØ	
13	RCAR8350A	PSi	571m	1.0k	20k#	3.0	5.0	10	250m	60	5.0	60	70	\$J	1.0mΔ	20MΔ	400m#	T03	KFØ	
14	RCAR8350B	PSi	571m	1.0k	20k#	3.0	5.0	10	250m	80	5.0	80	70	\$J	1.0mΔ	20MΔ	400m#	T03	KFØ	
15	SDM213011	PSi	571m	1.0k	20k#	5.0	5.0	5.0	2.0	5.0	5.0	80	100	\$J	500u*	10M	350m	F4q	KCØ	
16	SDM213021	PSi	571m	1.0k	20k#	5.0	5.0	5.0	2.0	5.0	5.0	80	100	\$J	500u*	10M	350m	F4q	KCØ	
17	SDM213031	PSi	571m	1.0k	20k#	5.0	5.0	5.0	2.0	5.0	5.0	80	100	\$J	500u*	10M	350m	F4q	KCØ	
18	SDM213041	PSi	571m	1.0k	20k#	5.0	5.0	5.0	2.0	5.0	5.0	120	100	\$J	500u*	10M	350m	F4q	KCØ	
19	SDM213111	PSi	571m	1.0k	20k#	5.0	5.0	10	2.0	5.0	5.0	60	100	\$J	500u*	10M	270m	F4q	KCØ	
20	SDM213121	PSi	571m	1.0k	20k#	5.0	5.0	10	2.0	5.0	5.0	60	100	\$J	500u*	10M	270m	F4q	KCØ	
21	SDM213131	PSi	571m	1.0k	20k#	5.0	5.0	10	2.0	5.0	5.0	100	100	\$J	500u*	10M	270m	F4q	KCØ	
22	SDM213141	PSi	571m	1.0k	20k#	5.0	5.0	10	2.0	5.0	5.0	120	100	\$J	500u*	10M	270m	F4q	KCØ	
23	U2T832	N	588m	1.0k	20k	5.0	3.0	5.0	500m	12	200	60	\$	\$S	10u*		270m	PL	F30	
24	U2T833	N	588m	1.0k	20k	5.0	3.0	5.0	500m	12	300	60	\$	\$S	10u*		270m	PL	F30	
25#	MJE6042*	PSi	600m	1.0k	20k	4.0	3.0	8.0	120m	100	5.0	100	75	\$J	500u	4.0MΔ	666m	Δ	B5	
26#	MJE6045	NSi	600m	1.0k	20k	4.0	3.0	8.0	120m	100	5.0	100	75	\$J	500u	4.0MΔ	666m	Δ	B5	
27#	MJE6040*	PSi	600m	1.0k	20k	4.0	4.0	8.0	120m	60	5.0	60	75	\$J	500u	4.0MΔ	500m	Δ	B5	
28#	MJE6041*	PSi	600m	1.0k	20k	4.0	4.0	8.0	120m	80	5.0	80	75	\$J	500u	4.0MΔ	500m	Δ	B5	
29#	MJE6043	NSi	600m	1.0k	20k	4.0	4.0	8.0	120m	60	5.0	60	75	\$J	500u	4.0MΔ	500m	Δ	B5	
30#	MJE6044	NSi	600m	1.0k	20k	4.0	4.0	8.0	120m	80	5.0	80	75	\$J	500u	4.0MΔ	500m	Δ	B5	
31	ST14046	NSi	600m	1.4k	20k	5.0	3.0	10	1.0	600	5.0	600	75	\$J	250u	30		PL	T03	
32#	2SD605	NSi	640m	200	1.0k	2.0	4.0	7.0	600	6.0	500	80	\$J	500u			250m	DM	T03	
33#	2SD650H	NSi	640m	500	#	2.0	4.0	6.0	400	7.0	400	80	\$J	5.0u			250m	D	T03	
34	TIP100†	NSi	640m	1.0k#	20k#	4.0	3.0	15 #	1.0	60	5.0	60	\$	\$S	50u		666m#	#	B1	
35#	TIP101†	NSi	640m	1.0k#	20k#	4.0	3.0	15 #	1.0	80	5.0	80	\$	\$S	50u		666m#	#	B1	
36#	TIP102†	NSi	640m	1.0k#	20k#	4.0	3.0	15 #	1.0	100	5.0	100	\$	\$S	50u		666m#	#	B1	
37#	TIP105†	PSi	640m	1.0k#	20k#	4.0	3.0	15 #	1.0	60	5.0	60	\$	\$S	50u		666m#	#	B1	
38#	TIP106†	PSi	640m	1.0k#	20k#	4.0	3.0	15 #	1.0	80	5.0	80	\$	\$S	50u		666m#	#	B1	
39#	TIP107†	PSi	640m	1.0k#	20k#	4.0	3.0	15 #	1.0	100	5.0	100	\$	\$S	50u		666m#	#	B1	
40#	2SB638H	PSi	640m	1.0k	20k#	3.0	5.0	10	2.0	100	7.0	100	80	\$J	100u		400m	DEΔ	T03	
41#	2SD472H†	NSi	640m	1.0k	20k	2.0	5.0	10	150	7.0	100	80	∅	\$J	100u		150m	DE	T03	
42#	2SD628H	NSi	640m	1.0k	20k#	3.0	5.0	10	2.0	100	7.0	100	80	\$J	100u		300m	DEΔ	T03	
43#	2SD411	NSi	640m	1.0k	20k	2.0	10	10	100	8.0	80	80	\$J	100u∅				EM	T03	
44#	2SB615	PSi	640m	2.0k	20k	4.0	1.0	7.0	110	5.0	110	80	\$J	100u		450m			T03	
45#	2SB685	PSi	640m	2.0k	24k	4.0	1.0	7.0	110	5.0	110	80	\$J	100u		430m			B35	
46#	2SD585	NSi	640m	2.0k	20k	4.0	1.0	7.0	110	5.0	110	80	\$J	100u		450m			T03	
47#	2SD715	NSi	640m	2.0k	24k	4.0	1.0	7.0	110	5.0	110	80	\$J	100u		430m			B35	
48	SDM3003*	CSi	666m	1.0k	20k	5.0	2.5	5.0	60	\$	10\$	40	\$	115		50u	40M	800m		
49	SDM3004*	CSi	666m	1.0k	20k	5.0	2.5	5.0	80	\$	10\$	60	\$	115		50u	40M	800m		
50	SDM3005*	CSi	666m	1.0k	20k	5.0	2.5	5.0	100	\$	10\$	80	\$	115		50u	40M	800m		
51#	BDX64C	PSi	666m	1.0k∅	20k	5.0	5.0	16	120			120	117	\$J	400u∅	7.0M	500m∅	E	T03	
52#	BDX65C	NSi	666m	1.0k∅	20k	5.0	5.0	16	140			120	117	\$J	400u∅	7.0M	500m∅	E	T03	
53#	BDX64	NSi	666m	1.5k∅	20k	3.0	10	12	200m	60	5.0	60	117	\$J	400u	7.0M	500m	E	T03	
54#	BDX64A	NSi	666m	1.5k∅	20k	3.0	10	12	200m	80	5.0	80	117	\$J	400u	7.0M	500m	E	T03	
55#	BDX64B	PSi	666m	1.5k∅	20k	3.0	10	12	200m	100	5.0	100	117	\$J	400u	7.0M	500m	E	T03	
56#	BDX65	NSi	666m	1.5k∅	20k	3.0	10	12	200m	80	5.0	80	117	\$J	400u∅	7.0M	500m	E	T03	
57#	BDX65A	NSi	666m	1.5k∅	20k	3.0	10	12	200m	100	5.0	80	117	\$J	400u∅	7.0M	500m	E	T03	
58#	BDX65B	NSi	666m	1.5k∅	20k	3.0	10	12	200m	120	5.0	100	117	\$J	400u∅	7.0M	500m	E	T03	
59	SDM3000*	CSi	666m	10k	20k	5.0	1.0	10	60	\$	10\$	40	\$	115		50u	50M	400m		
60	SDM3001*	CSi	666m	10k	20k	5.0	1.0	10	80	\$	10\$	60	\$	115		50u	50M	400m		
61	SDM3002*	CSi	666m	10k	20k	5.0	1.0	10	100	\$	10\$	80	\$	115		50u	50M	400m		
62	PMD13K40	PSi	667m	800	20k	3.0	4.0	8.0	120m	40	5.0	40	100	#	\$J	200uΔ	500m	P-E	T03	
63	PMD13K60	PSi	667m	800	20k	3.0	4.0	8.0	120m	60	5.0	60	100	#	\$J	200uΔ	500m	P-E	T03	
64	PMD13K80	PSi	667m	800	20k	3.0	4.0	8.0	120m	80	5.0	80	100	#	\$J	200uΔ	500m	P-E	T03	
65	PMD13K100	PSi	667m#	800	20k	3.0	4.0	8.0	120m	100	5.0	100	100	#	\$J	200uΔ	500m	P-E	T03	
66	PMD12K40	NSi	667m	1.0k	20k	3.0	4.0	8.0	120m	40	5.0	40	100	#	\$J	200uΔ	500m	N-E	T03	
67	PMD12K60	NSi	667m	1.0k	20k	3.0	4.0	8.0	120m	60	5.0	60	100	#	\$J	200uΔ	500m	N-E	T03	
68	PMD12K80	NSi	667m	1.0k	20k	3.0	4.0	8.0	120m	80	5.0	80	100	#	\$J	200uΔ	500m	N-E	T03	
69	PMD12K100	NSi	667m#	1.0k	20k	3.0	4.0	8.0	120m	100	5.0	100	100	#	\$J	200uΔ	500m	N-E	T03	
70#	SDN6251	NSi	672m	140	20k	5.0	3.0	10				400	∅	84	\$J	1.0mΔ	300m		T03	
71#	SDN6252	NSi	672m	140	20k	5.0	3.0	10				450	∅	84	\$J	1.0mΔ	300m		T03	
72#	SDN6253	NSi	672m	140	20k	5.0	3.0	10				500	∅	84	\$J	1.0mΔ	300m		T03	
73	MJ920*	PSi	680m	100	20k	3.0	8.0	8.0	120m	60	5.0	60	120	\$J	500uΔ	4.0MΔ	500m		F26	
74	MJ921*	PSi	680m																	

13. DARLINGTON TRANSISTORS

IN ORDER OF (1) MIN DERATING FACTOR
(2) MIN hFE (3) IC TEST (4) TYPE No.

LINE No.	4	TYPE No.	POL. & MAT. N-PNP P-PNP	1 MIN. DERATE J TO C (W/°C)	hFE 2 MIN Ø-TYP	t-hfe MAX Ø-TYP	TEST					ABSOLUTE MAX RATINGS @ 25°C					MAX COLL (CASE) DISS-Pc (W)	M A X T °C	MAX ICBO @ MAXVCB (A)	FT (Hz)	MAX SAT RES (Ω)	S T U R U E	D W G No	L C O A D E
							VCE ØVCB (V)	3 IC ØIB (A)	IC Ø-IE (A)	IB Ø-IE (A)	BVCEO (V)	BVCEB (V)	BVCEO (V)	BVCEB (V)	BVCEO (V)	BVCEB (V)								
1▼		RCA8766C	NSi	1.0	100 #	3.0	4.0	10	1.0	400	5.0	400	150	5J	1.0M*	10MΔ					T03	KF0		
2▼		RCA8766E	NSi	1.0	100 #	3.0	4.0	10	1.0	450	5.0	450	150	5J	1.0M*	10MΔ					T03	KF0		
3▼		MJ10012T	NSi	1.0	100 #	6.0	6.0	10	2.0	600	8.0	400	175	5J	1.0m		500m#				F49	C0		
4▼		RCA8766	NSi	1.0	100 #	3.0	6.0	10	1.0	350	5.0	350	150	5J	1.0M*	10MΔ					T03	KF0		
5▼		RCA8766B	NSi	1.0	100 #	3.0	6.0	10	1.0	400	5.0	400	150	5J	1.0M*	10MΔ					T03	KF0		
6▼		RCA8766D	NSi	1.0	100 #	3.0	6.0	10	1.0	450	5.0	450	150	5J	1.0M*	10MΔ					T03	KF0		
7		IR6060T	N	1.0	100	5.0	10	20	4.0	350		350	125	5J	1.0MΔ	8.0MΔ	150m	D			T03	C0		
8		IR6061T	N	1.0	100	5.0	10	20	4.0	400		400	125	5J	1.0MΔ	8.0MΔ	150m	D			T03	C0		
9		IR6062T	N	1.0	100	5.0	10	20	4.0	450		450	125	5J	1.0MΔ	8.0MΔ	150m	D			T03	C0		
10		IR4050T	NSi	1.0	100	5.0	15	15	4.0	500	20	500	125	5J	250uΔ	8.0MΔ	133m	D			T03	KF0		
11		IR6000T	N	1.0	150	5.0	5.0	15	4.0	400		400	125	5J	1.0MΔ	8.0MΔ	150m	D			T03	C0		
12		IR6001T	N	1.0	150	5.0	5.0	15	4.0	450		450	125	5J	1.0MΔ	8.0MΔ	150m	D			T03	C0		
13		IR6002T	N	1.0	150	5.0	5.0	15	4.0	500		500	125	5J	1.0MΔ	8.0MΔ	150m	D			T03	C0		
14		IR4055T	NSi	1.0	200	5.0	3.0	15	4.0	500	20	500	125	5J	250uΔ	8.0MΔ	120m	D			T03	KF0		
15		IR4040T	NSi	1.0	250	5.0	3.0	15	4.0	400	20	400	125	5J	250uΔ	8.0MΔ	133m	D			T03	KF0		
16		PMD25K120T	NSi	1.0 #	300	3.0	5.0	9.0	200m	120	2.0	120	150 #	5J	500uΔ		360m				T03	C0		
17		PMD25K150T	NSi	1.0 #	300	3.0	5.0	9.0	200m	150	2.0	150	150 #	5J	500uΔ		360m				T03	C0		
18		PMD20K120T	NSi	1.0 #	300	3.0	10	14	500m	120	2.0	120	150 #	5J	500uΔ		180m				T03	C0		
19		PMD20K150T	NSi	1.0 #	300	3.0	10	14	500m	150	2.0	150	150 #	5J	500uΔ		180m				T03	C0		
20▼		PMD20K200T	NSi	1.0 #	300	3.0	10	14	500m	200	2.0	200	150 #	5J			170m				T03	C0		
21▼		PMD25K200T	NSi	1.0 #	300	3.0	10	9.0	200m	200	2.0	200	150 #	5J			170m				T03	C0		
22		IR4045T	NSi	1.0	500	5.0	5.0	15	4.0	400	20	400	125	5J	250uΔ	8.0MΔ	120m	D			T03	KF0		
23		IR640T	NSi	1.0	500 #	5.0kØ	4.0	10	10	500m	60 †	5.0†	60	175	5J	1.0M†		300m#				T03	KF0	
24		IR641T	NSi	1.0	500 #	5.0kØ	4.0	10	10	500m	80 †	5.0†	80	175	5J	1.0M†		300m#				T03	KF0	
25		IR642T	NSi	1.0	500 #	5.0kØ	4.0	10	10	500m	100 †	5.0†	100	175	5J	1.0M†		300m#				T03	KF0	
26		IR645T	PSi	1.0	500 #	1.0kØ	4.0	10	10	500m	60 †	5.0†	60	175	5J	1.0M†		300m#				T03	KF0	
27		IR646T	PSi	1.0	500 #	1.0kØ	4.0	10	10	500m	80 †	5.0†	80	175	5J	1.0M†		300m#				T03	KF0	
28		IR647T	PSi	1.0	500 #	1.0kØ	4.0	10	10	500m	100 †	5.0†	100	175	5J	1.0M†		300m#				T03	KF0	
29		TIP140T	NSi	1.0	500 #	5.0kØ	4.0	10	10 †	500m	60 †	5.0†	60	125	5J	1.0M†		300m#			B3	KB0		
30		TIP141T	NSi	1.0	500 #	5.0kØ	4.0	10	10 †	500m	80 †	5.0†	80	125	5J	1.0M†		300m#			B3	KB0		
31		TIP142T	NSi	1.0	500 #	5.0kØ	4.0	10	10 †	500m	100 †	5.0†	100	125	5J	1.0M†		300m#			B3	KB0		
32		TIP145	PSi	1.0	500 #	1.0kØ	4.0	10	10 †	500m	60 †	5.0†	60	125	5J	1.0M†		300m#			B3	KB0		
33		TIP146	PSi	1.0	500 #	1.0kØ	4.0	10	10 †	500m	80 †	5.0†	80	125	5J	1.0M†		300m#			B3	KB0		
34		TIP147	PSi	1.0	500 #	1.0kØ	4.0	10	10 †	500m	100 †	5.0†	100	125	5J	1.0M†		300m#			B3	KB0		
35		TIP640T	NSi	1.0	500 #	5.0kØ	4.0	10	10 †	500m	60 †	5.0†	60	175	5J	1.0M†		300m#				T03	KF0	
36		TIP641T	NSi	1.0	500 #	5.0kØ	4.0	10	10 †	500m	80 †	5.0†	80	175	5J	1.0M†		300m#				T03	KF0	
37		TIP642T	NSi	1.0	500 #	5.0kØ	4.0	10	10 †	500m	100 †	5.0†	100	175	5J	1.0M†		300m#				T03	KF0	
38		TIP645T	PSi	1.0	500 #	1.0kØ	4.0	10	10 †	500m	60 †	5.0†	60	175	5J	1.0M†		300m#				T03	KF0	
39		TIP646T	PSi	1.0	500 #	1.0kØ	4.0	10	10 †	500m	80 †	5.0†	80	175	5J	1.0M†		300m#				T03	KF0	
40		TIP647T	PSi	1.0	500 #	1.0kØ	4.0	10	10 †	500m	100 †	5.0†	100	175	5J	1.0M†		300m#				T03	KF0	
41		PMD11K40	PSi	1.0	800	20k	3.0	6.0	12	200m	40	5.0	40	150 #	5J	200uΔ		333m	P-E			T03	C0	
42		PMD11K60	PSi	1.0	800	20k	3.0	6.0	12	200m	60	5.0	60	150 #	5J	200uΔ		333m	P-E			T03	C0	
43		PMD11K80	PSi	1.0	800	20k	3.0	6.0	12	200m	80	5.0	80	150 #	5J	200uΔ		333m	P-E			T03	C0	
44		PMD11K100	PSi	1.0 #	800	20k	3.0	6.0	12	200m	100	5.0	100	150 #	5J	1.0MΔ		333m	P-E			T03	C0	
45		JAN2N6051T	PSi	1.0	1.0k	10k#	3.0	6.0	12	200m	80	5.0	80	150 #	5J	500u#	20MΔ	333m#				T03	C0	
46		JAN2N6052T	PSi	1.0	1.0k	10k#	3.0	6.0	12	200m	100	5.0	100	150 #	5J	500u#	20MΔ	333m#				T03	C0	
47		PMD10K40	NSi	1.0 #	1.0k	20k	3.0	6.0	12	200m	40	5.0	40	150 #	5J	200uΔ		333m			N-E		T03	C0
48		PMD10K60	NSi	1.0 #	1.0k	20k	3.0	6.0	12	200m	60	5.0	60	150 #	5J	200uΔ		333m			N-E		T03	C0
49		PMD10K80	NSi	1.0 #	1.0k	20k	3.0	6.0	12	200m	80	5.0	80	150 #	5J	200uΔ		333m			N-E		T03	C0
50		PMD10K100	NSi	1.0 #	1.0k	20k	3.0	6.0	12	200m	100	5.0	100	150 #	5J	1.0MΔ		333m			N-E		T03	C0
51		JAN2N6058T	NSi	1.0	2.5k	18k#	3.0	6.0	12	200m	80	5.0	80	150 #	5J	500u#	20MΔ	333m#				T03	C0	
52		JAN2N6059T	NSi	1.0	2.5k	18k#	3.0	6.0	12	200m	100	5.0	100	150 #	5J	500u#	20MΔ	333m#				T03	C0	
53		MJ11011T	PSi	1.1	200	5.0	30	30	1.0	60	5.0	60	200	5J	1.0M*	4.0MΔ	150m					T03	KF	
54		MJ11012T	PSi	1.1	200	5.0	30	30	1.0	60	5.0	60	200	5J	1.0M*	4.0MΔ	150m					T03	KF	
55		MJ11013T	PSi	1.1	200	5.0	30	30	1.0	90	5.0	90	200	5J	1.0M*	4.0MΔ	150m					T03	KF	
56		MJ11014T	PSi	1.1	200	5.0	30	30	1.0	90	5.0	90	200	5J	1.0M*	4.0MΔ	150m					T03	KF	
57		MJ11015T	PSi	1.1	200	5.0	30	30	1.0	120	5.0	120	200	5J	1.0M*	4.0MΔ	150m					T03	KF	
58		MJ11016T	NSi	1.1	200	5.0	30	30	1.0	120	5.0	120	200	5J	1.0M*	4.0MΔ	150m					T03	KF	
59		PMD1601K	NSi	1.1	750	18k	3.0	10	20	500m	60	5.0	60	200	5J	500uΔ		200m				T03	C0	
60		PMD1602K	NSi	1.1	750	18k	3.0	10	20	500m	80	5.0	80	200	5J	500uΔ		200m				T03	C0	
61		PMD1603K	NSi	1.1	750	18k	3.0	10	20	500m	100	5.0	100	200	5J	1.0MΔ		200m			N-E		T03	C0
62		PMD1701K	PSi	1.1	750	18k	3.0	10	20	500m	60	5.0	60	200	5J	500uΔ		200m				T03	C0	
63		PMD1702K	PSi	1.1	750	18k	3.0	10	20	500m	80	5.0	80	200	5J	500uΔ		200m				T03	C0	
64		PMD1703K	PSi	1.1	750	18k	3.0	10	20	500m	100	5.0	100	200	5J	1.0MΔ		200m			P-E		T03	C0
65#		2SD572T	Si	1.2	80	100 Ø	5.0	15	15	1.0	500	8.0	400	150	5J	1.0m	7.0M	153m			F6e	KF		
66#		2SD573T	Si	1.2	80	100 Ø	5.0	15	15	1.0	600	8.0	450	150	5J	1.0m	7.0M	153m			F6e	KF		
67▼		2N6355	NSi	1.2	500																			

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	STRUCTURE	MATERIAL	DWG # Y200	L C O A D E	DESCRIPTION
1	MD6002F	5	N-PAN	Si	X22		Pd 350mW;VCB 60Vdc;VCEO 30Vdc;ft 200MHz min;Max tr 40,td 20,ts 280,tf 70ns.
2	MD6003	5	N-PAN	Si	R131f	PA	Pd 550mW;VCB 50Vdc;VCEO 30Vdc;ft 200MHz min;Cob 8.0pf max.
3	MD6003F	5	N-PAN	Si	X22		Pd 350mW;VCB 50Vdc;VCEO 30Vdc;ft 200MHz min;Cob 8.0pf max.
4	MD6100	5	N-PAN	Si	T099	PA	Pt-600mW(both sides);VCEO-45V;hFE-100 at 100uA;5.0V.
5	MD6100F	5	N-PAN	Si	T089	PB	PD(both sides)400mW max;VCEO 45V;hFE 100 at 100uA;5.0V.
6	MD6900	5	N-PAN	Si	R131b	PA	Pd 600mW(Both);VCB 12Vdc;VCEO 10Vdc;ICBO 10nA;hFE 40-200;IC 10mAdc;VCE 5Vdc.
7	MD7021	5	N-PAN	Si	R131f	PA	Pd 550mW;VCB 50Vdc;VCEO 40Vdc;ft 200MHz min;ton 28 ns;toff 72ns.
8	MD7021F	5	N-PAN	Si	X22		Pd 350mW;VCB 50Vdc;VCEO 40Vdc;ft 200MHz min;ton 28ns;toff 72ns.
9	MJE6040*	5	N-P	Si	B5	B	W/MJE6043;PT 75W;BVCEO 60V;BVCEO 60V;hFE 1/2 1.0k min at IC 4.0A;VCE 4.0V
10	MJE6041*	5	N-P	Si	B5	B	W/MJE6044;PT 75W;BVCEO 80V;BVCEO 80V;hFE 1/2 1.0k min at IC 4.0A;VCE 4.0V
11	MJE6042*	5	N-P	Si	B5	B	W/MJE6045;PT 75W;BVCEO 100V;BVCEO 100V;hFE 1/2 1.0k min at IC 3.0A;VCE 4.0V
12	PA6003	5	N-P-PE	Si	T0105	A	VCB50 25V min;Pt 360mW;hFE 40 min;VCE(Sat)300mV max;ft 150MHz.
13	PA6005	5	NPE	Si	R110d	A	W/PB6005;PT 360mW;BVCEO 25V min;ICBO 500nA max;hFE 100 min;Cob 12pF max
14	PA6015	5	N-P-PE	Si	R222	A	W/PB6015;PT 500mW;BVCEO 25V min;ICBO 500nA max;hFE 60 min;Cob 12pF max
15	PA6015A	5	NPE	Si	R222	F	W/PB6015A;PT 500mW;BVCEO 25V min;ICBO 500nA max;hFE 120 min;Cob 12pF max
16	PA6015B	5	NPE	Si	R222	F	W/PB6015B;PT 500mW;BVCEO 25V min;ICBO 500nA max;hFE 200 min;Cob 12pF max
17	PAM6003	5	N-P-PE	Si	R216g	A	VCB50 25V min;Pt 800mW;hFE 40 min;VCE(Sat)300mV max;ft 150MHz.
18	PA6003	5	N-P-PE	Si	T0105	A	VCB50 25V min;Pt 360mW;hFE 40 min;VCE(Sat)300mV max;ft 150MHz.
19	PB6005	5	PPE	Si	R110d	A	W/PA6005;PT 360mW;BVCEO 25V min;ICBO 500nA max;hFE 100 min;Cob 12pF max
20	PB6015	5	N-P-PE	Si	R222	A	W/PA6015;PT 500mW;BVCEO 25V min;ICBO 500nA max;hFE 60 min;Cob 12pF max
21	PB6015A	5	PPE	Si	R222	F	W/PA6015A;PT 500mW;BVCEO 25V min;ICBO 500nA max;hFE 120 min;Cob 12pF max
22	PB6015B	5	PPE	Si	R222	F	W/PA6015B;PT 500mW;BVCEO 25V min;ICBO 500nA max;hFE 200 min;Cob 12pF max
23	PBM6003	5	N-P-PE	Si	R216g	A	VCB50 25V min;Pt 800mW;hFE 40 min;VCE(Sat)300mV max;ft 150MHz.
24	PTC 1101-RT			Si	B17a	D	Comp Pair AF Power Amp;Pd 12.5W;IC 3.0A max;BVCEB 70V max;hFE 100f 75MHz.
25	PTC 1123-RT			Si	T066	C	Comp Pair AF Power Amp;Pd 25W;IC 4.0A max;BVCEB 90V max;hFE 80f 6.0MHz.
26	PTC 1423-RT			Si	T05	A	Comp Pair AF Power Amp;Pd 6.0W;IC 3.0A max;BVCEB 65V max;hFE 80f 8.0MHz.
27	PTC 1623-RT			Si	B16	D	Comp Pair AF Power Amp;Pd 40W;IC 4.0A max;BVCEB 60V max;hFE 50f 2.0MHz.
28	PTC 1645-RT			Si	B16k	D	Comp Pair AF Power Amp;Pd 100W;IC 12A max;BVCEB 80V max;hFE 70f 2.0MHz.
29	PTC 1667-RT			Si	B17a	D	Comp Pair AF Power Amp;Pd 75W;IC 5.0A max;BVCEB 100V max;hFE 40f 2.0MHz.
30	PTC 1689-RT			Si	B16k	B	Comp Pair AF Power Amp;Pd 100W;IC 12A max;BVCEB 80V max;hFE 70f 2.0MHz.
31	PTC 1723-RT			Si	F4p	C	Comp Pair AF Power Amp;Pd 200W;IC 16A max;BVCEB 100V max;hFE 50f 50MHz.
32	PTC 1745-RT			Si	F4p	C	Comp Pair AF Power Amp;Pd 250W;IC 30A max;BVCEB 100V max;hFE 50f 2.0MHz.
33	PTC 1778-RT			Si	R198	B	Comp Pair AF Power Amp;Pd 1.0W;IC 1.0A max;BVCEB 100V max;hFE 160f 200MHz.
34	SDM3000*	5	N-P	Si			Compl Darlington Pair;Pt 115W;BVCEO 80V min;hFE 10k min;ft 50MHz.
35	SDM3001*	5	N-P	Si			Compl Darlington Pair;Pt 115W;BVCEO 80V min;hFE 10k min;ft 50MHz.
36	SDM3002*	5	N-P	Si			Compl Darlington Pair;Pt 115W;BVCEO 100V min;hFE 10k min;ft 50MHz.
37	SDM3003*	5	N-P	Si			Compl Darlington Pair;Pt 115W;BVCEO 80V min;hFE 1.0k min;ft 40MHz.
38	SDM3004*	5	N-P	Si			Compl Darlington Pair;Pt 115W;BVCEO 80V min;hFE 1.0k min;ft 40MHz.
39	SDM3005*	5	N-P	Si			Compl Darlington Pair;Pt 115W;BVCEO 100V min;hFE 1.0k min;ft 40MHz.
40	TD800	5	PLT	Si	R138	PN	Pt-400mW;hFE1/2-90min;ft 20MHz min;IC-500mA max.
41	TD801	5	PLT	Si	R138	PN	Pt-400mW;ft-20MHz min;hFE at 10uA-100min;IC-500mA max.
42	TD602	5	PLT	Si	R138	PN	Pt-400mW;ft-20MHz min;hFE at 1.0mA-50min;IC-500mA max.
43	TD700	5	N-P-PL	Si	R138	PL	Pt 400mW;hFE1/2 .90 min;BVCEO 40V;BVCEO 30V;hFE 120 min at IC 1.0mA;ft 20M min.
44	TD701	5	N-P-PLT	Si	R138	PL	Pt 400mW;BVCEO 40V;BVCEO 30V;BVCEO 5.0V;hFE 100 min at IC 10uA;ft 20MHz min.
45	TD702	5	N-P-PLT	Si	R138	PL	Pt 400mW;BVCEO 40V;BVCEO 30V;BVCEO 5.0V;hFE 120 min at IC 150mA;ft 200MHz min.
46	TIS60M	5	N-PL	Si	T092		Consist of TIS60 and TIS61;Available only with matching TIS61M.
47	TIS61M	5	P-PL	Si	T092		Consist of TIS60 and TIS61;Available only with matching TIS60M.
48	TIS90M	5	N	Si	T092	B	Same as TIS90, available only with matching TIS91M.
49	TIS91M	5	N	Si	T092	B	Same as TIS91, available only with matching TIS90M.
50	TIS92M	5	P	Si	R203	A	Same as TIS92, available only with matching TIS93M.
51	TIS93M	5	P	Si	R203	A	Same as TIS93, available only with matching TIS92M.
52	ZAC 128	6	P-A	Ge	T01	F	hFE1/hFE2 1.25 max at VCB 0.0V;IC 50mA;Pt 1.0W max;BVCEO 32V max.
53	ZAC 128-01	6	P-A	Ge	X9c	F	Matched pair AC128/O1;hFE1/hFE2 1.25 max at IC 50mA and 300mA.
54	ZAC 132	6	P-A	Ge	T01	F	Matched pair of AC132;hFE1/2 1.1 at IC 50mA;VCBO 0.
55	ZAC 188	6	P-A	Ge	T01	F	Matched pair of AC188;hFE1/2-1.25 max at IC-500mA.
56	ZAC 188-01	6	P-A	Ge	X9c	F	Matched pair AC188/O1;hFE1/hFE2 1.25 max at IC 50mA and 500mA.
57	ZAC 17	6	P-A	Ge	T05	F	hFE 1/2-1.2 max;VBE(1-2)-250mV max.
58	ZAC 18	6	P-A	Ge	T05	F	hFE 1/2-1.2 max;VBE(1-2)-250mV max.
59	ZAC 19	6	P-A	Ge	T05	F	hFE 1/2-1.2 max;VBE(1-2)-250mV max.
60	ZAD 139	6	P-A	Ge	F7	F	Matched pair AD139; hFE1/hFE2-1.25 max.
61	ZAD 149	6	P-A	Ge	T03	C	Matched pair of AD149;hFE1/2 1.25 at IC 300mA.
62	ZAD 162	6	P-A	Ge	F9b	C	Matched pair of AD162;hFE1/2-1.1 at VCE-1.0V;IC-50mA
63	ZBD 124	6	N-PE	Si	F9b	C	Matched pair of BD124;IB(1-2) 2.0mA max;BVCEO 70V.
64	ZBD 131	6	N-PE	Si	T0126	D	Matched pair of BD131;hFE 280 max;ΔIB 2.0mA max;hFE1/2 1.2 max.
65	ZBD 181	6	N	Si			Pt 78W;BVCEO 55V;BVCEO 45V;hFE1/2 1.3 at IC 3A;VCE 4.0V.
66	ZBD 182	6	N	Si			Pt 117W;BVCEO 80V;BVCEO 60V;hFE1/2 1.3 at IC 4A;VCE 4.0V.
67	ZBD 183	6	N	Si			Pt 117W;BVCEO 85V;BVCEO 80V;hFE1/2 1.3 at IC 3A;VCE 4.0V.
68	ZBD 20	6	N-D	Si	T03	C	Matched pair of BDY20;hFE1/2 1.6 at IC 400mA;VCE 4.0V.
69	ZBDY38	6	N-D	Si	T03	C	Matched pair of BDY38;hFE1/2 1.5 at IC 200mA; VCE 4.0V.
70	ZN2X	6	N-PL	Si	T05		VCB50-60V; ICBO-0.1uA; Matched pair for hFE1/hFE2-9 min, 1.1 max
71	ZN282	6	P	Ge	R8		Matched pair of ZN281.
72	ZN2060*	6	N	Si	R131c		Pt-6W;hFE1/2-90 min;VBE(1-2)-5mV max;ΔVBE(1-2)ΔT-10uV/deg.C.
73	JANZ2N2060*	6	N	Si	R52		Pt 600mW both;VBE(1-2) 5.0mV max;hFE1/2 900 min;ΔVBE(1-2) 800uV max.
74	ZN2060A*	6	N	Si	R131c		Pt-600mW both;VBE(1-2) 3.0mV max;hFE1/2-90 min.
75	ZN2060B*	6	N	Si	R131c		Pt-600mW;BVCEO-100V;hFE1/2-85 min;VBE(1-2)-1.5mV;hFE-120 max.
76	ZN2223*	6	N	Si	R131c		Pt-6W;hFE1/2-80 min;VBE(1-2)-15mV max;ΔVBE(1-2)ΔT-25uV/deg.C.
77	ZN2223A*	6	N	Si	R131c		Pt-6W;hFE1/2-90 min;VBE(1-2)-5mV max;ΔVBE(1-2)ΔT-25uV/deg.C.
78	ZN2376	6	P	Ge	T05	A	Pt 250mW;BVCEO 35;Forward-current transfer Ratio Match 20%.
79	ZN241*	6	N	Si	R131c		Pt 600mW max;hFE 250 max each side.
80	ZN2431MP	6	P-A	Ge	T01		Matched Pair ZN2431;3.0W out Class B;hFE1/hFE2-1.25 max.
81	ZN2453*	6	N	Si	R131c		Pt-30W;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔT-10uV/deg.C.
82	ZN2453A*	6	N	Si	R131c		Pt-30W;hFE1/2-90 min;VBE(1-2)-5.0mV max.
83	ZN2482*	6	N	Si	R131c		Pt-6W;hFE1/2-80 min;VBE(1-2)-10mV max;ΔVBE(1-2)ΔT-15uV/deg.C.
84	ZN2480A*	6	N	Si	R131c		Pt-6W;hFE1/2-80 min;VBE(1-2)-5mV max;ΔVBE(1-2)ΔT-15uV/deg.C.
85	ZAN2639*	6	N	Si	R131c		Pt 600mW max;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔTA 10uV/C max.
86	JANZ2N2639*	6	N	Si	T077		Pt-600mW both;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔT-10uA/C max.
87	ZN264*	6	N	Si	R131c		Pt 600mW max;hFE1/2-90 min;VBE(1-2)-10mV max;ΔVBE(1-2)ΔTA 20uV/C max.
88	ZN2642*	6	N	Si	R131c		Pt 600mW max;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔT-10uV/C max.
89	JANZ2N2642*	6	N	Si	T077		Pt-600mW both;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔT-10uA/C max.
90	ZN2643*	6	N	Si	R131c		Pt 600mW max;hFE1/2-80 min;VBE(1-2)-10mV max;ΔVBE(1-2)ΔTA 20uV/C max.
91	ZN2652*	6	N	Si	R131c		Pt-6W;hFE1/2-85 min;VBE(1-2)-3mV;ΔVBE1-2ΔT-10uV/deg.C.
92	ZN2652A*	6	N	Si	R131c		Pd-600mW both;hFE1/2-90 min;VBE(1-2)-3mV;ΔVBE1-2ΔT-10uV/deg.C.
93	ZN2720*	6	N	Si	R131c		Pt-600mW;hFE1/2-90 min;VBE(1-2)-5mV max;ΔVBE1-2ΔT-1mV.
94	ZN2721*	6	N	Si	R131c		Pt-600mW;hFE1/2-80 min;VBE(1-2)-10mV max;ΔVBE1-2ΔT-2mV.
95	ZN2722*	6	N	Si	R131c		Pt-600mW;hFE1/2-90 min;VBE(1-2)-5mV max;ΔVBE1-2ΔT-1mV.
96	ZN2803*	6	P	Si	R131c	PA	Pt-50W;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔT-10uV/deg.C.
97	ZN2803*	6	P	Si	R131c	PA	Pt-50W;hFE1/2-80 min;VBE(1-2)-10mV max;ΔVBE(1-2)ΔT-20uV/deg.C.
98	ZN2805*	6	P	Si	R131c	PA	Pt-50W;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)ΔT-10uV/deg.C.
99	ZN2806*	6	P	Si	R131c	PA	Pt-50W;hFE1/2-80 min;VBE(1-2)-10mV max;ΔVBE(1-2)ΔT-20uV/deg.C.
100	ZN2903*	6	N	Si	R131c		Pt-30W;hFE1/2-80 min;VBE(1-2)-1.0mV max;ΔVBE(1-2)ΔT-20uV/deg.C.
101	ZN2903A*	6	N	Si	R131c		Pt-30W;hFE1/2-90 min;VBE(1-2)-5.0mV max.
102	ZN2915*	6	N	Si	T077		Pt-600mW both;hFE1/2-80 min;VBE(1-2)-10mV;ΔVBE(1-2)ΔT-20uV/deg.C.
103	ZN2915*	6	N	Si	R131c		Pt-50W;hFE1/2-90 min;VBE(1-2)-5.0mV max;VCE(sat)-35 ohms.
104	ZN2915A*	6	N	Si	R131c		hFE 1/2-85 min;VBE(1-2)-2.0mV max;Pt-5W;ΔVBE(1-2)ΔT-5uV/deg.C.
105	ZN2916*	6	N	Si	R131c		Pt-50W;hFE1/2-90 min;VBE(1-2)-5.0mV;ΔVBE(1-2)-80mV.
106	ZN2916A*	6	N	Si	R131c		hFE 1/2-85 min;VBE(1-2)-2.0mV max;Pt-5W;ΔVBE(1-2)ΔT-5uV/deg.C.
107	ZN2918*	6	N	Si	R131c		Pt-50W;hFE1/2-80 min;VBE(1-2)-10mV;ΔVBE(1-2)-1.6mV.
108	ZN2918*	6	N	Si	R131c		Pt-50W;hFE1/2-80 min;VBE(1-2)-10mV;ΔVBE(1-2)-1.6mV.
109	ZN2919*	6	N	Si	R131c		Pt-50W;hFE1/2-90 min;1VBE(1-2)-5.0mV;ΔVBE(1-2)-80mV.
110	JANZ2N2919*	6	N	Si	R131d		Pt-50W both;hFE1/2-1.1 max;ΔVBE1-2-800uV max;IEBO-2.0nA max.

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	STRUCTURE	MATERIAL	DWG #	L E O A D E	DESCRIPTION
1	2N5119*	6 P-Ø	Si	Ø	T078	PR	Pt .75W,VBE(1-2) 5.0mV;ΔVBE(1-2) 10uV/°C,hFE1/2 .80 min.
2	2N5120*	6 P-Ø	Si	Ø	T071	PA	Pt .50W,VBE(1-2) 3.0mV;ΔVBE(1-2) 3.0uV/°C,hFE1/2 .90 min
3	2N5121*	6 P-Ø	Si	Ø	T071	PA	Pt .50W,VBE(1-2) 5.0mV;ΔVBE(1-2) 5.0uV/°C,hFE1/2 .85 min.
4	2N5122*	6 P-Ø	Si	Ø	T071	PA	Pt .50W,VBE(1-2) 5.0mV;ΔVBE(1-2) 10uV/°C,hFE1/2 .80 min
5	2N5123*	6 P-Ø	Si	Ø	R138	PL	Pt-750mW;VBE(1-2)-3mV;ΔVBE(1-2)-3uV/°C,hFE1/2-.90min.
6	2N5124*	6 P-Ø	Si	Ø	R138	PL	Pt-750mW;VBE(1-2)-5mV;ΔVBE(1-2)-5uV/°C,hFE1/2-.85min.
7	2N5125*	6 P-Ø	Si	Ø	R138	PL	Pt-750mW;VBE(1-2)-5mV;ΔVBE(1-2)-10uV/°C,hFE1/2-.80min.
8	2N5196*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 5.0mV max;yfs1/2 .97 min.
9	2N5197*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 5.0mV max;yfs1/2 .97 min.
10	2N5198*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 10mV max;yfs1/2 .95 min.
11	2N5199*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 15mV max;yfs1/2 .95 min.
12	2N5255*	6 P-Ø	Si	Ø	R137	PA	Pt-.43W,hFE1/2-.80 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-2.0uV/deg.C
13	2N5255/78*	6 P-Ø	Si	Ø	R131c	PA	Pt 500mW,hFE1/2 .80 min;VBE(1-2) 5.0mV max;ΔVBE(1-2)/ΔT 20uV/deg C
14	2N5256*	6 P-Ø	Si	Ø	R137	PA	Pt-.43W,hFE1/2-.90 min;VBE(1-2)-3.0mV max;ΔVBE(1-2)/ΔT-10uV/deg.C
15	2N5256/78*	6 P-Ø	Si	Ø	R131c	PA	Pt 500mW,hFE1/2-.90 min;VBE(1-2) 3.0mV max;ΔVBE(1-2)/ΔT 10uV/deg.C
16	2N5452*	6 N-Ø	Si	Ø	T071	PC	Pt-.50W;VGS(1-2)-5mV;ΔVGS(1-2)-5uV/deg.C;yfs1/2-.97 min
17	2N5453*	6 N-Ø	Si	Ø	T071	PC	Pt-.50W;VGS(1-2)-10mV;ΔVGS(1-2)-10uV/deg.C;yfs1/2-.97 min.
18	2N5454*	6 N-Ø	Si	Ø	T071	PC	Pt-.50W;VGS(1-2)-15mV;ΔVGS(1-2)-25uV/deg.C;yfs1/2-.95 min.
19	2N5508*	6 P-Ø	Si	Ø	T071	PC	Pt-.3W;IG(1-2)-50pA;Yos(1-2)-1.5umhos;VGS(1-2)-15mV;VGS(1-2)/TA-1.9mV
20	2N5515*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 5.0mV max;yfs1/2 .97 min;CMRR 100dB min.
21	2N5516*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 5.0mV max;yfs1/2 .97 min;CMRR 100dB min.
22	2N5517*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 10mV max;yfs1/2 .95 min;CMRR 90dB min
23	2N5518*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 15mV max;yfs1/2 .95 min;yos(1-2) 100nmho.max
24	2N5519*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .90 min;VGS(1-2) 15mV max;yfs1/2 .90 min;yos(1-2) 100nmho.max.
25	2N5520*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 5.0mV max;yfs1/2 .97 min;CMRR 100dB min.
26	2N5521*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 5.0mV max;yfs1/2 .97 min;CMRR 100dB min.
27	2N5522*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 10mV max;yfs1/2 .95 max;CMRR 90dB min.
28	2N5523*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .95 min;VGS(1-2) 15mV max;yfs1/2 .95 max;yos(1-2) 100nmho.max.
29	2N5524*	6 N-Ø	Si	Ø	R120	PC	Pt 375mW;IDSS1/2 .90 min;VGS(1-2) 15mV max;yfs1/2 .90 max;yos(1-2) 100nmho.max.
30	2N5545*	6 N-Ø	Si	Ø	T071	PJ	Pt .40W;IDSS1/2-.95 min;ΔVGS(1-2)/ΔT-.8mV;Yos(1-2)-1.0umho.
31	JAN2N5545*	6 N-Ø	Si	Ø	T071	PJ	Pt 400m both;yfs1/2 .970 min;VGS(1-2) 5.0mV max;ΔVGS(1-2)/ΔT 1.0mV max
32	2N5546*	6 N-Ø	Si	Ø	T071	PJ	Pt .40W;IDSS1/2-.90 min;ΔVGS(1-2)/ΔT-1.6mV;Yos(1-2)-2.0umho.
33	JAN2N5546*	6 N-Ø	Si	Ø	T071	PJ	Pt 400m both;yfs1/2 .950 min;VGS(1-2) 10mV max;ΔVGS(1-2)/ΔT 2.0mV max
34	2N5547*	6 N-Ø	Si	Ø	T071	PJ	Pt .40W;IDSS1/2-.90 min;ΔVGS(1-2)/ΔT-3.2mV;Yos(1-2)-3.0umho.
35	JAN2N5547*	6 N-Ø	Si	Ø	T071	PJ	Pt 400m both;yfs1/2 .900 min;VGS(1-2) 15mV max;ΔVGS(1-2)/ΔT 4.0mV max
36	2N5561*	6 N-Ø	Si	Ø	T071	PJ	Pt-500mW;IDSS1/2-.95min;VGS(1-2)-5mVmax;ΔVGS(1-2)/ΔT-500uVmax;yfs1/2-.97min.
37	2N5562*	6 N-Ø	Si	Ø	T071	PJ	Pt-500mW;IDSS1/2-.95min;VGS(1-2)-10mVmax;ΔVGS(1-2)/ΔT-800uVmax;yfs1/2-.97min.
38	2N5563*	6 N-Ø	Si	Ø	T071	PJ	Pt-500mW;IDSS1/2-.95min;VGS(1-2)-15mVmax;ΔVGS(1-2)/ΔT-2.0mVmax;yfs1/2-.95min.
39	2N5564*	6 N-Ø	Si	Ø	T071	PJ	Pt-650mW;IDSS1/2-.95min;VGS(1-2)-5mVmax;ΔVGS(1-2)/ΔT-800uVmax;yfs1/2-.95min.
40	2N5565*	6 N-Ø	Si	Ø	T071	PJ	Pt-650mW;IDSS1/2-.95min;VGS(1-2)-10mVmax;ΔVGS(1-2)/ΔT-2.0mVmax;yfs1/2-.90min.
41	2N5566*	6 N-Ø	Si	Ø	T071	PJ	Pt-650mW;IDSS1/2-.95min;VGS(1-2)-20mVmax;ΔVGS(1-2)/ΔT-4.0mVmax;yfs1/2-.90min.
42	2N5902*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 2.0nA max;IDSS1/2 .95 min;VGS(1-2) 5.0mV max.
43	2N5903*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 2.0nA max;IDSS1/2 .95 min;VGS(1-2) 5.0mV yfs1/2 .97 min.
44	2N5904*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 2.0nA max;IDSS1/2 .95 min;VGS(1-2) 10mV;yfs1/2 .95 min.
45	2N5905*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 2.0nA max;IDSS1/2 .95 min;VGS(1-2) 15mV;yfs1/2 .95 min.
46	2N5906*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 200pA max at 125°C;IDSS1/2 .95 min;VGS(1-2) 5.0mV;yfs1/2 .97 min.
47	2N5907*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) at 125°C 200pA max;VGS(1-2) 5.0mV;yfs1/2 .97 min.
48	2N5908*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) at 125°C 200pA max;IDSS1/2 .95 min;VGS(1-2) 10mV;yfs1/2 .95 min.
49	2N5909*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) at 125°C 200pA max;IDSS1/2 .95 min;VGS(1-2) 15mV;yfs1/2 .95 min.
50	2N5911*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 20nA max;IDSS1/2 .95 min;VGS(1-2) 10mV max.
51	2N5912*	6 N-Ø	Si	Ø	T078	PE	Pt 500mW;IG(1-2) 20nA max;IDSS1/2 .95 min;VGS(1-2) 15mV max.
52	2N6085*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .70 min;VBE(1-2) 10mV;ΔVBE(1-2)/ΔT 4.0mV;Cc(1-2) 4.0pF.
53	2N6086*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .70 min;VBE(1-2) 10mV;ΔVBE(1-2)/ΔT 4.0mV;Cc(1-2) 4.0pF.
54	2N6087*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .90 min;VBE(1-2) 3.0mV;ΔVBE(1-2)/ΔT 1.0mV;Cc(1-2) 4.0pF.
55	2N6088*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .90 min;VBE(1-2) 3.0mV;ΔVBE(1-2)/ΔT 1.0mV;Cc(1-2) 4.0pF.
56	2N6089*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .80 min;VBE(1-2) 5.0mV;ΔVBE(1-2)/ΔT 2.0mV;Cc(1-2) 4.0pF.
57	2N6090*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .80 min;VBE(1-2) 5.0mV;ΔVBE(1-2)/ΔT 2.0mV;Cc(1-2) 4.0pF.
58	2N6091*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .90 min;VBE(1-2) 3.0mV;ΔVBE(1-2)/ΔT 1.0mV;Cc(1-2) 4.0pF.
59	2N6092*	6 N-Ø	Si	Ø	T078	PE	Pt 600mW;hFE1/2 .90 min;VBE(1-2) 3.0mV;ΔVBE(1-2)/ΔT 1.0mV;Cc(1-2) 4.0pF.
60	2N6441*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 10mV max;IC-2C ±0.005uA.
61	2N6442*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 10mV max;IC-2C ±0.005uA.
62	2N6443*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 5.0mV max;IC-2C ±0.005uA.
63	2N6444*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 5.0mV max;IC-2C ±0.005uA.
64	2N6445*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 3.0mV max;IC-2C ±0.005uA.
65	2N6446*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 3.0mV max;IC-2C ±0.005uA.
66	2N6447*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 3.0mV max;IC-2C ±0.005uA.
67	2N6448*	6 N-Ø	Si	Ø	T078	PE	Pt 550mW;VBE1-2 3.0mV max;IC-2C ±0.005uA.
68	2N6483*	6 N-#	Si	Ø	T071	PJ	Pt 500mW;IDSS1/2 .95 min;VGS(1-2)5mV max;Yfs1/2 .97 min.
69	2N6484*	6 N-#	Si	Ø	T071	PJ	Pt 500mW;IDSS1/2 .95 min;VGS(1-2)10mV max;Yfs1/2 .97 min.
70	2N6485*	6 N-#	Si	Ø	T071	PJ	Pt 500mW;IDSS1/2 .95 min;VGS(1-2)15mV max;Yfs1/2 .95 min.
71#	20C28	6 P-A	Ge	Ø	T03		Matched Pair of OC28;hFE 1/2-1.2
72#	20C29	6 P-A	Ge	Ø	T03		Matched Pair of OC29;hFE 1/2-1.2
73#	20C35	6 P-A	Ge	Ø	T03		Matched Pair of OC35;hFE 1/2-1.2
74#	20C36	6 P-A	Ge	Ø	T03		Matched Pair of OC36;hFE 1/2-1.2
75#	2PT6	6 P-A	Ge	Ø	F4N	AØ	hFE1/hFE2 1.25 Max;Matched Pair Pt6:Pt 6W both sides
76#	2SA798	6 P	Si	Ø			Pt 400m both;hFE1/2 0.8 min;VBE(1-2)10m max.
77#	2SC294	6 N-D	Si	Ø	R131h	PD	Pt 300mW(both sides)max;hFE1/2 .80 min;ΔVBE 10mV max
78#	2SC1583	6 N	Si	Ø			Pt 400m both;hFE1/2 0.8 min;VBE(1-2)10m max.
79#	2SC1910	6 N-PEΔ	Si	Ø	W35	PG	Pc 200mW;BVBCBO 15V;hFE at 50mA-30 min;ft 6.0G min;Cob 1.5pF max;ΔVBE(1-2)30mV.
80#	2SC1911	6 N-PEΔ	Si	Ø	W35	PG	Pc 150mW;BVBCBO 20V;hFE at 10mA-40 min;ft 5.0G min;Cob 80pF max;ΔVBE(1-2)15mV.
81#	2SC1912	6 N-PEΔ	Si	Ø	W35	PH	Pc 150mW;BVBCBO 20V;hFE at 10mA-40 min;ft 5.0G min;Cob 80pF max;ΔVBE(1-2)15mV.
82#	2SC1920	6 N-PEΔ	Si	Ø	W35	PH	Pc 200mW;BVBCBO 15V;hFE at 30mA-30 min;ft 6.0G min;Cob 1.5pF max;ΔVBE(1-2)30mV.
83#	2SK109*	6 N	Si	Ø	B34	RC	VGS(1-2) 50mV max;IDSS 1/2 0.85 min;Yfs 1/2 0.9 min
84	3N151*	6 P	Si	Ø	T077	PY	Pt 325mW;ID1/2 .90 min;VGS(1-2)250mV;yfs1/2 .80 min;Yos(1-2)0.1mmho
85	3N165*	6 PΔ	Si	Ø	T099	QC	Pt-525mW;yfs1/2-.90min;VGS(th)(1-2)-100mVmax;tr-30nS;ton-15nS;toff-50nS.
86	3N188*	6 PMOSΔ	Si	Ø	T099	QC	Pt 525mW;yfs1/2 .85 min;VGS(th)1-2 100mV;tr 30nS;tr 30nS;toff 50nS;td 15nS.
87	3N190*	6 PMOSΔ	Si	Ø	T099	QC	Pt 525mW;yfs1/2 .85 min;VGS(th)1-2 100mV;tr 30nS;tr 30nS;toff 50nS.
88	3N207	6 P-MOS*	Si	Ø	T076	PY	Pt 600mW;AVGS1/2 200mV max.
89#	40809	6 P-A	Ge	Ø	T01	A	Matched Pair of AC127 and AC128
90#	ADY27*	6 P-A	Ge	Ø	F9d	CØ	hFE1/hFE2 1.25 max;Pt 27.5W;ICEV 150uA;ft 450kHz.
91#	BC140-6*	6 N-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
92#	BC140-10*	6 N-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
93#	BC140-16*	6 N-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
94#	BC141-6*	6 N-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
95#	BC141-10*	6 N-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
96#	BC141-16*	6 N-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
97#	BC160-6*	6 P-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
98#	BC160-10*	6 P-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
99#	BC160-16*	6 P-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
100#	BC161-6*	6 P-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
101#	BC161-10*	6 P-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
102#	BC161-16*	6 P-PEΔ	Si	Ø	T039	AØ	Pt 3.7W at 45°C case;Vsat 1.0V max;hFE 1/2 1.25 max
103	BC328/BC338	6 P-PE	Si	Ø	T092	F	hFE1/2 1.25 typ. 1.4 max;Pt 500mW;BVCEs 30V;ft 100MHz.
104	BC337/						

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	2	TYPE No.	1	CATEGORY	M	DWG #	L	C	E	O	A	D	DESCRIPTION
				STRUCTURE	AT	s/a	EO	AD					
						TO200 Ser.							
1		MD1120	6	N	Si	R131b							hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
2		MD1120F	6	N-AN	Si	X22							hFE 30/120 at IC 100uA;VBE(1-2)max 10mV at IC 100uA.
3		MD1121	6	N	Si	R131b							hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
4		MD1122	6	N	Si	R131b							hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
5		MD1123	6	P	Si	R131							hFE-30/120 at IC-100uA;(VBE1-VBE2) max-10mV at IC-100uA
6		MD1129*	6	NAN	Si	R131b	PA						Pd 625mW(ALL);hFE1/2 0.9 min -1 max;VBE(1-2)5mVdc;ΔVBE(1-2)0.8mVdc.
7		MD1129F*	6	NAN	Si	X22	PB						Pd 400mW(ALL);hFE1/2 0.9 min-1 max;VBE(1-2)5mVdc;ΔVBE(1-2)1mVdc.
8		MD1130	6	P	Si	R131b							hFE-100/300 at IC-100uA;VBE1/2-5.0mV max. at IC-100uA.
9		MD1130F	6	P-AN	Si	X22	PB						hFE 100/300 at IC 100uA;VBE 1/2 5.0mV at IC 100uA.
10		MD1132*	6	N-AN	Si	T099	PA						Pd 600mW(both sides);hFE1/2 .90 min;VBE(1-2) 5.0mVdc;ΔVBE(1-2) .80mVdc.
11		MD2369A*	6	N-AN	Si	T099	PA						Pd 600mW(both sides);hFE1/2 .90;VBE(1-2) 5mV;ΔVBE(1-2)/ΔTA 10uV/°C;ton 15,toff 20ns.
12		MD2369AF*	6	N-AN	Si	T089	PB						Pd 400mW(both sides);hFE1/2 .90;VBE(1-2) 5mV;ΔVBE(1-2)/ΔTA 10uV/°C;ton 15,toff 20ns.
13		MD2369B*	6	N-ANΔ	Si	T099	PA						Pd 600mW(both sides);hFE1/2 .80;VBE(1-2) 10mV;ΔVBE(1-2)/ΔTA 20uV/°C;ton 15,toff 20ns
14		MD2369BF*	6	N-ANΔ	Si	T089	PB						Pd 400mW(both sides);hFE1/2 .80;VBE(1-2) 10mV;ΔVBE(1-2)/ΔTA 20uV/°C;ton 15,toff 20ns
15#		MD2974*	6	N-PL0	Si	R148a							Pd 250mW(both sides);hFE1/2 .90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
16#		MD2975*	6	N-PL0	Si	R148a							Pd 250mW(both sides);hFE1/2 .90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
17#		MD2978*	6	N-PL0	Si	R148a							Pd 250mW(both sides);hFE1/2 .90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
18#		MD2979*	6	N-PL0	Si	R148a							Pd 250mW(both sides);hFE1/2 .90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
19		MD3250A*	6	P-AN	Si	R131f	PA						Pd 625mW(both sides);hFE1/2 .900 min;VBE(1-2) 3.0mVdc;ΔVBE1/2 .800mVdc.
20		MD3250AF*	6	P-AN	Si	X22	PA						Pd 400mW(both sides);hFE1/2 .900 min;VBE(1-2) 3.0mVdc;ΔVBE1/2 .800mVdc.
21		MD3251A*	6	P-AN	Si	R131f	PA						Pd 625mW(both sides);hFE1/2 .900 min;VBE(1-2) 3.0mVdc;ΔVBE1/2 .800mVdc.
22		MD3251AF*	6	P-AN	Si	X22	PA						Pd 400mW(both sides);hFE1/2 .900 min;VBE(1-2) 3.0mVdc;ΔVBE1/2 .800mVdc.
23		MD3409*	6	N-AN	Si	T099	PA						Pd 625mW(both sides);ΔVBE(1-2) 1.6mVdc.
24		MD3410*	6	N-AN	Si	T099	PA						Pd 625mW(both sides);ΔVBE(1-2) .80mVdc.
25		MD4260*	6	PAN	Si	R131b	PA						Pd 600mW(Both);hFE1/2 0.8 min - 1 max;VBE(1-2)10mVdc.
26		MD4261*	6	PAN	Si	R131b	PA						Pd 600mW(Both);hFE1/2 0.8 min - 1 max;VBE(1-2)10mVdc.
27		MD5000*	6	P-EA	Si	T099	PA						Pd(both sides)-400mW;VCE0-15V;hFE1/2-.70 min;VBE(1-2)-5.0mV max.
28		MD5000A*	6	P-EA	Si	T099	PA						Pd(both sides)-400mW;VCE0-15V;hFE1/2-.90 min;VBE(1-2)-5.0mV max
29		MD5000B*	6	P-EA	Si	T099	PA						Pd(both sides)-400mW;VCE0-15V;hFE1/2-.80 min;VBE(1-2)-10mV max.
30		MD8001*	6	N-AN	Si	R131f	PA						Pd 625mW(both sides);VBE(1-2)15mVdc max;IEBO 50nAdc max;Cib 2.3pF typ
31		MD8002*	6	N-AN	Si	R131f	PA						Pd 625mW(both sides);VBE(1-2)15mVdc max;IEBO 50nAdc max;Cib 2.3pF typ.
32		MD8003*	6	N-AN	Si	R131f	PA						Pd 625mW(both sides);VBE(1-2)15mVdc max;IEBO 50nAdc max;Cib 2.3pF typ.
33		MEM551*	6	P	Si	T077	PY						Pt-112mW;Yfs1/2-.80 min;Gfs(1-2)-200mV max;VGST-6.0V max.
34		MEM551C*	6	P	Si	T077	PY						Pt 85mW;Yfs1/2-.80 min;Gfs(1-2)-200mV max;VGST 6.0V max.
35		MEM954*	6	P	Si	T077	PY						Pt 325mW At Case;yfs1/2 1.0 max;VGS(1-2)75mV max;VGS(1-2)/ΔT 150uV/°C max
36		MEM954A*	6	P	Si	T077	PY						Pt 325mW At Case;yfs1/2 1.0 max;VGS(1-2)25mV max;VGS(1-2)/ΔT 50uV/°C max
37		MEM954B*	6	P	Si	T077	PY						Pt 325mW At Case;yfs 1/2 1.0max;VGS(1-2) 10mVmax;VGS(1-2)/ΔT 25uV/°Cmax
38		MEM955*	6	P	Si	T077	PY						Pt 325mW at Case;yfs1/2 1.0 max;VGS(1-2) 75mV max;VGS(1-2)/ΔT 150uV/°C max.
39		MEM955A*	6	P	Si	T077	PY						Pt 325mW at Case;yfs1/2 1.0 max;VGS(1-2) 25mV max;VGS(1-2)/ΔT 50uV/°C max.
40		MEM955B*	6	P	Si	T077	PY						Pt 325mW at Case;yfs1/2 1.0 max;VGS(1-2) 10mV max;VGS(1-2)/ΔT 25uV/°C max.
41		MMF1*	6	N	Si	R206	DH						yfs1/2 .98 min;VGS(1-2) 5.0mVdc max;IDSS1/2 .95;Yos1/2 1.0umf max.
42		MMF2*	6	N	Si	R206	DH						yfs1/2 .98 min;VGS(1-2) 5.0mVdc max;IDSS1/2 .95;Yos1/2 1.0umf max.
43		MMF3*	6	N	Si	R206	DH						yfs1/2 .98 min;VGS(1-2) 5.0mVdc max;IDSS1/2 .90;Yos1/2 1.0umf max.
44		MMF4*	6	N	Si	R206	DH						yfs1/2 .98 min;VGS(1-2) 5.0mVdc max;IDSS1/2 .90;Yos1/2 1.0umf max.
45		MMF5*	6	N	Si	R206	DH						yfs1/2 .98 min;VGS(1-2) 5.0mVdc max;IDSS1/2 .90;Yos1/2 1.0umf max.
46		MMF6*	6	N	Si	R206	DH						yfs1/2 .98 min;VGS(1-2) 5.0mVdc max;IDSS1/2 .90;Yos1/2 1.0umf max.
47		NDF9401*	6	N-EO	Si	T078	PE						Pt 500mW;VGS(1-2)-5.0mV;ΔVGS(1-2)-5.0uV/°C;Yfs1/2 .97 min;CMRR 120db min.
48		NDF9402*	6	N-EO	Si	T078	PE						Pt 500mW;VGS(1-2)-5.0mV;ΔVGS(1-2)-10uV/°C;Yfs1/2 .97 min;CMRR 120db min.
49		NDF9403*	6	N-EO	Si	T078	PE						Pt 500mW;VGS(1-2)-10mV;ΔVGS(1-2)-10uV/°C;Yfs1/2 .95 min;CMRR 110db min.
50		NDF9404*	6	N-EO	Si	T078	PE						Pt 500mW;VGS(1-2)-15mV;ΔVGS(1-2)-10uV/°C;Yfs1/2 .95 min;CMRR 110db min.
51		NDF9405*	6	N-EO	Si	T078	PE						Pt 500mW;VGS(1-2)-25mV;ΔVGS(1-2)-25uV/°C;Yfs1/2 .90 min;CMRR 100db min.
52		NDF9406*	6	N-EO	Si	R120	PC						Pt 375mW;VGS(1-2)-5.0mV;ΔVGS(1-2)-5.0uV/°C;Yfs1/2 .97 min;CMRR 120db min.
53		NDF9407*	6	N-EO	Si	R120	PC						Pt 375mW;VGS(1-2)-5.0mV;ΔVGS(1-2)-10uV/°C;Yfs1/2 .97 min;CMRR 120db min.
54		NDF9408*	6	N-EO	Si	R120	PC						Pt 375mW;VGS(1-2)-10mV;ΔVGS(1-2)-10uV/°C;Yfs1/2 .95 min;CMRR 110db min.
55		NDF9409*	6	N-EO	Si	R120	PC						Pt 375mW;VGS(1-2)-15mV;ΔVGS(1-2)-10uV/°C;Yfs1/2 .95 min;CMRR 110db min.
56		NDF9410*	6	N-EO	Si	R120	PC						Pt 375mW;VGS(1-2)-25mV;ΔVGS(1-2)-25uV/°C;Yfs1/2 .90 min;CMRR 100db min.
57		SA2253*	6	N	Si	T05							BVCBO-40V min;hFE1/hFE2-7/1.0;VBE1-VBE2-20mV at IC-100uA
58		SA2254	6	N	Si	T05							hFE1/hFE2-8/1.0;VBE1-VBE2-10mV at IC-100uA;BVCBO-60V min.
59		SA2255	6	N	Si	T05							BVCBO-45V min;hFE1/hFE2-8/1.0;VBE1-VBE2-10mV at IC-50uA
60		SA2644*	6	N-PE	Si	T077							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-5.0mV deg.C.
61		SA2648*	6	N-PF	Si	T077							Pt-6W;hFE1/2-.9 min;VBE(1-2)-2mV max;ΔVBE1-2/ΔT-3mV max.
62		SA2710*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
63		SA2711*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
64		SA2712*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-5uV/deg.C.
65		SA2713*	6	N	Si	R131c							Pt-6W;hFE1/2-.80 min;VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-5uV/deg.C.
66		SA2714*	6	N	Si	R131c							Pt-6W;hFE1/2-.80 min;VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uV/deg.C.
67		SA2715*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
68		SA2716*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
69		SA2717*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-5uV/deg.C.
70		SA2718*	6	N	Si	R131c							Pt-6W;hFE1/2-.80 min;VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uV/deg.C.
71		SA2719*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
72		SA2720*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-5uV/deg.C.
73		SA2721*	6	N	Si	R131c							Pt-6W;hFE1/2-.80 min;VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uV/deg.C.
74		SA2722*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
75		SA2723*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-5uV/deg.C.
76		SA2724*	6	N	Si	R131c							Pt-6W;hFE1/2-.80 min;VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uV/deg.C.
77		SA2738*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-1.5mV max;ΔVBE(1-2)/ΔT-3uV/deg.C.
78		SA2739*	6	N	Si	R131c							Pt-6W;hFE1/2-.90 min;VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-5uV/deg.C.
79#		SFT918	6	N-PL	Si	T077							Pt-300mW each;ft-600 MHz min;hFE-50 min.
80#		SFT918A	6	N-PL	Si	T077							Pt-300mW each;ft-600 MHz min;hFE 1/2-.90 min;VBE (1-2)-5.0mV max.
81#		SFT918B	6	N-PL	Si	T077							Pt-300mW each;ft-600 MHz min;hFE 1/2-.80 min;VBE (1-2)-10mV max.
82#		SL301AE*	6	N	Si	S17	QR						BVCBO 35V;BVCEO 16V;IC 50mA;hFE(1-2)900m;VCE 600mV;ΔVBE(1-2)3.0mV
83#		SL301AT*	6	N	Si	T078	PD						BVCBO 35V;BVCEO 16V;IC 5

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	U	CATEGORY	M	DWG #	L	C	E	O	DESCRIPTION
		S	STRUCTURE	A	Y200	s/a	A	D	E	
		E		T	TO200	TO200	D	E		
					Ser.	Ser.				
1	2N2418A	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .62 max;VEB1(sat) 5.0V max;lv 8.0mA min.	
2	JAN2N2418A	9	P	Si	T072	CC	Pt	35W	VB2E 60V;RBB 9.1kΩ max;n .62 max;lv 12uA max.	
3	2N2418B	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .62 max;lv 6.0uA max;VOB1 3.0V min.	
4	2N2419	9	P	Si	R33c	CC	Pt	300mW	RBB 6.8kΩ max;n .68 max;lv 12uA max;IB 2(MOD) 22mA max	
5	2N2419A	9	P	Si	R33c	CC	Pt	300mW	RBB 6.8kΩ max;n .68 max;lv 12uA max;IB 2(MOD) 22mA max	
6	JAN2N2419A	9	P	Si	T072	CA	Pt	35W	VB2E 60V;RBB 6.8kΩ max;n .75 max;lv 1.2uA max.	
7	2N2419B	9	P	Si	R33c	CC	Pt	300mW	RBB 6.8kΩ max;n .68 max;lv 12uA max;VOB1 3.0V min.	
8	2N2420	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .68 max;lv 12uA max;IB 2(MOD) 22mA max.	
9	2N2420A	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .68 max;lv 12uA max;VEB1(sat) 5.0V max;lv 8.0mA min.	
10	JAN2N2420A	9	P	Si	T072	CA	Pt	35W	VB2E 60V;RBB 9.1kΩ max;n .68 max;lv 1.2uA max.	
11	2N2420B	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .68 max;lv 6.0uA max;VOB1 3.0V min.	
12	2N2421	9	P	Si	R33c	CC	Pt	300mW	RBB 6.8kΩ max;n .75 max;lv 12uA max;IB 2(MOD) 22mA max.	
13	2N2421A	9	P	Si	R33c	CC	Pt	300mW	RBB 6.8kΩ max;n .75 max;lv 12uA max;IB 2(MOD) 22mA max.	
14	JAN2N2421A	9	P	Si	T072	CA	Pt	35W	VB2E 60V;RBB 6.8kΩ max;n .75 max;lv 1.2uA max.	
15	2N2421B	9	P	Si	R33c	CC	Pt	300mW	RBB 6.8kΩ max;n .75 max;lv 6.0uA max;VOB1 3.0V min.	
16	2N2422	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .75 max;lv 12uA max;IB 2(MOD) 22mA max.	
17	2N2422A	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .75 max;lv 12uA max;VEB1(sat) 5.0V max;lv 8.0mA min.	
18	JAN2N2422A	9	P	Si	T072	CA	Pt	35W	VB2E 60V;RBB 9.1kΩ max;n .75 max;lv 1.2uA max.	
19	2N2422B	9	P	Si	R33c	CC	Pt	300mW	RBB 9.1kΩ max;n .75 max;lv 6.0uA max;VOB1 3.0V min	
20	2N2646	9	P	Si	T072	CCS	Pt	30W	VB2E 30V;VB2B 1.35V;RBB0 9.1kΩ max;VOB1 3V;lv 5uA;n .56-.75;lv 4mA min	
21	2N2647	9	P	Si	T072	CCS	Pt	30W	VB2E 30V;VB2B 1.35V;RBB0 9.1kΩ max;VOB1 6V;lv 2uA;n .68-.82;lv 8-18mA	
22	2N2840	9	P	Si	T072	CA	Pt	30W	VB2E 30V;VBB 35V;lv 10uA max;lv 70mA max.	
23	2N3479	9	P	Si	R33	GF	Pc	40W	RBB 9.1kohms max;n .62 max;lv 4.0mA min;lv 20uA max.	
24	2N3480	9	P	Si	R33	GF	Pc	40W	RBB0 9.1kohms max;n .75 max;lv 4.0mA min;lv 20uA max.	
25	2N3481	9	P	Si	R33	GF	Pc	40W	RBB0 9.1kohms max;n .85 max;lv 4.0mA min;lv 20uA max.	
26	2N3483	9	P	Si	R33	GF	Pc	40W	RBB0 9.1kΩ max;n .72 max;lv 4.0mA min;lv 5.0uA max.	
27	2N3484	9	P	Si	R33	GF	Pc	40W	RBB0 9.1kohms max;n .85 max;lv 4.0mA min;lv 5.0uA max.	
28	2N3980	9	P	Si	T072	CA	Pt	36W	le 50mA;RBB 8.0kohms;n .82 max;lv 2.0uA max;lv 10mA max.	
29	2N4851	9	P	Si	T072	CA	Pd	30W	RBB 9.1kohms max;n .75 max;lv 2.0mA max;lv 2.0uA max;le(DC).	
30	2N4852	9	P	Si	T072	CA	Pd	30W	RBB 9.1kohms max;n .85 max;lv 4.0mA max;lv 2.0uA max.	
31	2N4853	9	P	Si	T072	CA	Pt	300mW	RBB 9.1kΩ max;n .85 max;lv 6.0mA min;lv 400mA max.	
32	2N4870	9	P	Si	T092	CB	Pd	30W	VB2B 1.35V max;lv 2.0mA min;VOB1 3.0V min;n .75 max.	
33	2N4871	9	P	Si	T092	CB	Pd	30W	VB2B 1.35V max;lv 4.0mA min;VOB1 5.0V min;n .85 max.	
34	2N4891	9	P	Si	R203	CG	Pt	360mW	RBB 9.1kΩ max;n .82 max;VEB1(sat) 4.0V max;VOB1 3.0V min;lv 2.0uA max	
35	2N4892	9	P	Si	R203	CG	Pt	360mW	RBB 9.1kΩ max;n .69 max;VEB1(sat) 4.0V max;VOB1 3.0V min;lv 2.0uA max.	
36	2N4893	9	P	Si	R203	CG	Pt	360mW	RBB 12kΩ max;n .82 max;VEB1(sat) 4.0V max;VOB1 6.0V min;lv 2.0uA max.	
37	2N4894	9	P	Si	R203	CG	Pt	360mW	RBB 12kΩ max;n .86 max;VEB1(sat) 4.0V max;VOB1 3.0V min;lv 1.0uA max.	
38	2N4947	9	P	Si	R33a	CCS	Pt	36W	RBB 9.1kohms max;n .69 max;lv 2.0uA max.	
39	JAN2N4947	9	P	Si	R33a	CA	Pt	360mW	RBB0 9.1kΩ max;n .69 max;lv 2.0uA max;VB2E-30V	
40	2N4948	9	P	Si	R33a	CCS	Pt	36W	RBB 12kohms max;n .82 max;lv 2.0uA max.	
41	JAN2N4948	9	P	Si	R33a	CA	Pt	360mW	RBB0-12kΩ max;n .82 max;lv 2.0uA max;VB2E-30V	
42	2N4949	9	P	Si	R33a	CCS	Pt	36W	RBB 12kohms max;n .86 max;lv 1.0uA max.	
43	JAN2N4949	9	P	Si	R33a	CA	Pt	360mW	RBB0-12kΩ max;n .86 max;lv 1.0uA max;VB2E-30V.	
44	2N5431	9	P	Si	R33c	CA	Pt	30W	n .80 max;RBB 8.5kohms;lv 4.0uA max;lv 2.0mA min	
45	JAN2N5431	9	P	Si	R33a	CC	Pt	300mW	le 80mA;RBB0 8.5kΩ max;n .80 max;lv 2.0mA min;lv 400nA max	
46	2N6114	9	N	Si	R149	CC	Pt	300mW	lv 5.0uA;lv 1.0mA;RBB 8.2kΩ max;VOB1 3.5V min;n .62 max	
47	2N6115	9	N	Si	R149	CC	Pt	300mW	lv 15uA;lv 1.0mA;RBB 15kΩ max;VOB1 3.5V min;n .62 max	
48	2N6119	9	N	Si	T018	CE	Pt	400mW	VT 1.6V max;lv 5.0uA max;lv 1.5mA max;VO 9.0V max;VF 1.0V max.	
49	2N6120	9	P	Si	T018	CE	Pt	400mW	VT 600mV max;lv 1.0uA max;lv 1.0mA max;VO 9.0V max;VF 1.0V max	
50 #	2SH11	9	N	Si	T05		Pc	450mW	n .58/.75;VBB-450ohms;le(DC)-50mA.	
51 #	2SH20	9	N	Si	T018	CB	Pt	200mW	n .90 max;RBB 4.0kohms min;lv 2.0mA min;lv 8.0uA min.	
52 #	2SH21	9	N	Si	T018	CB	Pt	250mW	n .85 max;RBB 4kΩ min;lv 4.0mA min;lv 4.0uA max	
53 #	A5T6116	9	N	Si	R203	CE	Pt	300mW	Vp-Vs 1.6V max;lv 5.0uA max;lv 70uA max;Vo 6.0V max;tr 80ns max	
54	A5T6117	9	N	Si	R203	CE	Pt	300mW	Vp-Vs 0.6V max;lv 2.0uA max;lv 50uA max;Vom 6.0V max;tr 80ns max.	
55	A5T6118	9	N	Si	R203	CE	Pt	300mW	Vp-Vs 0.6V max;lv 1.0uA max;lv 50uA max;Vom 6.0V max;tr 80ns max	
56	A7T6027	9	N	Si	T092	CF	Pt	300mW	Vp-Vs 1.6V max;lv 2.0uA max;lv 50uA max;IGAO 10nA max;Vom 6.0V max.	
57	A7T6028	9	N	Si	T092	CF	Pt	300mW	Vp-Vs 0.6V max;lv 150nA max;lv 25uA max;IGAO 10nA max;Vom 6.0V max.	
58 #	BSV57B	9	P	Si	R186	CB	RBB 4.7kΩ min;lv 6.0uA max;lv 4.0mA min;Pd 300mW;intrinsic standoff ratio .68 to .82			
59	D5E37	9	N	Si	R33a	CA	Pt	30W	RBB 12kohms max;lv 4.0mA min;n .85 max;lv 25uA max.	
60	D5E43	9	P	Si	R33c	CA	Pt	300mW	lv 6.0mA min;n .82 max;lv 2.0uA;RBB0 9.1kΩ max.	
61	D5E44	9	P	Si	R33c	CA	Pt	300mW	lv 4.0mA min;n .82 max;lv 5.0uA;RBB0 9.1kΩ max.	
62	D5E45	9	P	Si	R33c	CA	Pt	300mW	lv 8.0mA min;n .82 max;lv 2.0uA;RBB0 9.1kΩ max.	
63	D5K1	9	P-PL	Si	R33a	CC	Pt	30W	RBB 8.2kohms max;lv 2.0mA typ;n .62 max.	
64	D5K2	9	P-PL	Si	R33a	CC	Pt	20W	RBB 15kohms max;lv 2.0mA typ;n .62 max.	
65	GET4870	9	P	Si	T072	CCS	Pt	300mW	n .75 max;Rbb 9.1kΩ max;lv 5.0uA max;lv 2.0mA min	
66	GET4871	9	P	Si	T072	CCS	Pt	300mW	n .85 max;RBB 9.1kΩ max;lv 5.0uA max;lv 4.0mA min.	
67	HEP310-RT	9	P	Si	T092	CB	le 50mA;RBB0 9.1kΩ;Pd 300mW;IEO at VBE of 30V is 1.0uA;lv 4.0mA at VBB.			
68	HEPS9001-RT	9	P	Si	T092	CE	IT 200mA;IG ±20mA;VGKF 40V;VGKR 5.0V;VAK 40V;Pd 375mW Adjustable.			
69 #	MEU21	9	P-Δ	Si	R110c		Pt	300mW	lv 2.0uA max;Vf 1.5V max;Vo 6.0V min;tr 80ns max.	
70 #	MEU22	9	P-Δ	Si	R110c		Pt	300mW	lv 150nA;Vf 1.5V max;Vo 6.0V min;tr 80ns max.	
71	MPU6027	9	P	Si	T092	CF	Pd	375mW	lv 2.0uA max;Vt 1.6V max;lv 50uA max;Vf 1.5V max;Vo 6.0V min;tr 80ns max.	
72	MPU6028	9	P	Si	T092	CF	Pd	375mW	lv 150nA max;Vt 600mV max;lv 50uA max;Vf 1.5V max;Vo 6.0V min;tr 80ns max.	
73	MU10	9	P-ANT	Si	R210	CB	Pd	300mW	lv 5.0uA;n .85;RBB 10kΩ;IB2(mod)50mA;lv 10mA(A11 max);VEB1(sat) 2V typ.	
74	MU20	9	P-AN	Si	R33c	CC	Pt	30W	n .85 max;RBB 9.1kohms;lv 10mA max;lv 2.0uA max;VEB1(sat) 2V.	
75	MU2646	9	P-AN	Si	T092	CB	Pt	VB2B 1.35V max;Pd 300mW;n .56 min;.75 max;RBB 9.1kΩ max;lv 1.0uA;lv 6.0mA typ.		
76	MU2646M	9	P-AN	Si	T018	CH	Pt	VB2B 1.35V max;Pd 300mW max;n .56 min;.75 max;RBB 9.1kΩ max;lv 1.0uA;lv 4.0mA typ.		
77	MU4891	9	P-ANT	Si	R196b	CB	Pt	30W	n .82 max;RBB 9.1kohms;lv 2.0mA;lv 5.0uA max;VEB1(sat) 4V max.	
78	MU4892	9	P-ANT	Si	R196b	CB	Pt	30W	n .69 max;RBB 9.1kohms;lv 2.0mA;lv 2.0uA max;VEB1(sat) 4V max.	
79	MU4893	9	P-ANT	Si	R196b	CB	Pt	30W	n .82 max;RBB 12kohms;lv 2.0mA;lv 2.0uA max;VEB1(sat) 4V max.	
80	MU4894	9	P-ANT	Si	R196b	CB	Pt	30W	n .86 max;RBB 12kohms;lv 2.0mA;lv 1.0uA max;VEB1(sat) 4V max.	
81 #	PUT1	9	P-Δ	Si	T0106		Pd	300mW	VT 600mV;Vak(min)±20V;lv(max)1.0uA;IGAO 10nA;Vf 1.5V;BVGAO 40V.	
82 #	PUT2	9	P-Δ	Si	T0106		Pd	300mW	VT 600mV;Vak(min)±40V;lv(max)1.0uA;IGAO 10nA;Vf 1.5V;BVGAO 40V.	
83 #	TIS43	9	P	Si	T092	CD	Pt	360mW	n .820 max;lv 5.0uA max;RBB 9.1kΩ max;IEBO 10nA max.	
84	2N941*	10	P-A	Si	T018	A	Voff-1.0mV max;loff-1.0n Amps.			
85	2N942*	10	P-A	Si	T018	A	Voff-3.0mV max;loff-3.0n Amps.			
86	2N943*	10	P-A	Si	T018	A	Voff-2.0mV max;loff-1.0n Amps; fab-1.0Mc min.			
87	2N944*	10	P-A	Si	T018	A	Voff-3.0mV max;loff-1.5n Amps; fab-1.0Mc min.			
88	2N945*	10	P-A	Si	T018	A	Voff-4.0mV max;loff-2.0n Amps; fab-1.0Mc min.			
89	2N946*	10	P-A	Si	T018	A	Voff-4.0mV max;loff-2.0n Amps; fab-1.0Mc min.			
90	2N1917*	10	P-A	Si	T05	A	Voff-1.0mV max;loff-1.0n Amps.			
91	2N1918*	10	P-A	Si	T05	A	Voff-3.0mV max;loff-3.0n Amps.			
92	2N1919*	10	P-A	Si	T05	A	Voff-2.0mV max;loff-1.0n Amps; fab-1.0Mc min.			
93	2N1920*	10	P-A	Si	T05	A	Voff-3.0mV max;loff-1.5n Amps; fab-1.0Mc min.			
94	2N1921*	10	P-A	Si	T05	A	Voff-4.0mV max;loff-2.0n Amps; fab-1.0Mc min.			
95	2N1922*	10	P-A	Si	T05	A	Voff-4.0mV max;loff-2.0n Amps; fab-1.0Mc min.			
96	2N2162*	10	P-PA	Si	T05	A	Voff-2.0mV max; rS-20 ohms; ft-14Mc min.			
97	2N2163*	10	P-PA	Si	T05	A	Voff-2.0mV max; rS-20 ohms; ft-14Mc min.			
98	2N2164*	10	P-PA	Si	T05	A	Voff-1.5mV max; rS-20 ohms; ft-24Mc min.			
99	2N2165*	10	P-PA	Si	T05	A	Voff-3.0mV max; rS-20 ohms; ft-10Mc min.			
100	2N2166*	10	P-PA	Si	T05	A	Voff-3.0mV max; rS-30 ohms; ft-10Mc min.			
101	2N2167*	10	P-PA	Si	T05	A	Voff-2.5mV max; rS-20 ohms; ft-16Mc min.			
102	2N2185*	10	P	Si	R177	A	Voff 2.5mV max;ts 250ns max.			
103	2N2186*	10								

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No	TYPE No.	CATEGORY	STRUCTURE	MATERIAL	DWG #	LCODE	DESCRIPTION
2		U	S	A	Y200 s/a TO200 Ser	E O A D	
1	3N133*	10	PA	Si	T072	GC	VE1E2/ΔT 10uV max,rs(on) 15Ω max,V(BR)E1E2 50V,VE1E2 30uV.
2	3N134*	10	PA	Si	T072	GC	VE1E2/ΔT 25uV max,rs(on) 15Ω max,V(BR)E1E2 15V,VE1E2 100uV.
3	3N135*	10	PA	Si	T072	GC	VE1E2/ΔT 25uV max,rs(on) 15Ω max,V(BR)E1E2 30V,VE1E2 100uV.
4	3N136*	10	PA	Si	T072	GC	VE1E2/ΔT 25uV max,rs(on) 15Ω max,V(BR)E1E2 50V,VE1E2 100uV
5	30	10	P-A	Si	R199		Matched pair; ICBO-2.0uA, BVCEO-20V, BVEBO-12V.
6	40	10	P-A	Si	R199b		Matched pair; ICBO-25nA, BVCEO-35V; BVCEO-40V.
7	50	10	P-A	Si	R199d		Matched pair; ICBO-3.0uA, BVCEO-25V; BVCEO-25V.
8	60	10	P-A	Si	R199a		Matched pair; ICBO-2.0uA, BVCEO-36V; BVEBO-12V
9	70	10	P-A	Si	R199c		Matched pair; ICBO-3.0nA, BVCEO-6.0V; BVEBO-10V.
10#	BFV34*	10	P-PE	Si	S5a	P	Pt-15W,hFE(inv)-6.0 min,VEC(ofs)-30mV,rec(on)-20 ohms
11#	BFV35*	10	P-PE	Si	S5a	P	Pt-15W,hFE(inv)-4.0 min,VEC(ofs)-50mV,rec(on)-35 ohms.
12#	BFV36*	10	P-PE	Si	S5a	P	Pt-15W,hFE(inv)-3.0 min,VEC(ofs)-80mV,rec(on)-45 ohms
13#	BFV37*	10	N-PE	Si	S5a	P	Pt-15W,hFE(inv)-2.0 min,VEC(ofs)-50mV,rec(on)-20 ohms
14#	BFV38*	10	N-PE	Si	S5a	P	Pt-15W,hFE(inv)-3.0 min,VEC(ofs)-40mV,rec(on)-15 ohms.
15#	BFV89*	10	N-PE	Si	W5a	B	Pt-30W,hFE(inv)-2.0 min,VEC(ofs)-40mV,rec(on)-15 ohms
16#	BFV89A*	10	N-PE	Si	W5a	B	Pt-30W,hFE(inv)-3.0 min,VEC(ofs)-70mV,rec(on)-15 ohms.
17#	BSX82*	10	N-MOS	Si	T033	DW	Pt 250mW,Voff 30uV max;Cob 4.0pf max;rDS(off) 20MΩ.
18#	BSY89*	10	N-PE	Si	T018	AZ	Voff-1.0mV max;rs-20 ohms;cob-12pf;ft-40Mc min.
19	HA7804	10	P-A	Si	T05		Vo-3.0mV max; Rsat-25 ohms max; Tr-15 usec max.
20	HA7806*	10	P-A	Si	T05		BVCEO-15V;ICBO-50nA,fab-1.0MHz,Cob-90pf,Voff-2.0mV;trr-15usec.
21	HA7808*	10	P-A	Si	T05		BVCEO-15V;ICBO-50nA,fab-1.0MHz,Cob-70pf,Voff-1.5mV;trr-15usec.
22	HA7810	10	P-A	Si	T05		Vo-1.5mV max; Rsat-30 ohms max; Tr-15 usec max.
23	HA7815	10	P-A	Si	T05		Vo-1.5mV max; Rsat-25 ohms max; Tr-15 usec max.
24	LDS207*	10	N-PEΔ	Si	S5	P	Pt-36W,hFE(INV)-20min,Voff-10mV max,rec(on)-4 ohms max.
25#	UPA36A*	10	N-F	Si	R144	RD	Common Ccl;Dual;hFE1/hFE2 80min,1.25 max;V(off) 50uVmax,(i)off 1.0nAmax
26#	ZDT10	10	N-PL	Si	R102a		ΔVEC-250uV max,VEC-2.0mV;IE1E2-10nA max.
27#	ZDT30*	10	N-PE	Si	T072	GC	VE1E2 50uV at IB 500uA;IE1E20 10nA at VE1E2 5.0 to 5.0V;rs 15Ω.
28#	ZDT31*	10	N-PE	Si	T072	GC	VE1E2 50uV at IB 500uA;IE1E20 10nA at VE1E2 5.0 to 5.0V;rs 15Ω.
29	2N626	11	N	Si	GS X171	A	Pc-10W max;VCB,VCE,VEB 30V max;hFE At VCE 5V,IC 1A 18k To 30k;fae 7kHz min
30	2N998	11	N-PL	Si	T072		Pc-50W max,BVCEO-100V,hFE-1600 min/IC-10mA,BVCEO-60V;ICBO-0.10uA
31	2N999	11	N	Si	T072		Pc-50W; hFE-70000 max, pulsed at IC-100mA and VCE-10V
32	2N2641*	11	N	Si	R131c		Pt-6W,VCE(sat)-100ohms max,VBE-60V min;hFE-50 min.
33	2N2644*	11	N	Si	R131c		Pt-6W,VCE(sat)-100ohms max,VBE-60V min;hFE-100 min.
34	2N2785	11	N	Si	T072		Pc-50W; BVCEO-60V; hFE:2,000-20,000
35	2N2804*	11	P	Si	R131c	PA	Pt-50W,hFE-20-120 at IC-10mA,VCE-5V;VCE(SAT)-5V.
36	2N2807*	11	P	Si	R131c	PA	Pt-50W,hFE-40-120 at IC-10mA,VCE-5V;VCE(sat)-5V.
37	2N2913*	11	N	Si	R131c		Pt-50W;ICBO-10uA at 150 deg.C,VBE(ON)-70V max;VCE(sat)-35V max.
38	2N2914*	11	N	Si	R131c		Pt-50W;ICBO-10uA at 150 deg.C,VBE(ON)-70V max;VCE(sat)-35V max.
39	2N3425*	11	N	Si	R131c		Pt-4W,VC1C2-200V,ton-50nsec max;toff-90nsec max.
40	2N3800*	11	P	Si	T071	PM	Pt-360mW,hFE-100 min. at IC-10uA,VCE(sat)-20V max.
41	2N3801*	11	P	Si	T071	PM	Pt-360mW,hFE-225 min. at IC-10uA,VCE(sat)-20V max.
42	2N3806*	11	P	Si	R131c	PA	Pt-600mW,hFE-100 min. at IC-10uA,VCE(sat)-20V max.
43	2N3807*	11	P	Si	R131c	PA	Pt-600mW,hFE-225 min. at IC-10uA,VCE(sat)-20V max.
44	2N3812*	11	P	Si	X22		Pt-35W,hFE-100 min. at IC-10uA, VCE-5.0V.
45	2N3813*	11	P	Si	X22		Pt-35W,hFE-225 min. at IC-10uA, VCE-5.0V.
46	2N4017*	11	P	Si	R131a	PR	Pt-600mW,hFE-60 min. at VCE of 5.0V and IC of 1.0uA;IEBO-10nA max.
47	2N4018*	11	P	Si	R131a	PR	Pt-600mW,hFE-60 min. at VCE of 5.0V and IC of 1.0uA;IEBO-10nA max.
48	2N4019*	11	P	Si	R131a	PR	Pt-600mW,hFE-180 min. at VCE of 5.0V and IC of 1.0uA;IEBO-10nA max.
49	2N4939	11	P	Si	R131c	PA	Pt-60W;BVCI2-200V max;hFE-50 min;BVCEO-50 max,IC-50mA max.
50	2N4942	11	P	Si	T089	PB	Pt-35W;BVCEO-50 max;hFE-50 min;ICBO-0.2uA max.
51	2N4955*	11	N	Si	R137		Pt-45W,NF-4.5db at 10kohms.
52	2N5254*	11	P-∅	Si	R137	PA	Pt-43W,hFE-50 min;VBCEO-40V,VEBO-5.0V,ft-40M min
53	2N5254/78*	11	P	Si	R131c		Pt 500mW,hFE 50 min;VCBO 40V;VEBO 5V;ft 60M min
54	2N5390	11	N	Si	T033	GN	Pt-1W,VCB1-120V max,VCE-80V max;IC-2A max;hFE-2000 min;ft-40Mc min
55	2N5793†	11	N	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
56	JAN2N5793†	11	N	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
57	2N5794†	11	N	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
58	JAN2N5794†	11	N	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
59	2N5795†	11	P	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
60	JAN2N5795†	11	P	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
61	2N5796†	11	P	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
62	JAN2N5796†	11	P	Si	R131f		Unitized Dual;Pt 600mW(total);ft 1.0G max;lc 600mA;(1C-2C)±1.0nA max.
63	2N6502*	11	N	Si	R131f	PA	Pd 650mW(both sides);ton 35ns max;toff 60ns max;VCE(sat)0.5V.
64	2N6503*	11	N	Si	X22	PB	Pd 400mW(both sides);ton 35ns max;toff 60ns max;VCE(sat)0.5V.
65#	2SC603*	11	N-PE	Si	R144a	QY	Bidirectional Switching;Pt 200mW(total);IEBO 1.0uA max;IE 50mA max
66#	2SC1265*	11	N-E	Si	T139	PR	Pt 300mW(per unit);hFE1/2 1.0 max;ΔVBE 8.0mV max;High Speed Switching
67	3N189*	11	PMOSΔ	Si	T099	QC	Pt 525mW,tr 30ns;td 15ns;toff 50ns
68	3N191*	11	PMOSΔ	Si	T099	QC	Pt 525mW,tr 30ns;td 15ns;toff 50ns.
69#	BFV70	11		Si	T084		Pt-4W,BVCEO-60V min;hFE-100 min;ft-200MHz min;Toff-40ns max
70#	BFV71	11		Si	T084		Pt-4W,BVCEO-60V min;hFE-100 min;ft-350MHz min;Toff-18ns max
71#	BFV73	11		Si	T084		Pt-4W,BVCEO-60V min;hFE-40 min;ft-350MHz min;Toff-18ns max
72#	BFV73N	11		Si			Pt 400mW;BVCEO 60V min;hFE 40 min;ft 350MHz min;Toff 18ns max.
73#	BFV75	11		Si	T089		Pt-4W,BVCEO-45V min;IC-30mA max;ft-30MHz min.
74#	BFV76	11		Si	T089		Pt-4W,BVCEO-15V min;VEC(off)-500uV;Rec(on)-20 ohms
75#	BFV93A	11		Si	T084		BVCEO-60V min;hFE-100 min;VCE(sat)-40V max.
76#	BFV93AN	11		Si			BVCEO 60V min;hFE 100 min,VCE(sat) 400mV max.
77#	BFX67	11	N	Si	T072		Pc-50W;hFE-7000 max, pulsed at IC-100mA and VCE-10V.
78#	C2306	11	N	Si	T071	PJ	IDSS1/2 0.9-1.0 Ratio,VGS1/2 20mV,VGS1/2T 40uV/C
79	D2T918*	11	N	Si	T077		Pt 300mW(both sides);VCEO 15V;hFE 20 min at 1.0V;IC 3.0mA.
80	M106*	11	PMOSΔ	Si	T099	QX	FET,BVDSS 30V;BVGSS 30V;IGSS 100pA;rDS 120Ω;Pt 500mW;Cgss 4.0pF
81	M107*	11	PMOS	Si	T099	PW	FET,BVDSS 30V;BVGSS 30V;IGSS 100pA;rDS 120Ω;Pt 500mW
82	M108*	11	P-MOS	Si	T099	PW	FET,BVDSS 30V;BVGSS 100V;IGSS 1pA;rDS 120Ω;Pt 500mW
83	MD708*	11	N-AN*	Si	R131f	PA	Pd 600mW(both sides);ton 35ns max;toff 75ns max;ts 25ns max.
84	MD708F	11	N-AN*	Si	X22		Pd 400mW(both sides);ton 35ns max;toff 75ns max;ts 25ns max.
85	MD918*	11	N-AN∅	Si	T099	PA	Pd 600mW(both sides);VCEO 15Vdc,hFE 50 min at 3.0mAdc and 5.0V
86	MD918F*	11	N-AN∅	Si	T089	PB	Pd 600mW(both sides);VCEO 15Vdc,hFE 50 min at 3.0mAdc and 5.0V.
87	MD2060F*	11	NAN	Si	T089	PB	Pd(both sides)400mW max;hFE1/2 .90 min-1.0 max;VBE(1-2)8mVdc max
88	MD2218*	11	NANΔ	Si	R131c	PA	Pd 625mW,td 20us,tr 40us,ts 280us,tf 70us max values
89	MD2218A*	11	NANΔ	Si	R131c	PA	Pd 625mW,td 15us,tr 30us,ts 250us,tf 60us max values.
90	MD2218AF*	11	NANΔ	Si	X22	PB	Pd 400mW,td 15us,tr 30us,ts 250us,tf 60us max values.
91	MD2218F*	11	NANΔ	Si	X22	PB	Pd 400mW,td 20us,tr 40us,ts 280us,tf 70us max values.
92	MD2219*	11	NANΔ	Si	R131c	PA	Pd 625mW,td 20us,tr 40us,ts 280us,tf 70us max values
93	MD2219A*	11	NANΔ	Si	R131c	PA	Pd 625mW,td 15us,tr 30us,ts 250us,tf 60us max values
94	MD2219AF*	11	NANΔ	Si	X22	PB	Pd 400mW,td 15us,tr 30us,ts 250us,tf 60us max values
95	MD2219F*	11	NANΔ	Si	X22	PB	Pd 400mW,td 20us,tr 40us,ts 280us,tf 70us max values
96	MD2369*	11	N-AN	Si	T099	PA	Pd 600mW(both sides);ton 15ns max;toff 20ns max;ts 13ns max.
97	MD2369F*	11	N-AN	Si	T089	PB	Pd 400mW(both sides);ton 15ns max;toff 20ns max;ts 13ns max.
98	MD2904*	11	PAN	Si	R131b	PA	Pd 625mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns.
99	MD2904A*	11	PAN	Si	R131b	PA	Pd 625mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns.
100	MD2904AF*	11	PAN	Si	X22	PB	Pd 400mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns
101	MD2904F*	11	PAN	Si	X22	PB	Pd 400mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns
102	MD2905*	11	PAN	Si	R131b	PA	Pd 625mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns.
103	MD2905A*	11	PAN	Si	R131b	PA	Pd 625mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns.
104	MD2905AF*	11	PAN	Si	X22	PB	Pd 400mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns
105	MD2905F*	11	PAN	Si	X22	PB	Pd 400mW(ALL);tr 35ns;td 12ns;ts 100ns;tf 40ns
106	MD3250*	11	P-AN	Si	R131f	PA	Pd 625mW(both sides);hFE 50 min,82 typ,150 max at VCE 5Vdc,IC 100uAdc
107	MD3250F*	11	P-AN	Si	X22		Pd 400mW(both sides);hFE 50 min,82 typ,150 max at VCE 5Vdc,IC 100uAdc.
108	MD3251*	11	P-AN	Si	R131f	PA	Pd 625mW(both sides);hFE 80 min,170 typ,300 max at VCE 5Vdc,IC 100uAdc.
109	MD3251F*	11	P-AN	Si	X22		Pd 400mW(both sides);hFE 80 min,170 typ,300 max at VCE 5Vdc,IC 100uAdc.
110	MD3467†	11	P-AN	Si	R131f	PA	Pd 650mW(both sides);IEBO 100nAdc max;ft 150MHz min.

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	STRUCTURE	MATERIAL	DWG #	LOC	DESCRIPTION
		U	S	A	Y200	E	
		S	T	T	s/a	A	
		E	R		TO200	D	
					Ser.	E	
1	2N2451*	13	NDPE	Si	T046	A	Rad. Res. Switch; Irradiation-10kT nvt.
2	2N5145*	13	N Δ	Si	T039	A	Post Rad of 300T NVT;tr-35ns,td-10ns,ts-35ns,tf-30ns,MAX;ft-250MHz min.
3	2N5200*	13	N	Si	T046	A	Pd-1.2W;Post Rad. of 300T nvt;hFE-10 min;ICES-05uA max.
4	2N5201*	13	N	Si	T046	A	Pd-1.2W;Post Rad. of 300T nvt;hFE-12 min;ICES-05uA max.
5	2N5236*	13	N	Si	T039	A	Max. Rad. Level 300T NVT;hFE 10 min;VCE(sat) 1.4,all pulsed.
6	2N5292*	13	P	Si	T018	A	Max.Rad.Level-300T-nvt;hFE-10min;tr-12ns,tf-15ns.
7	2N5304*	13	N Δ	Si	T061	A	Max. Rad. Level 100T NVT;hFE 5.0 min;VCE(sat) 1.5V max;tr 100ns,ts 700ns,tf 100ns max
8	JAN2N5304*	13	N Δ	Si	T061	A	Pt 25W Case;Fast Neutron Rad.1x10(14)N/cm sq;Cob 300pF max.
9	2N5332*	13	P Δ	Si	T046	A	Max.Rad.Level-1000T NVT;hFE-10 min;pulsed;tr-8ns;ts-70ns;tf-16ns.
10	2N5399*	13	N Δ	Si	T046	A	Max.Rad.-1000T nvt;Post Rad. hFE-12 min;ICBO-10uA;tr-8ns;tf-16ns.
11	2N5417*	13	N Δ	Si	T039	A	Max.Rad.-1000T nvt;Post Rad. hFE-8 pulsed;tr-18ns;ICBO-10uA;tr-60ns.
12	2N5527*	13	N	Si	R179u	A	Max.Rad.Level-500T NVT;hFE-15 min pulsed;ICBO-1mA;VCE(sat)-6.7 max.
13	2N5528*	13	N	Si	T059	A	Max.Rad.Level-500T NVT;hFE-15 min pulsed;ICBO-1mA;VCE(sat)-6.7 max.
14	2N5529*	13	N	Si	T061	A	Max.Rad.Level-500T NVT;hFE-15 min pulsed;ICBO-1mA;VCE(sat)-6.7 max.
15	2N5530*	13	N	Si	T061	A	Max.Rad.Level-500T NVT;hFE-15 min pulsed;ICBO-1mA;VCE(sat)-6.7 max.
16	2N5531*	13	N	Si	R179u	A	Max.Rad.Level-500T NVT;hFE-7 min;pulsed;ICBO-1mA;VCE(sat)-1 max.
17	2N5532*	13	N	Si	T059	A	Max.Rad.Level-500T NVT;hFE-7 min;pulsed;ICBO-1mA;VCE(sat)-1 max.
18	2N5533*	13	N	Si	T061	A	Max.Rad.Level-500T NVT;hFE-7 min;pulsed;ICBO-1mA;VCE(sat)-1 max.
19	2N5534*	13	N	Si	T061	A	Max.Rad.Level-500T NVT;hFE-7 min;pulsed;ICBO-1mA;VCE(sat)-1 max.
20	2N5535*	13	N Δ	Si	T061	A	Max.Rad.Level-500T NVT;hFE-15 min;pulsed;ICBO-1mA;td-25ns;tf-300ns.
21	2N5536*	13	N Δ	Si	T061	A	Max.Rad.Level-500T NVT;hFE-15 min;pulsed;ICBO-1mA;td-25ns;tf-300ns.
22	2N5537*	13	N Δ	Si	T061	A	Max.Rad.Level-500T NVT;hFE-10 min;pulsed;ICBO-2mA;td-25ns;tf-300ns.
23	2N5538*	13	N Δ	Si	T061	A	Max.Rad.Level-500T NVT;hFE-10 min;pulsed;ICBO-2mA;td-25ns;tf-300ns.
24	2N5763*	13	P Δ	Si	T018	A	Pt 1.8W;Post Rad.500T NVT;ICBO 25n;tr 40ns max;td 10ns max;ts 200ns max;tf 50ns max.
25	2N5938*	13	N	Si	T128	A	Max. Rad. Level 100T NVT;hFE 10 min.
26	2N5939*	13	N	Si	T0111	A	Max. Rad. Level 100T NVT;hFE 10 min.
27	2N5940*	13	N	Si	T0111	A	Max. Rad. Level 100T NVT;hFE 10 min.
28	BR100A*	13	N	Si	T05	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE 5.0V,lc 3.0A
29	BR100B*	13	N	Si	T27	A	Max. Rad. Level-500T nvt;Post Rad hFE-25;ICBO-1.0mA
30	BR100C*	13	N	Si	T059	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE 5.0V,lc 3.0A
31	BR100D*	13	N	Si	T060	A	Max. Rad. Level-500T nvt;Post Rad hFE-25;ICBO-1.0mA
32	BR100E*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE 5.0V,lc 3.0A
33	BR100F*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE 5.0V,lc 3.0A
34	BR101A*	13	N	Si	T05	A	Rad 100T n/Sq Cm;Post Rad hFE 7.0 At VCE 5.0V,lc 3.0A
35	BR101B*	13	N	Si	T27	A	Max. Rad. Level-500T nvt;Post Rad hFE-15;ICBO-1.0mA
36	BR101C*	13	N	Si	T059	A	Rad 100T n/Sq Cm;Post Rad hFE 7.0 At VCE 5.0V,lc 3.0A
37	BR101D*	13	N	Si	T060	A	Max. Rad. Level-500T nvt;Post Rad hFE-15;ICBO-1.0mA
38	BR101E*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 7.0 At VCE 5.0V,lc 3.0A
39	BR101F*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 7.0 At VCE 5.0V,lc 3.0A
40	BR200A*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE 5.0V,lc 5.0A
41	BR200B*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE 5.0V,lc 5.0A
42	BR201A*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 10 At VCE 5.0V,lc 5.0A
43	BR201B*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 10 At VCE 5.0V,lc 5.0A
44	BR300A*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE(s) 2.0V,lc 10A
45	BR300B*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE(s) 2.0V,lc 10A
46	BR301A*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 10 At VCE(s) 3.0V,lc 10A
47	BR301B*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 10 At VCE(s) 3.0V,lc 10A
48	BR400A*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 12 At VCE(s) 2.0V,lc 5.0A
49	BR400B*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 12 At VCE(s) 2.0V,lc 5.0A
50	BR401A*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 7.0 At VCE(s) 2.5V,lc 5.0A
51	BR401B*	13	N	Si	T061	A	Rad 100T n/Sq Cm;Post Rad hFE 7.0 At VCE(s) 2.5V,lc 5.0A
52	PPR1006*	13	N	Si	T27	A	Post Rad hFE-15 at lc 3.0A;VCE 5.0V.
53	PPR1007*	13	N	Si	T060	A	Post Rad hFE-15 at lc 3.0A;VCE 5.0V.
54	PPR1008*	13	N	Si	T27	A	Post Rad hFE-7.0 at lc 3.0A;VCE 5.0V.
55	PPR1009*	13	N	Si	T060	A	Post Rad hFE-7.0 at lc 3.0A;VCE 5.0V.
56	PPR1010*	13	N	Si	T061	A	Post Rad hFE-15 at lc 10A;VCE 5.0V.
57	PPR1011*	13	N	Si	T061	A	Post Rad hFE-15 at lc 10A;VCE 5.0V.
58	PPR1012*	13	N	Si	T061	A	Post Rad hFE-10 at lc 10A;VCE 5.0V.
59	PPR1013*	13	N	Si	T061	A	Post Rad hFE-10 at lc 10A;VCE 5.0V.
60	SDR2710	13	N	Si		A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE(S)2.0V,lc 3.0A;lc max 5.0A;VCBO 60V
61	SDR2711	13	N	Si	T060	A	Rad 100T n/Sq Cm;Post Rad hFE 15 At VCE(S)2.0V,lc 3.0A;lc max 10A;VCBO 60V
62	PT12	14	N-PL	Si	T046	A	Press. 1.0psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
63	PT22	14	N-PL	Si	T046	A	Press. 2.0psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
64	PT52	14	N-PL	Si	T046	A	Press. 5.0psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
65	PT102	14	N-PL	Si	T046	A	Press. 10psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
66	PT152	14	N-PL	Si	T046	A	Press. 15psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
67	PT202	14	N-PL	Si	T046	A	Press. 20psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
68	PT-H2	14	N-PL	Si	T046	A	Press. .500psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
69	PT-L2	14	N-PL	Si	T046	A	Press. .100psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
70	PT-M2	14	N-PL	Si	T046	A	Press. .250psid nom;Tc ±150mV/°C;hFE 10 nom;BVCEO 120V;tr 10us.
71	M22P2	15	N-PE	Si	C2a	T	BVCEO-25V;BVCEO-18V;BVEBO-5.0V;lc-100mA;hFE-70min at lc 2.0mA and VCE 4.5V.
72	M22P3	15	N-PE	Si	C2a	T	BVCEO-25V;BVCEO-18V;BVEBO-5.0V;lc-100mA;hFE-110min at lc 2.0mA and VCE 4.5V.
73	M22P4	15	N-PE	Si	C2a	T	BVCEO-25V;BVCEO-18V;BVEBO-5.0V;lc-100mA;hFE-150min at lc 2.0mA and VCE 4.5V.
74	M23P-X504	15	N-PE	Si	C9	T	2N2219-22 chips.
75	M24P-X502	15	N-PE	Si	C2a	T	2N2714 chip.
76	M26P-X504	15	N-PE	Si	C3a	T	2N2484 chip.
77	M26P-X505	15	N-PE	Si	C3a	T	2N930 chip.
78	M26P-X516	15	N-PE	Si	C3a	T	2N3859 chip.
79	M26P-X517	15	N-PE	Si	C3a	T	2N5232 chip.
80	M26P-X531	15	N-PE	Si	C3a	T	2N929 chip.
81	M26P-X558	15	N-PE	Si	C3a	T	2N5172 chip.
82	M26P-X580	15	N-PE	Si	C3a	T	2N3860 chip.
83	M28P-X507	15	N-PE	Si	C3a	T	2N3855A chip.
84	M28P-X508	15	N-PE	Si	C3a	T	2N3856A chip.
85	M32P-X503	15	N-PE	Si	C10	T	2N3414 chip.
86	M32P-X506	15	N-PE	Si	C10	T	2N3416 chip.
87	M32P-X508	15	N-PE	Si	C10	T	2N3417 chip.
88	M32P-X509	15	N-PE	Si	C10	T	2N3415 chip.
89	M63P-X503	15	N-PE	Si	C11	T	2N918 chip.
90	M67P-X504	15	N-PE	Si	C9	T	2N2905-07 chips.
91	M73P1	15	N-PE	Si	C12	T	Darlington chip;BVCEO-18V;BVEBO-12V;hFE-3.0k at lc-2.0mA and VCE-5.0V.
92	M73P-X502	15	N-PE	Si	C12	T	2N5306 Darlington chip.
93	M82P-X500	15	N-PE	Si	C13	T	2N708 chip.
94	THC4004	15	N-PEΔ	Si	C20	T	BVCE 60V;BVCEO 45V;BVEBO 5.0V;lc 1.0A;hFE 50-150 at IC 100mA
95	THC4005	15	N-PEΔ	Si	C20	T	BVCE 60V;BVCEO 45V;BVEBO 5.0V;lc 1.0A;hFE 120-360 at IC 100mA
96	THC40D10	15	N-PE	Si	C20	T	BVCE 90V;BVCEO 75V;BVEBO 5.0V;lc 1.0A;hFE 50-150 at IC 100mA
97	THC40D11	15	N-PE	Si	C20	T	BVCE 90V;BVCEO 75V;BVEBO 5.0V;lc 1.0A;hFE 120-360 at IC 100mA
98	THC95	15	P-PEΔ	Si	C7	GP	BVCEO 50V;BVCEO 50V;BVEBO 50V;lc 100mA max;hFE 20 min At IC 3mA And VCE 500mV
99	THC930	15	N-PE	Si	C3	T	BVCEO 45V;BVCEO 45V;BVEBO 5.0V;lc 100mA max;hFE 100 min At IC 10uA And VCE 5V
100	THC2192	15	N-PEΔ	Si	C6	T	BVCEO 60V;BVCEO 40V;BVEBO 5.0V;lc 1.0A max;hFE 100 min At IC 150mA And VCE 10V
101	THC2221	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 30V;BVEBO 5.0V;lc 800mA max;hFE 40 min At IC 150mA And VCE 10V
102	THC2221A	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 40V;BVEBO 6.0V;lc 800mA max;hFE 40 min At IC 150mA And VCE 10V
103	THC2222	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 30V;BVEBO 5.0V;lc 800mA max;hFE 100 min At IC 150mA And VCE 10V
104	THC2222A	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 40V;BVEBO 6.0V;lc 800mA max;hFE 100 min At IC 150mA And VCE 10V
105	THC2484	15	N-PE	Si	C3	T	BVCEO 60V;BVCEO 60V;BVEBO 6.0V;lc 800mA max;hFE 100 min At IC 10uA And VCE 5V
106	THC2906	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 40V;BVEBO 5.0V;lc 800mA max;hFE 40 min At IC 150mA And VCE 10V
107	THC2906A	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 60V;BVEBO 5.0V;lc 800mA max;hFE 40 min At IC 150mA And VCE 10V
108	THC2907	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 40V;BVEBO 5.0V;lc 800mA max;hFE 100 min At IC 150mA And VCE 10V
109	THC2907A	15	N-PEΔ	Si	C1	T	BVCEO 60V;BVCEO 60V;BVEBO 5.0V;lc 800mA max;hFE 100 min At IC 150mA And VCE 10V
110	THC2926	15	N-PE	Si	C2	T	BVCEO 18V;BVCEO 18V;BVEBO 5.0V;lc 200mA max;hFE 35 min At IC 2.0mA And VCE 10V

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY		M DWG #	L C	DESCRIPTION
		U S E	STRUC- TURE			
1#	2SC1564*	17	N-PE	Si T129a	Ge	Pd 40W max;Po 30W at VCC 28V,freq 700MHz,Pin 10W,Cob 23pf at 20V
2#	2SC1592*	17	N-PE	Si T136	S	VHF/UHF Wide Band Ampl;(S21E)2 8.0dB,Ga(max) 12dB at 1.0GHz,Vce 10V,Ic 50mA
3#	2SC1593*	17	N-PE	Si T136	S	VHF/UHF Wide Band Ampl;(S21E)2 7.0dB at 1.0GHz,Vce 10V,Ic 50mA
4#	2SC1594*	17	N-PE	Si T136	S	VHF/UHF Wide Band Ampl;(S21E)2 4.0dB,Ga(max) 11dB at 1.0GHz,Vce 10V,Ic 100mA
5#	2SC1595*	17	N-PE	Si T136	S	Microwave Pwr Ampl;Po 33dBm Class C for Pi 29.5dBm at 2.3GHz,Vcc 18V
6#	2SC1600	17	N-E	Si T046	A0	Microwave Pwr Osc;Posc 28.5dBm at 1.7GHz,Vce 18V,Ga(max) 6.0dB at 1.0GHz
7#	2SC1655*	17	N-PE	Si W18	S	Microwave Ampl/Switch;Ga(max)10dB,(S21E)2 9.5dB at 2.0GHz,Vce 6.0V,Ic 10mA
8#	2SC1655A*	17	N-PE	Si W18	S	Lo Noise UHF Ampl,NF 3.0dB max at 500MHz,Vce 6.0V,Ic 5.0mA
9#	2SC1656*	17	N-PE	Si W18	S	Microwave Ampl/Switch;Ga(max) 10dB,(S21E)2 9.5dB at 2.0GHz,Vce 6.0V,Ic 10mA
10#	2SC1657*	17	N-PE	Si W108	QM	Dual Type 2SC1655,hFE1/hFE2 .60min,1.0max at Vce 3.0V,Ic 10mA
11#	2SC1658*	17	N-PE	Si W108	QM	Dual Type 2SC1656,hFE1/hFE2 .60min,1.0max at Vce 3.0V,Ic 10mA
12#	2SC1659*	17	N-PE	Si W116	S	Microwave Ampl/Switch;Ga(max) 15dB,(S21E)2 13dB at 1.0GHz,Vce 6.0V,Ic 30mA
13#	2SC1660*	17	N-PE	Si W116	S	Microwave Ampl/Switch;Ga(max) 15dB,(S21E)2 13dB at 1.0GHz,Vce 6.0V,Ic 30mA
14#	2SC1661*	17	N-PE	Si T140	QM	Dual Type 2SC1659,hFE1/hFE2 .60min,1.0max at Vce 5.0V,Ic 30mA
15#	2SC1662*	17	N-PE	Si W108	QM	Dual Type 2SC1660,hFE1/hFE2 .60min,1.0max at Vce 5.0V,Ic 30mA
16#	2SC1673*	17	N-PE	Si T136	S	Hi Freq Pwr Ampl in Stripline Pkg W/Isolated Stud;Ga(max)5.0dB at 2.0GHz,10V,100mA
17#	2SC1710*	17	N-PEΔ	Si T130	V	For HF Amp,CML Switching;Pd 1.0W;Ccb 800ff at VCB 6.0V;ft 7.0GHz at VCE 6.0V,Ic 60mA
18#	2SC1711A*	17	N-PE	Si W82	V	Pd 200mW,NF 2.5dB at VCE 8.0V,Ic 5.0mA,freq 2.0GHz;Ga 14.5dB at 2.0GHz
19#	2SC1712*	17	N-PEΔ	Si W82	V	For HF Amp,CML Switching;Pd 200mW;Ccb 300ff at 6.0V;Ccb 12dB at 2.0GHz
20#	2SC1713*	17	N-PEΔ	Si W84	QE	Twin for CML Switch,Diff Amp;hFE1/2 .600 min;VBE(1-2)20mV max
21#	2SC1714*	17	N-PEΔ	Si W85	QF	Twin for CML Switch,Diff Amp;hFE1/2 .600 min;VBE(1-2)20mV max
22#	2SC1715*	17	N-PEΔ	Si W85	QG	Twin for CML Switch,Diff Amp;hFE1/2 .600 min;VBE(1-2)20mV max
23#	2SC1716*	17	N-PEΔ	Si W85	QH	Twin for CML Switch,Diff Amp;hFE1/2 .600 min;VBE(1-2)20mV max
24#	2SC1731*	17	N-PE	Si W109	RE	Dual Type 2SC1090 for Diff Ampl and UHF Switch;hFE1/hFE2 .80min,1.0max
25#	2SC1732*	17	N-PE	Si W109	RE	Dual Type 2SC1458 for Diff Ampl and UHF Switch;hFE1/hFE2 .80min,1.0max
26#	2SC1733*	17	N-PE	Si R120	RE	Dual Type 2SC1275 for Diff Ampl and UHF Switch;hFE1/hFE2 .80min,1.0max
27#	2SC1791*	17	N-PE	Si T59d	S	Microwave Class A,AB Power Ampl;Po 6.0W typ at 1.0GHz,Pi 2.0W,Vcc 18V
28#	2SC1792*	17	N-PE	Si T59d	S	Microwave Class A,AB Power Ampl;Po 10W typ at 1.0GHz,Pi 4.0W,Vcc 18V
29#	2SC1797*	17	N-PE	Si W77	F	Microwave Power Ampl;Po 1.6W typ at 2.0GHz,Pi .20W,Vcc 28V
30#	2SC1798*	17	N-PE	Si W77	F	Microwave Power Ampl;Po 3.1W typ at 2.0GHz,Pi .50W,Vcc 28V
31#	2SC1799*	17	N-PE	Si W77	F	Microwave Power Ampl;Po 6.3W typ at 2.0GHz,Pi 1.0W,Vcc 28V
32#	2SC1800*	17	N-PE	Si W77	F	Microwave Power Ampl;Po 10W min at 2.0GHz,Pi 3.2W,Vcc 28V
33#	2SC1803*	17	N-PE	Si W116	S	VHF to Microwave Linear Ampl in Stripline Pkg;Po 22dBm to typ at 1.5GHz
34#	2SC1820*	17	N-PE	Si T039	A	Pd 3.0W max;Po 1.6W at VCC 18V,freq 175MHz,Pin 50mW;Cob 4.0pf at 20V
35#	2SC1821*	17	N-PE	Si T129a	Ge	Pd 7.0W max;Po 4.0W at VCC 20V,freq 470MHz,Pin 300mW;Cob 4.5pf at 20V
36#	2SC1822*	17	N-PE	Si T129a	Ge	Pd 12W max;Po 7.5W at VCC 28V,freq 470MHz,Pin 1.0W;Cob 7.0pf at 20V
37#	2SC1823*	17	N-PE	Si T129a	Ge	Pd 25W max;Po 15W at VCC 28V,freq 470MHz,Pin 3.0W;Cob 12pf at 20V
38#	2SC1824*	17	N-PE	Si T129a	Ge	Pd 40W max;Po 30W at VCC 28V,freq 470MHz,Pin 7.5W;Cob 23pf at 20V
39#	2SC1825*	17	N-PE	Si W81	V	Pd 75W max;Po 55W at VCC 28V,freq 470MHz,Pin 16W;Cob 45pf at 20V
40#	2SC1924	17	N-PE	Si W109	RA	Dual Type 2SC1090 W/Com Emitter(Same Characteristics as Type 2SC1731)
41#	2SC1925	17	N-PE	Si W109	RE	Dual Type 2SC1090 W/Independent Connections(Same Characteristics as Type 2SC1731)
42#	2SC1926	17	N-PE	Si W109	RA	Dual Type 2SC1275 W/Com Emitter(Same Characteristics as Type 2SC1733)
43#	2SC1927	17	N-PE	Si W109	RE	Dual Type 2SC1275 W/Independent Connections(Same Characteristics as Type 2SC1733)
44#	2SC1930	17	N*	Si W87	V	VCBO 16V;VEBO 3.0V;VCEO 8.0V;IC 30mA;hFE 80 Typ;ft 7.0GHz min;Pc 150mW/Unit
45#	2SC1931	17	N*	Si W84	QM	VCBO 16V;VEBO 3.0V;VCEO 8.0V;IC 30mA;hFE 80 Typ;ft 7.0GHz min;Pc 150mW/Unit
46#	2SC1932	17	N*	Si W85	QP	VCBO 16V;VEBO 3.0V;VCEO 8.0V;IC 30mA;hFE 80 Typ;ft 7.0GHz min;Pc 200mW/Unit
47#	2SC1933	17	N*	Si W84	QM	VCBO 15V;VEBO 3.0V;VCEO 10V;IC 40mA;hFE 80 Typ;ft 5.0GHz min;Pc 200mW/Unit
48#	2SC1934	17	N*	Si T131	QE	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 80mA;hFE 80 Typ;ft 5.0GHz min;Pc 500mW/Unit
49#	2SC1935	17	N*	Si W87	V	VCBO 15V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 5.0GHz min;Pc 250mW
50#	2SC1936	17	N*	Si W84	QM	VCBO 15V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 5.0GHz min;Pc 200mW/Unit
51#	2SC1937	17	N*	Si W87	V	VCBO 15V;VEBO 3.0V;VCEO 10V;IC 70mA;hFE 80 Typ;ft 5.0GHz min;Pc 300mW
52#	2SC1938	17	N*	Si W85	QN	VCBO 15V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 5.0GHz min;Pc 200mW/Unit
53#	2SC1939	17	N*	Si W85	QN	VCBO 15V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 5.0GHz min;Pc 200mW/Unit
54#	2SC1948-1*	17	N-PE	Si W29c	S	Microwave Lo Noise Ampl in Stripline Pkg;NF 3.5dBmax,Gain 8.5dB type at 4.0GHz
55#	2SC1948-2*	17	N-PE	Si W29c	S	Microwave Lo Noise Ampl in Stripline Pkg;NF 4.0dBmax,Gain 8.5dB type at 4.0GHz
56#	2SC1948-5*	17	N-PE	Si W29c	S	Microwave Lo Noise Ampl in Stripline Pkg;NF 2.3dBmax at 1.85GHz
57#	2SC1949*	17	N-PE	Si W116	S	VHF to Microwave Linear Ampl in Stripline Pkg;(S21E)2 2.8dBmin at 1.0GHz
58#	2SC1950	17	N-PE	Si W101	A	Microwave Pwr Ampl/Osc in Stripline Pkg;Osc Po 250mW at 5.0GHz;Vce 11V,Ic 140mA
59#	2SC1952*	17	N-PE	Si T039	A	Microwave Wide Band Ampl;Ga(max) 16dB min at 200MHz,Vce 15V,Ic 50mA
60#	2SC1988*	17	N-PE	Si T072	G	UHF,NF 2.5dB max At VCE 10V;IC 3.0mA;f 500MHz;(S21E)2 15 Typ At IC 20mA
61#	2SC2025	17	N-EA	Si T072	G	VHF,NF 4.0dB max At VCE 5.0V;IC 25mA;f 200MHz;RG 50Ω;Cob 2.0pf max
62#	2SC2026*	17	N-EA	Si T092	C	UHF;VHF;NF 4.0dB max At VCE 10V;IC 3.0mA;f 500MHz;RG 50Ω;Gpe 15dB max
63#	2SC2031	17	N-PE	Si T129a	V	UHF;f470MHz;Po 2.5W;hFE50 Typ;VDC 21V;Pd 7.5W;Cob 5.0pf At VCB 20V
64#	2SC2032	17	N-PE	Si T129a	V	UHF;f470MHz;Po 5.5W;hFE50 Typ;VDC 21V;Pd 12.5W;Cob 8.0pf At VCB 20V
65#	2SC2033	17	N-PE	Si T129a	V	UHF;f470MHz;Po 18W;hFE50 Typ;VDC 21V;Pd 30W;Cob 18pf At VCB 20V
66#	2SC2037*	17	N-EA	Si T092	A	UHF;VHF;NF 4.0dB max At VCE 10V;IC 3.0mA;f 500MHz;RG 50Ω;Gpe 13dB Typ
67#	2SC2044*	17	N-PE	Si W81	V	Pd 65W max;Po 42W at VCC 28V,freq 770MHz,Pin 15W;Cob 37pf at 20V
68#	2SC2065*	17	N-EA	Si T136	S	UHF;VHF;G max 14.5dB Typ At f 500MHz;IM 3-78dB At VCE 10V;IC 80mA;VO 110dBuV
69#	2SC2093*	17	N-PE	Si W101	A0	Microwave Pwr Ampl/Dsc;Posc 22dBm;Po 22dBm(Pi 19dBm) at 5.0GHz;Vce 11V,Ic 100mA
70#	2SC2148*	17	N-PE	Si W100	S	Microwave Lo Noise Ampl;Unity Power Gain Freq 2.9GHz;NF 2.1dB at 500MHz,10V,3.0mA
71#	2SC2149*	17	N-PE	Si W100	S	Microwave Lo Noise Ampl;Unity Power Gain Freq 4.3GHz;NF 2.6dB at 2.0GHz,10V,5.0mA
72#	2SC2150*	17	N-PE	Si W100	S	Microwave Lo Noise Ampl;Unity Power Gain Freq 5.5GHz;NF 4.3dB at 4.0GHz,8.0V,3.0mA
73#	2SK85	17	N-S	GA W117	EX	X Band FET;Ga(max) 11dB,(S21E)2 4.0dB,NF 4.5dB all at 8.0GHz;VDS 3.0V,ID 30mA
74	0912-70	17	N-D	Si		UHF;f 1.2GHz;PO 70W;Power Gain 6.7dB;VDC 43V;Eff 40%;Pt 115W;DF 555mW/C
75	0912-100	17	N-D	Si		UHF;f 1.2GHz;PO 100W;Power Gain 6.0dB;VDC 43V;Eff 40%;Pt 115W;DF 555mW/C
76	0912-200	17	N-D	Si		UHF;f 1.2GHz;PO 100W;Power Gain 4.5dB;VDC 50V;Eff 40%;Pt 250W;DF 1.4W/C
77	2001*	17	N	Si W24	A	RF;PO 1.0W min;Pin 200mW at 2.0GHz;Efficiency 33%;CCB 2.5pF max
78	2002	17	N-D	Si		UHF;f 2.0GHz;PO 2.0W;Power Gain 7dB;VDC 28V;Eff 33%;Pt 8.5W;DF 47mW/C
79	2003*	17	N	Si W24	A	RF;PO 2.5W min;Pin 500mW at 2.0GHz;Efficiency 33%;CCB 5.0pF max
80	2005*	17	N	Si W24	A	RF;PO 5.0W min;Pin 1.0W at 2.0GHz;Efficiency 35%;Cob 7.0pF max
81	2010*	17	N-E	Si W24	A	RF;PO 10W min;Pin 3.0W at 2.0GHz;Efficiency 33%;CCB 11pF max
82	2303	17	N-D	Si		UHF;f 2.3GHz;PO 2.5W;Power Gain 8.5dB;VDC 28V;Eff 47%;Pt 6.0W;DF 33mW/C
83	2305	17	N-D	Si		UHF;f 2.3GHz;PO 5.0W;Power Gain 9.0dB;VDC 28V;Eff 45%;Pt 12W;DF 66mW/C
84	40953*	17	N-PE	Si T039	G	Class C;PO 1.75W min;Power Gain 12.4db min;Efficiency 50% min;Vcc 15.5V
85	40975*	17	N-PE	Si T039	G	Class C;PO 50mW min;Power Gain 10db min;Collector Current 60mA;Vcc 12.5V
86	40976*	17	N-PE	Si T039	G	Class C;PO 500mW min;Power Gain 10db min;Collector Current 140mA max;Vcc 12.5V
87	41024*	17	N-PE	Si T039	A0	Class B or C;PO 1.0W min at 1.0GHz;Efficiency 35% min;Cob 3.0pf max
88	41038*	17	N-PE	Si T046	A0	PO 750mW min at 1.88 GHz;Efficiency 20% min;Cob 4.0pf max
89#	AMPFAC1720-20	17		Si W112		PO 20W min at Pi 4.0W;BVCEO 45V;Ic 3.0A max;Pd 58W;Vcc 24V;Eff 40%
90#	AMPFAC2023-16	17		Si W112		PO 16W min at Pi 4.0W;BVCEO 45V;Ic 3.0A max;Pd 58W;Vcc 24V;Eff 40%
91#	AMPFAC2223-18	17		Si W112		PO 18W min at Pi 4.0W;BVCEO 45V;Ic 3.0A max;Pd 58W;Vcc 24V;Eff 40%
92#	BFQ19*	17	N-PE	Si X166	B	Pt 500mW max;ft 5.0GHz typ;VCBO 20V;VCEO 15V;VEBO 3.0V;hFE 50 typ;NF 3.3dB typ
93#	BFR14B*	17	N	Si W14c	R	NF 1.5dB Typ At 200MHz;Ga 12.5dB At 2.0GHz;hFE 30 min;ft 6.0GHz;VCBO 20V
94	BFR48*	17	N	Si W29	R	Pt 300mW max;BVCEO 20V max;BVCEO 15V max;BVEBO 2.0V;ICBO 50mA max;hFE 50
95#	BFR53*	17	N-PE1	Si X156a	A	Pt 180mW;ft 2.0GHz typ;Power Gain 10.5dB typ;NF 5.0dB max
96#	BFT92*	17	P-PE	Si X156a	A	Pt 180mW;ft 5.0GHz typ;Power Gain 18dB typ;NF 2.7dB typ
97#	BFT93*	17	P-PE	Si X156a	A	Pt 180mW;ft 5.0GHz typ;Power Gain 16.5dB typ;NF 2.4dB typ
98#	BGY22	17		Si W103		UHF/VHF;Po 3.5Wmax;Freq Range 380-512MHz;Oper Volt 15V;Eff 40% min
99#	BGY22A	17		Si W103		UHF/VHF;Po 2.5Wmax;Freq Range 420-480MHz;Oper Volt 12.5V;Eff 40% min
100#	BGY23	17		Si W103		UHF/VHF;Po 9.0Wmax;Freq Range 380-512MHz;Oper Volt 15V;Eff 60% min
101#	BGY23A	17		Si W103		UHF/VHF;Po 7.0Wmax;Freq Range 420-480MHz;Oper Volt 12.5V;Eff 60% min
102#	BLW79	17	N	Si		Po 2.0W at 470MHz;Gp 9.0dB;Vcc 12.5V;Pt 8.5W;Vceo 17V;Ic 1.5A max
103#	BLW80	17	N	Si		Po 4.0W at 470MHz;Gp 8.0dB;Vcc 12.5V;Pt 17W;Vceo 17V;Ic 3.0A max
104#	BLW81	17	N	Si		Po 10W at 470MHz;Gp 6.0dB;Vcc 12.5V;Pt 35W;Vceo 17V;Ic 7.5A max
105#	BLX66*	17	N-PL	Si W78	R	V.H.F./U.H.F.Class B;Freq 470MHz;PO 2.5W min;Eff 65% min
106#	BLX67*	17	N-PL	Si W78	R	V.H.F./U.H.F.Class B;Freq 470MHz;PO 2.5W min;Eff 65% min
107#	C1-122	17	N-D	Si		UHF;f 475MHz;PO 1.0W;Power Gain 10dB;VDC 12.5V;Eff 65%;Pt 5.0W;DF 28mW/C
108	C2M50-28R	17	N-D	Si		UHF;f 400MHz;PO 50W;Power Gain 8.0dB;VDC 28V;Eff 60%;Pt 110W;DF 625mW/C
109	C2M60-28R	17	N-D	Si		UHF;f 400MHz;PO 60W;Power Gain 7.8dB;VDC 28V;Eff 65%;Pt 140W;DF 800mW/C
110	C2M70-28R	17	N-D	Si W65b	S	UHF;Class A,AB,B,C;Pout 70W min;Pin 10W max;Freq rng 200-500MHz;Pt 140W;Eff 60% typ

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	STRUCTURE	MOUNT	DWG #	L C O D E	DESCRIPTION
1#	FJ401E	17	000000		W18b	S	NF 3.5dB Typ At 4.0GHz;Ga 8.5dB Typ At 4.0GHz;hFE 80 Typ;ft 5.5GHz min;Pd 200mW
2#	FJ401F	17	000000		W18a	S	NF 3.5dB Typ At 4.0GHz;Ga 8.5dB Typ At 4.0GHz;hFE 80 Typ;ft 5.5GHz min;Pd 150mW
3#	FJ402E1	17	000000		W18b	S	NF 3.0dB Typ At 4.0GHz;Ga 11dB Typ At 4.0GHz;hFE 80 Typ;ft 5.0GHz min;Pd 200mW
4#	FJ402E	17	000000		W18b	S	NF 3.5dB Typ At 4.0GHz;Ga 11dB Typ At 4.0GHz;hFE 80 Typ;ft 5.0GHz min;Pd 200mW
5#	FJ402F1	17	000000		W18a	S	NF 3.0dB Typ At 4.0GHz;Ga 11dB Typ At 4.0GHz;hFE 80 Typ;ft 5.0GHz min;Pd 150mW
6#	FJ402F	17	000000		W18a	S	NF 3.5dB Typ At 4.0GHz;Ga 11dB Typ At 4.0GHz;hFE 80 Typ;ft 5.0GHz min;Pd 150mW
7#	FJ901D	17	000000		W87	V	VCBO 16V;VEBO 3.0V;VCEO 8.0V;IC 30mA;hFE 80 Typ;ft 6.5GHz min;Pd 250mW
8#	FJ901E	17	000000		W18b	S	VCBO 16V;VEBO 3.0V;VCEO 8.0V;IC 30mA;hFE 80 Typ;ft 6.5GHz min;Pd 200mW
9#	FJ901F	17	000000		W18a	S	VCBO 16V;VEBO 3.0V;VCEO 8.0V;IC 30mA;hFE 80 Typ;ft 6.5GHz min;Pd 200mW
10#	FJ901M	17	N**		W84	QM	ΔVBE 20mV max;hFE1/2 0.6 min;ft 6.5GHz min;VCEO 8.0V;IC 30mA;PT 250mW
11#	FJ901N	17	N**		W85	QJ	ΔVBE 20mV max;hFE1/2 0.6 min;ft 6.5GHz min;VCEO 8.0V;IC 30mA;PT 250mW
12#	FJ901P	17	N**		W85	QF	ΔVBE 20mV max;hFE1/2 0.6 min;ft 6.5GHz min;VCEO 8.0V;IC 30mA;PT 250mW
13#	FJ901R	17	N**		W85	QN	ΔVBE 20mV max;hFE1/2 0.6 min;ft 6.5GHz min;VCEO 8.0V;IC 30mA;PT 250mW
14#	FJ901S	17	N**		W85	QP	ΔVBE 20mV max;hFE1/2 0.6 min;ft 6.5GHz min;VCEO 8.0V;IC 30mA;PT 250mW
15#	FJ902D	17	000000		W87	V	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 4.0GHz min;Pd 250mW
16#	FJ902E	17	000000		W18b	S	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 4.0GHz min;Pd 200mW
17#	FJ902F	17	000000		W18a	S	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 30mA;hFE 80 Typ;ft 4.0GHz min;Pd 150mW
18#	FJ902M	17	N**		W84	QM	ΔVBE 20mV max;hFE1/2 0.6 min;ft 4.0GHz min;VCEO 10V;IC 30mA;PT 250mW
19#	FJ902N	17	N**		W85	QJ	ΔVBE 20mV max;hFE1/2 0.6 min;ft 4.0GHz min;VCEO 10V;IC 30mA;PT 250mW
20#	FJ902P	17	N**		W85	QF	ΔVBE 20mV max;hFE1/2 0.6 min;ft 4.0GHz min;VCEO 10V;IC 30mA;PT 250mW
21#	FJ902R	17	N**		W85	QN	ΔVBE 20mV max;hFE1/2 0.6 min;ft 4.0GHz min;VCEO 10V;IC 30mA;PT 250mW
22#	FJ902S	17	N**		W85	QP	ΔVBE 20mV max;hFE1/2 0.6 min;ft 4.0GHz min;VCEO 10V;IC 30mA;PT 250mW
23#	FJ905G	17	000000		T88b	R	VCBO 45V;VEBO 3.0V;VCEO 30V;IC 300mA;hFE 80 Typ;ft 1.5GHz min;Pd 5.0W;Ga 7dB
24#	FJ951D	17	000000		W87	V	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 90mA;hFE 80 Typ;ft 4.0GHz;Pd 300mW;Ga 8dB max
25#	FJ951H	17	000000		T130	V	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 90mA;hFE 80 Typ;ft 4.0GHz;Pd 2.0W;Ga 8dB max
26#	FJ952H	17	000000		T130	V	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 130mA;hFE 80 Typ;ft 5.5GHz min;Pd 2.0W;Ga 9.5dB
27#	FJ2001B18	17	000000		W86	C	VCC 18V;Freq 2.0GHz;Pout 1.2W Typ;VCBO 35V;VEBO 3.5V;VCEO 20V;IC 600mA
28#	FJ2001E18	17	000000		W86	A	VCC 18V;Freq 2.0GHz;Pout 1.5W Typ;VCBO 35V;VEBO 3.5V;VCEO 20V;IC 600mA
29#	FJ2003B18	17	000000		W86	C	VCC 18V;Freq 2.0GHz;Pout 3.8W Typ;VCBO 35V;VEBO 3.5V;VCEO 20V;IC 1.5A
30#	FJ2003E18	17	000000		W86	A	VCC 18V;Freq 2.0GHz;Pout 3.3W Typ;VCBO 35V;VEBO 3.5V;VCEO 20V;IC 1.5A
31#	FJ2007B18	17	000000		W86	C	VCC 24V;Freq 2.0GHz;Pout 7.5W Typ;VCBO 35V;VEBO 3.5V;VCEO 20V;IC 3.0A
32#	FJ2010B24	17	000000		W86	C	VCC 24V;Freq 2.0GHz;Pout 12W Typ;VCBO 35V;VEBO 3.5V;VCEO 20V;IC 3.0A
33#	FT1317	17	000000		R176j	G	VCBO 30V;VEBO 3.0V;VCEO 18V;IC 150mA;hFE 80 Typ;ft 3.5GHz Typ;Pd 800mW
34#	FT1717R	17	000000		W82	V	VCBO 20V;VEBO 3.0V;VCEO 13V;IC 20mA;hFE 80 Typ;ft 7.0GHz Typ;Pd 200mW
35#	FT1720AR*	17	N-P-E	Si	W82	V	Pd 200mW;NF 2.0dB at VCE 6.0V;IC 5.0mA;freq 2.0GHz;Ga 12.5dB at 2.0GHz.
36#	FT1720R*	17	N-P-E	Si	W82	V	Pd 200mW;NF 3.0dB at VCE 6.0V;IC 5.0mA;freq 2.0GHz;Ga 12.5dB at 2.0GHz.
37#	FT1727AR*	17	N-P-E	Si	W18a	S	Pd 150mW;NF 3.0dB at VCE 8.0V;IC 3.0mA;freq 4.0GHz;Ga 11dB at 4.0GHz.
38#	FT1727R*	17	N-P-E	Si	W18a	S	Pd 150mW;NF 4.0dB at VCE 8.0V;IC 3.0mA;freq 4.0GHz;Ga 11dB at 4.0GHz.
39#	FT3716*	17	N-P-E	Si	W18a	S	Pd 150mW;for HF Low-Noise Amp;Ccb 900pf at 10V;ft 3.0GHz at VCE 6.0V;IC 10mA.
40#	FT3717*	17	N-P-E	Si	W18a	S	Pd 150mW;for HF Low-Noise Amp;Ccb 300pf at 6.0V;Ga 12dB at 2.0GHz.
41#	FT3718*	17	N-P-E	Si	W18a	S	Pd 150mW;NF 3.0dB at VCE 8.0V;IC 5.0mA;freq 2.0GHz;Ga 14.5dB at 2.0GHz.
42#	FT3719	17	000000		W18a	S	VCBO 20V;VEBO 3.0V;VCEO 10V;IC 70mA;hFE 80 Typ;ft 5.0GHz Typ;Pd 150mW
43#	FT5720R*	17	N-PEA	Si	W84	QE	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
44#	FT5726CR*	17	N-PEA	Si	W85	QF	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
45#	FT5727CR*	17	N-PEA	Si	W85	QG	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
46#	FT5728CR*	17	N-PEA	Si	W85	QH	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
47#	FT5735R*	17	N-PEA	Si	T131	QE	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
48#	FT5737R*	17	N-PEA	Si	W85	QH	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
49#	FT5738R*	17	N-PEA	Si	W85	QG	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
50#	FT5739R*	17	N-PEA	Si	W85	QF	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
51#	FT5740R*	17	N-PEA	Si	W85	QJ	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
52#	FT6741R*	17	N-PEA	Si	W84	QE	Twin for CML Switch;Diff Amp;hFE1/2 600 min;VBE(1-2)20mV max.
53	FT129A*	17	N-DPL	Si	T092	E	Pd 500mW;ft 1.0GHz At 100MHz;VCBO 35V;CB Osc;IC 30mA max
54#	GAT1	17	000000		GA T072	EW	FET;f 1.0GHz;Power Gain 10dB Typ;NF 5.0dB max;BVDS 12V;VP 10V At VDS 5.0V;Pt 300mW
55#	GAT1/010	17	000000		GA T072	EW	FET;f 1.0GHz;Power Gain 12dB Typ;NF 3.0dB max;BVDS 12V;VP 10V At VDS 5.0V;Pt 300mW
56#	GAT2	17	000000		GA W107	DA	FET;f 3.0GHz;Power Gain 8.0dB Typ;NF 5.0dB max;BVDS 6.0V;VP 10V At VDS 5.0V;Pt 300mW
57#	GAT2/010	17	000000		GA W107	DA	FET;f 3.0GHz;Power Gain 10dB Typ;NF 4.0dB max;BVDS 6.0V;VP 10V At VDS 5.0V;Pt 300mW
58#	GAT3	17	000000		GA W107	DA	FET;f 8.0GHz;Power Gain 6.0dB Typ;NF 6.0dB max;BVDS 6.0V;VP 10V At VDS 5.0V;Pt 300mW
59#	GAT3/010	17	000000		GA W107	DA	FET;f 8.0GHz;Power Gain 6.0dB Typ;NF 4.0dB max;BVDS 6.0V;VP 10V At VDS 5.0V;Pt 300mW
60#	GAT4	17	000000		GA T138	DA	FET;f 12GHz;Power Gain 8.0dB Typ;NF 4.0dB max;BVDS 6.0V;VP 10V At VDS 5.0V;Pt 300mW
61#	GAT5	17	000000		GA T138	DA	FET;f 10GHz;Power Gain 10dB Typ;NF 3.5dB max;BVDS 6.0V;VP 10V At VDS 5.0V;Pt 300mW
62#	GT383A	17	N-PL	Ge	W99	S	Pd 25mW max;ft 2.4GHz min;VCB 5.0V max;VCE 10mA max;hFE 15-25 At VC 3.2V;IE 5.0mA
63#	GT383B	17	N-PL	Ge	W99	S	Pd 25mW max;ft 1.5GHz min;VCB 5.0V max;VCE 5.0V max;hFE 10-25 At VC 3.2V;IE 5.0mA
64#	GT383V	17	N-PL	Ge	W99	S	Pd 25mW max;ft 3.6GHz min;VCB 5.0V max;VCE 5.0V max;hFE 15-25 At VC 3.2V;IE 5.0mA
65	HFT1000	17	000000		GA		FET Chip;NF 2.9dB Typ At 8.0GHz;Ga 8.9dB Typ At 8.0GHz;VDS 5.0V
66	HP35812E*	17	000000		T125		Pt 1.6W max;PO 28dbm typ at 2.0GHz;Tuned Gain at VCE 15V;IC 100mA;6db min.
67#	HP35820A*	17	000000		Si C21	AD	Unpackaged Chip of HP35820 Series;Usable to 5GHz;hFE 15-125 at Vc 15V;IC 15mA
68#	HP35821B*	17	000000		Si W17	S	Common Base Stripline Pkg;(S21E)2 5.1dB typ at Vc 15V;IC 15mA
69#	HP35821E*	17	000000		Si W17	S	Pt 700mW;Ga(max) 6.0dB;(S21E)2 1dB;All at f 4GHz;VCE 15V;IC 15mA;F min 2.3dB.
70	HP35822E*	17	000000		Si W8a	V	Pt 375mW;Ga(max) 6.0dB;(S21E)2 1dB;All at f 4GHz;VCE 15V;IC 15mA;F min 2.3dB.
71#	HP35824A*	17	000000		Si T072	G	General Purpose 100MHz to 2.0GHz Ampl/Osc;NF 3dB typ at 1.0GHz;Vc 10V;IC 5mA
72	HP35826E*	17	000000		Si W26a	V	Pt 700mW;Ga(MAX)6dB;(S21E)2 1dB;All at f 4GHz;VCE 15V;IC 15mA;F min 2.3dB.
73#	HP35827B*	17	000000		Si W32	A	Common Base Cox Pkg;Po 100mW Typ;(S21B)2 4.3dB both at 2.0GHz;Vc 20V;IC 35mA
74#	HP35827E*	17	000000		Si W32	C	Pt 700mW;Ga(max) 6dB;(S21E)2 1dB;All at f 4GHz;VCE 15V;IC 15mA
75#	HP35828E*	17	000000		Si W26b	V	Common Emitter Tuned Ampl;(S21E)2 8dB;Ga(max) 14dB both at 2.0GHz;Vc 15V;IC 15mA
76#	HP35829E*	17	000000		Si W36	V	Common Emitter Tuned Ampl;(S21E)2 8.8dB;Ga(max) 12dB both at 2.0GHz;Vc 15V;IC 15mA
77#	HP35831BOpt005*	17	000000		Si W17	AD	Linear Power Ampl;Common Base Stripline Pkg;Pt 1.6W;(S21B)2 4.0dB at Vc18V;IC60mA
78	HP35831EOpt005*	17	000000		Si W17	S	Pt 700mW;Ga(max) 8dB;(S21E)2 4dB;All at f 2.0GHz;VCE 18V;IC 60mA
79#	HP35850A*	17	000000		Si C23	S	Unpackaged Chip of HP35850 Series;Linear Power Transistor;hFE 15-125 at Vc15V;IC100mA
80#	HP35853B*	17	000000		Si W16	E	Common Base Grounded Bar Pkg;Class C Pwr Ampl/Osc Applications;Pt 2.5W
81	HP35853E	17	000000		Si W16	F	Pt 2.5W;Ga(max) 8dB;(S21E)2 3.3dB;All at f 2.0GHz;VCE 15V;IC 100mA
82#	HP35854B*	17	000000		Si T112	F	Common Base Grounded Stud Pkg;Class C Pwr Ampl/Osc Applications;Pt 2.5W
83	HP35854E	17	000000		Si T112	F	Pt 2.5W;Ga(max) 8dB;(S21E)2 3.3dB;All at f 2.0GHz;VCE 15V;IC 100mA
84	HP35858E*	17	000000		Si W36	V	Pt 1.6W max;PO 28dbm typ at 2.0GHz;Tuned Gain at VCE 15V;IC 100mA;6db min.
85#	HP35860A*	17	000000		Si C22	S	Unpackaged Chip of HP35860 Series;Low Noise Transistor;hFE 20-200 at Vc 10V;IC 10mA
86#	HP35861E*	17	000000		Si W17	S	Pt 300mW;(S21E)2 9.5dB at VCE 10V;IC 10mA;f 2.0GHz;F min 3.3dB.
87	HP35861EOpt100*	17	000000		Si W17	S	Pt 300mW;(S21E)2 9.5dB at VCE 10V;IC 10mA;f 2.0GHz;F min 2.5dB.
88	HP35862E*	17	000000		Si W8a	V	Pt 300mW;(S21E)2 9.5dB at VCE 10V;IC 10mA;f 2.0GHz;F min 3.3dB.
89	HP35862EOpt100*	17	000000		Si W8a	V	Pt 300mW;(S21E)2 9.5dB at VCE 10V;IC 10mA;f 2.0GHz;F min 2.5dB.
90	HP35866E*	17	000000		Si W26a	V	Pt 300mW;(S21E)2 9.5dB;Ga(max) 14dB all at f 2.0GHz;VCE 10V;IC 10mA;F min 3.3dB.
91	HP35866EOpt100*	17	000000		Si W26a	V	Pt 300mW;(S21E)2 9.5dB;Ga(max) 14dB all at f 2.0GHz;VCE 10V;IC 10mA;F min 2.5dB.
92	HP35867B	17	000000		Si W32	A	VCBO 20V;VEBO 1.5V;VCEO 15V;IC 20mA;hFE 80 Typ;f 8.0GHz;Pd 300mW
93	HP35867E	17	000000		Si W32	C	VCBO 20V;VEBO 1.5V;VCEO 15V;IC 20mA;hFE 80 Typ;f 8.0GHz;Pd 300mW
94	HP35868E*	17	000000		Si W69a	V	Pt 250mW;NF 4.5dB At 4.0GHz;Ga 8.0dB min At 4.0GHz;hFE 20 min
95	HP35868H*	17	000000		Si W69a	V	Pt 250mW;NF 4.5dB At 4.0GHz;Ga 8.0dB min At 4.0GHz;hFE 20 min
96#	HXTR6101*	17	000000		Si W26a	V	Tuned Ampl;Stripline Pkg;Tuned Gain 9.0dB min;Po1db18dBm typ at 4.0GHz;Vc15V;IC25mA
97	HXTR6101*	17	000000		Si W69a	V	Pt 180mW;NF 3.0dB max At 4.0GHz;Ga 8.0dB Typ At 4.0GHz;hFE 50 min
98	HXTR6102	17	000000		Si W26b	V	NF 2.7dB max At 4.0GHz;Ga 9.0dB Type At 4.0GHz;hFE 50 min;VCBO 30V;Pd 180mW
99#	HXTR6103*	17	000000		Si W26a	V	Lo Noise 2.0GHz Ampl;Stripline Pkg;NF 2.2dB max;Gain 11dB min at 2.0GHz;Vc10V;IC3.0mA
100#	HXTR6104*	17	000000		Si W26a	V	Lo Noise 1.5GHz Ampl;Stripline Pkg;NF 1.6dB max;Gain 13dB min at 1.5GHz;Vc10V;IC3.0mA
101#	HXTR61						

14. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	STRUCTURE	MATERIAL	DWG #	LEAD	DESCRIPTION
1	MSC1100*	17	N-E	S	W77	F	Power Output 100W, Power Gain 10db; Cob at 40V 13pF, freq 1.09GHz.
2	MSC1315	17	N	S	T96	F	Class C: Power Output 17W and Power Gain 9.0dB at 1.3GHz; Vcc 28V; Eff 60%
3	MSC3330	17	N	S	W23	F	Class C: Power Output 70W and Power Gain 10dB at 1.3GHz; Vcc 28V; Eff 55%
4	MSC2001*	17	N-E	S	W77	F	Class B and C: PO(Amp) 1.0W and Power Gain 8.0db at 2.0GHz; Vcc 28V; Eff 30%
5	MSC2003*	17	N-E	S	W77	F	Class B and C: PO(Amp) 3.0W and Power Gain 7.0db min at 2.0GHz; Vcc 28V; Eff 30%
6	MSC2005*	17	N-E	S	W77	F	Class B and C: PO(Amp) 5.8W and Power Gain 7.0db min at 2.0GHz; Vcc 28V; Eff 30%
7	MSC2010*	17	N-E	S	W77	F	Class B and C: PO(Amp) 10W min and Power Gain 5.0db min at 2.0GHz; Vcc 28V; Eff 33%
8	MSC2100*	17	N	S	W77	F	Class A: PO 1db 25dbm and Power Gain 12db at 1.0GHz; Vcc 18V; NF 14db; Ip(3) 38.5dBm
9	MSC3000	17	N	S	W23	F	Class A: PO(Amp) 600mW and Power Gain 8.0dB at 3.0GHz; Vcc 28V; Eff 30%
10	MSC3001	17	N	S	W23	F	Class A: PO(Amp) 1.2W and Power Gain 8.0dB at 3.0GHz; Vcc 28V; Eff 32%
11	MSC3003	17	N	S	W23	F	Class A: PO(Amp) 3.0W and Power Gain 6.0dB at 3.0GHz; Vcc 28V; Eff 32%
12	MSC3005	17	N	S	W23	F	Class A: PO(Amp) 5.0W and Power Gain 5.0dB at 3.0GHz; Vcc 28V; Eff 32%
13	MSC4000	17	N	S	W23	F	Class C: PO 500mW and Power Gain 5.0dB at 4.0GHz; Vcc 28V; Eff 25%
14	MSC4001	17	N	S	W23	F	Class C: PO 1.0W and Power Gain 5.0dB at 4.0GHz; Vcc 28V; Eff 25%
15	MSC4003	17	N	S	W23	F	Class C: PO 2.5W and Power Gain 5.0dB at 4.0GHz; Vcc 28V; Eff 30%
16	MSC4005	17	N	S	W23	F	Class C: PO 5.0W and Power Gain 4.0dB at 4.0GHz; Vcc 28V; Eff 30%
17	MSC80040*	17	N	S	T95	R	Class A: PO 1db 25dbm and Power Gain 12db at 1.0GHz; Vcc 18V; NF 14db; Ip(3) 38.5dBm
18	MSC80044*	17	N	S	T95	R	Class A: PO 1db 21.5dbm and Power Gain 10db at 2.0GHz; Vcc 18V; NF 11db; Ip(3) 36dBm
19	MSC80064*	17	N	S	W77	F	Class A: PO 1db 21.5dbm and Power Gain 10db at 2.0GHz; Vcc 18V; NF 11db; Ip(3) 36dBm
20	MSC80069*	17	N-E	S	T95	R	Class B and C: PO(osc) 4.0W and Power Gain (Amp) 6.0db at 1.0GHz; VCC 28V
21	MSC80080*	17	N-E	S	T95	R	Class B and C: PO(osc) 7.5W and Power Gain (Amp) 6.0db at 1.0GHz; VCC 28V
22	MSC80081*	17	N-E	S	T95	R	Class B and C: PO(osc) 13W and Power Gain (Amp) 5.2db at 1.0GHz; VCC 28V
23	MSC80090*	17	N-E	S	T95	R	Class B and C: PO(osc) 13W and Power Gain (Amp) 8.0db at 1.0GHz; VCC 28V
24	MSC80185*	17	N	S	T95	R	Class A: PO 1db 28dbm and Power Gain 8.5db at 2.0GHz; Vcc 18V; NF 12db; Ip(3) 36dBm
25	MSC80186*	17	N	S	T95	R	Class A: PO 1db 30.5dbm and Power Gain 8.0db at 2.0GHz; Vcc 18V; NF 12.5db; Ip(3) 38dBm
26	MSC80187*	17	N	S	T95	R	Class A: PO 1db 31.7dbm and Power Gain 7.0db at 2.0GHz; Vcc 18V; NF 12.5db; Ip(3) 39dBm
27	MSC80195*	17	N	S	W77	F	Class A: PO 1db 28dbm and Power Gain 8.5db at 2.0GHz; Vcc 18V; NF 12db; Ip(3) 36dBm
28	MSC80196*	17	N	S	W77	F	Class A: PO 1db 30.5dbm and Power Gain 8.0db at 2.0GHz; Vcc 18V; NF 12.5db; Ip(3) 38dBm
29	MSC80197*	17	N	S	W77	F	Class A: PO 1db 31.7dbm and Power Gain 7.0db at 2.0GHz; Vcc 18V; NF 12.5db; Ip(3) 39dBm
30	MSC85401	17	N	S	W32a	A	VCCBO 45V; VEB0 3.5V; PO(osc) 150mW Typ; Freq 5.0GHz; Vcc 20V; Eff 12%
31	MSC85402	17	N	S	W32a	C	VCCBO 45V; VEB0 3.5V; PO(osc) 150mW Typ; Freq 5.0GHz; Vcc 20V; Eff 12%
32	MSC85403	17	N	S	W32a	C	VCCBO 45V; VEB0 3.5V; PO(osc) 300mW Typ; Freq 5.0GHz; Vcc 20V; Eff 12%
33	MSC85404	17	N	S	W32a	A	VCCBO 45V; VEB0 3.5V; PO(osc) 500mW Typ; Freq 3.0GHz; Vcc 20V; Eff 20%
34	MSC85405	17	N	S	W32a	C	VCCBO 45V; VEB0 3.5V; PO(osc) 500mW Typ; Freq 3.0GHz; Vcc 20V; Eff 20%
35	MSC85406	17	N	S	W32a	C	VCCBO 45V; VEB0 3.5V; PO(osc) 900mW Typ; Freq 3.0GHz; Vcc 20V; Eff 20%
36	MSC85470	17	N	S	W113	A	VCCBO 55V; VEB0 3.5V; PO(osc) 600mW Typ; Freq 2.0GHz; Vcc 21V; Eff 28%
37	MSC85501	17	N	S	W113	A	VCCBO 45V; VEB0 3.5V; PO(osc) 400mW Typ; Freq 4.3GHz; Vcc 21V; Eff 12%
38	MSC85502	17	N	S	W113	C	VCCBO 45V; VEB0 3.5V; PO(osc) 400mW Typ; Freq 4.3GHz; Vcc 21V; Eff 12%
39	MSC85503	17	N	S	W113	A	VCCBO 45V; VEB0 3.5V; PO(osc) 210mW Typ; Freq 4.3GHz; Vcc 21V; Eff 14%
40	MSC85504	17	N	S	W113	C	VCCBO 45V; VEB0 3.5V; PO(osc) 210mW Typ; Freq 4.3GHz; Vcc 21V; Eff 14%
41	MSC85601	17	N	S	W114a	A	VCCBO 45V; VEB0 3.5V; PO(osc) 150mW Typ; Freq 5.0GHz; Vcc 20V; Eff 10%
42	MSC85602	17	N	S	W114a	C	VCCBO 45V; VEB0 3.5V; PO(osc) 150mW Typ; Freq 5.0GHz; Vcc 20V; Eff 10%
43	MSC85603	17	N	S	W114a	B	VCCBO 45V; VEB0 3.5V; PO(osc) 100mW Typ; Freq 6.0GHz; Vcc 20V; Eff 10%
44	MSC85604	17	N	S	W114a	A	VCCBO 45V; VEB0 3.5V; PO(osc) 300mW Typ; Freq 5.0GHz; Vcc 20V; Eff 10%
45	MSC85605	17	N	S	W114a	C	VCCBO 45V; VEB0 3.5V; PO(osc) 300mW Typ; Freq 5.0GHz; Vcc 20V; Eff 10%
46	MSC85606	17	N	S	W114a	B	VCCBO 45V; VEB0 3.5V; PO(osc) 200mW Typ; Freq 6.0GHz; Vcc 20V; Eff 10%
47	MSC85636	17	N	S	W113	C	VCCBO 55V; VEB0 3.5V; PO(osc) 600mW Typ; Freq 2.0GHz; Vcc 21V; Eff 28%
48	MSC85637	17	N	S	W113	C	VCCBO 50V; VEB0 3.5V; PO(osc) 1.3W Typ; Freq 2.0GHz; Vcc 28V; Eff 28%
49	MSC85653	17	N	S	W113	A	VCCBO 45V; VEB0 3.5V; PO(osc) 600mW Typ; Freq 3.0GHz; Vcc 21V; Eff 20%
50	MSC85654	17	N	S	W113	A	VCCBO 45V; VEB0 3.5V; PO(osc) 1.2W Typ; Freq 3.0GHz; Vcc 21V; Eff 20%
51	MSC85655	17	N	S	W113	C	VCCBO 45V; VEB0 3.5V; PO(osc) 600mW Typ; Freq 3.0GHz; Vcc 21V; Eff 20%
52	MSC85656	17	N	S	W113	C	VCCBO 45V; VEB0 3.5V; PO(osc) 1.2W Typ; Freq 3.0GHz; Vcc 21V; Eff 20%
53	MSC85920	17	N	S	W113	A	VCCBO 50V; VEB0 3.5V; PO(osc) 1.3W Typ; Freq 2.0GHz; Vcc 28V; Eff 28%
54	MSC88002	17	N	GA	W114	DE	VDS 8.5V max; VGS 8.0V; Pt 3.2W; IDSS 200mA min; Vp 6.0V; PO 350mW; X-Band
55	NE02135	17	Δ	S	W100	S	Freq 4.3GHz typ; NF 2.6db typ At 2.0GHz
56	NE57835	17	Δ	S	W100	S	Freq 5.5GHz typ; NF 4.3db typ At 4.0GHz
57	NE73435	17	Δ	S	W100	S	Freq 2.9GHz typ; NF 2.1db typ At 500MHz
58	PGAT100	17	N	GA	T138a	DA	MESFET; VDS 12V max; VGS -8.0V max; Pt 1.4W; IDSS 150mA max; Vp 6.0V; PO 19dBm min at 5GHz
59	PGAT200	17	N	GA	T138a	DA	MESFET; VDS 12V max; VGS -8.0V max; Pt 1.4W; IDSS 160mA max; Vp 6.0V; PO 22dBm min at 5GHz
60	RTC104L	17	N	S			Linear; Po 200mW At 3.0GHz; Gp 7.0dB; VCC 12V; IC 80mA
61	RTC105L	17	N	S			Linear; Po 200mW At 3.0GHz; Gp 7.0dB; VCC 12V; IC 80mA
62	RTC108L	17	N	S			Linear; Po 400mW At 1.0GHz; Gp 10dB; VCC 15V; IC 100mA
63	RTC109L	17	N	S			Linear; Po 400mW At 1.0GHz; Gp 10dB; VCC 15V; IC 100mA
64	RTC110L	17	N	S			Linear; Po 800mW At 1.5GHz; Gp 7.0dB; VCC 15V; IC 120mA
65	RTC111L	17	N	S			Linear; Po 800mW At 1.5GHz; Gp 7.0dB; VCC 15V; IC 120mA
66	RTC112L	17	N	S			Linear; Po 400mW At 1.0GHz; Gp 10dB; VCC 15V; IC 100mA
67	RTC113L	17	N	S			Linear; Po 400mW At 1.0GHz; Gp 10dB; VCC 15V; IC 100mA
68	RTC116L	17	N	S			Linear; Po 400mW At 3.0GHz; Gp 5.0dB; VCC 18V; IC 140mA
69	RTC117L	17	N	S			Linear; Po 400mW At 3.0GHz; Gp 5.0dB; VCC 18V; IC 140mA
70	RTC118L	17	N	S			Linear; Po 300mW At 4.0GHz; Gp 5.5dB; VCC 20V; IC 100mA
71	RTC119L	17	N	S			Linear; Po 300mW At 4.0GHz; Gp 5.5dB; VCC 20V; IC 100mA
72	RTC1010	17	N	S			Po 12W At 1.0GHz; Gp 10dB; VCC 28V; Efficiency 55%
73	RTC1020	17	N	S			Po 20W At 1.0GHz; Gp 8.0dB; VCC 28V; Efficiency 45%
74	RTC1040	17	N	S			Po 40W At 1.0GHz; VCC 45V
75	RTC2001	17	N	S			Po 1.0W At 2.0GHz; Gp 9.0dB; VCC 28V; Efficiency 35%
76	RTC2003	17	N	S			Po 3.0W At 2.0GHz; Gp 8.0dB; VCC 28V; Efficiency 35%
77	RTC2005	17	N	S			Po 6.0W At 2.0GHz; Gp 7.0dB; VCC 28V; Efficiency 45%
78	RTC2010	17	N	S			Po 10W At 2.0GHz; Gp 6.0dB; VCC 28V; Efficiency 40%
79	RTC2020	17	N	S			Po 20W At 2.0GHz; Gp 5.0dB; VCC 28V; Efficiency 40%
80	RTC3000	17	N	S			Po 6.0W At 3.0GHz; Gp 8.0dB; VCC 28V; Efficiency 30%
81	RTC4000	17	N	S			Po 400mW At 4.0GHz; Gp 6.0dB; VCC 28V; Efficiency 27%
82	RTC4001	17	N	S			Po 1.0W At 4.0GHz; Gp 5.5dB; VCC 28V; Efficiency 30%
83	RTC4003	17	N	S			Po 2.8W At 4.0GHz; Gp 4.5dB; VCC 28V; Efficiency 30%
84	SCA0005*	17	N	S	W14b	R	Pt 1.2W; Ga(max) 8.0dB At 1.0GHz; VCE 30V; IC 400mA max; ft 2.2GHz
85	SCA13682*	17	N	S	T039	S	Pt 1.2W; Ga(max) 8.0dB At 1.0GHz; VCE 30V; IC 400mA max; ft 2.2GHz
86	SCA13683*	17	N	S	T072	S	Pt 1.2W; Ga(max) 8.0dB At 1.0GHz; VCE 30V; IC 400mA max; ft 2.2GHz
87	V912A*	17	N-E	S	W18	S	Microwave Lo Noise Ampl; NF 1.5dB max at 500MHz; Vce 10V; Ic 3.0mA
88	V912B*	17	N-E	S	W18	S	Microwave Lo Noise Ampl; NF 2.0dB max at 500MHz; Vce 10V; Ic 3.0mA
89	V912C*	17	N-E	S	W18	S	Microwave Lo Noise Ampl; NF 2.5dB max at 500MHz; Vce 10V; Ic 3.0mA
90	V913A*	17	N-E	S	W18	S	Microwave Low Noise Ampl; NF 4.3dB; (S21E)2 2.0dB at 4.0GHz; Vce 8.0V; Ic 3.0mA
91	V913B*	17	N-E	S	W18	S	Microwave Low Noise Ampl; NF 4.8dB; (S21E)2 2.0dB at 4.0GHz; Vce 8.0V; Ic 3.0mA
92	V913C*	17	N-E	S	W18	S	Microwave Low Noise Ampl; NF 5.5dB; (S21E)2 2.0dB at 4.0GHz; Vce 8.0V; Ic 3.0mA
93	2N2963*	18	P	Ge	T146	A	VHF; Class C; Po 500mW typ; Eff 40% min; Power Gain 5dB min
94	2N2964*	18	P	Ge	T146	A	VHF; Class C; Po 500mW typ; Eff 40% min; Power Gain 6dB min
95	2N2965*	18	P	Ge	T146	A	VHF; Class C; Po 500mW typ; Eff 40% min; Power Gain 5dB min
96	2N3374*	18	N	S	T05	A	VHF; Class C; Power Gain 7.5dB min at VCE 28V; Ic 170mA; fo 130MHz; Pac Out 2.8W; Eff 53%
97	2N5834*	18	P	S	T039	A	VHF; Class C; Power Gain 10dB min at VCC 28V; Ic 180mA; fo 175MHz; fout 175MHz; Po 2.5W
98	2SC1251*	18	N-E	S	T136	S	CATV Wide Band Ampl; Pwr Gain 14dB min; NF 4.0dB max at 200MHz; Vce 15V; Ic 50mA
99	2SC1252*	18	N-E	S	T039	A	CATV Wide Band Ampl; Pwr Gain 15dB min; NF 4.0dB max at 200MHz; Vce 15V; Ic 50mA
100	2SC1253*	18	N-E	S	T039	A	CATV Wide Band Ampl; Pwr Gain 16dB min; NF 3.5dB typ at 200MHz; Vce 15V; Ic 50mA
101	2SC1511*	18	N-E	S	W55b	R	Pow 25W Typ At VCC 18V; f 275MHz; Pin 6.0W; Cob 80pf max
102	2SC1512*	18	N-E	S	W55b	R	Pow 37W Typ At VCC 18V; f 275MHz; Pin 10W; Cob 100pf max
103	2SC2066*	18	N-E	S	T136	S	Pt 7.0W; Pt 32dBm Typ At f 475MHz; VCC 7.0V; Pi 26dBm; Cob 5.5pf max
104	2SC2091*	18	N-DE	S	T0126	B	Pc 125mW; PO 1.8W Typ At VCC 12V; f 27MHz; Pi 35mW; Cob 20pf max; Eff 60% min
105	2SC2092*	18	N-DE	S	Y220b	B	Pc 75mW; PO 5.0W Typ At VCC 12V; f 27MHz; Pi 200mW; Cob 70pf max; Eff 60% min
106	B1-12	18	N-D	S			VHF; f 175MHz; PO 1.0W; Power Gain 12dB; VDC 12.5V; Eff 70%; Pt 5.0W; DF 142mW/C
107	B8-12	18	N-D	S			VHF; f 175MHz; PO 8.0W; Power Gain 10dB; VDC 12.5V; Eff 60%; Pt 25W; DF 142mW/C
108	B15-12	18	N-D	S			VHF; f 175MHz; PO 15W; Power Gain 6.0dB; VDC 12.5V; Eff 60%; Pt 30W; DF 142mW/C
109	B30-12	18	N-D	S			VHF; f 175MHz; PO 30W; Power Gain 5.5dB; VDC 12.5V; Eff 60%; Pt 65W; DF 555mW/C
110	B45-12	18	N-D	S			VHF; f 175MHz; PO 45W; Power Gain 4.5dB; VDC 12.5V; Eff 60%; Pt 90W; DF 526mW/C

14A. TYPES WITH U.S. MILITARY SPECIFICATIONS

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/
2N43A	none	6B AMEND 1	2N464	none	49C AMEND 1	2N696	FSC TEC	99E AMEND 1	2N1022A	GPD 217B	2N1307	TII	126C	
2N44A	none	6B AMEND 1	2N465	none	EL 49C	2N697	FSC RTN TEC	99E AMEND 1	2N1025	STC 78C	2N1308	TII	126C	
2N78A	none	90A USAF	2N466	none	EL 49C	2N700A	none	123A EL	2N1026	TCY 78C	2N1309	TII	126C	
2N117	none	2B	2N467	none	51E	2N702	NSC	153B AMEND 1	2N1039	STC 89D	2N1310	none	136A	
2N118	none	2B		none	AMEND 1			153B AMEND 1	2N1041	GPD 89D	2N1358	none	NAVY 122C	
2N119	none	2B		none	AMEND 1			153B AMEND 1	2N1042	STC 89D	2N1358	none	AMEND 1	
2N123	none	30A USAF		none	AMEND 1			153B AMEND 1	2N1043	STC 137C	2N1411	SPR	133A	
2N128	SPR	98	2N489A	†GESY	EL 75B	2N703	MOTA NSC	153B AMEND 1	2N1044	STC 137C	2N1411	SPR	AMEND 2	
2N158	GPD	24D		†TII	AMEND 1			153B AMEND 1	2N1045	STC 137C	2N1412	none	EL 76C	
	STC	AMEND 1	2N490A	†GESY	AMEND 1	2N705	none	86A AMEND 1	2N1046	none	2N1412	GPD	AMEND 3	
2N167A	none	11C		†TII	AMEND 1	2N706	none	120C AMEND 3	2N1047A	SEN 176B	2N1412A	GPD	NAVY 76C	
2N174A	none	13B	2N491A	†GESY	AMEND 1	2N706	none	120C AMEND 3	2N1048A	SPC 176B	2N1412A	STC	AMEND 3	
2N220	none	1A	2N492A	†TII	AMEND 1	2N706	none	120C AMEND 3	2N1049A	SEN 176B	2N1450M	none	NAVY 222B	
2N240	SPR	25B	2N493A	†TII	AMEND 1	2N708	none	120C AMEND 3	2N1050A	SEN 176B	2N1469	none	USAF 78C	
2N297A	GPD	36C		†TII	AMEND 1			120C AMEND 3	2N1051	STC 176B	2N1479	TCY	207C	
2N326	STC	40B	2N494A	†TII	AMEND 1	2N708	none	120C AMEND 3	2N1050A	SEN 176B	2N1480	RCA	EL	
2N328A	none	110C		†TII	AMEND 1			120C AMEND 3	2N1051	STC 176B	2N1480	STC	207C	
2N329A	TCY	110C	2N497	TEC	74E	2N718A	†MOTA	181C AMEND 5	2N1051	TII 216A	2N1481	STC	EL	
2N331	none	4D	2N498	TII	AMEND 2	2N720A	†MOTA	181C AMEND 5	2N1051	NAVY 163	2N1482	STC	207C	
2N333	TEC	37D	2N498	TII	AMEND 2	2N720A	†MOTA	181C AMEND 5	2N1051	AMEND 2	2N1482	STC	EL	
2N333A	TII	37D	2N499	SPR	AMEND 2	2N744	†MOTA	181C AMEND 5	2N1051	SigC 161	2N1483	STC	180D	
2N335	TEC	37D		none	AMEND 2			181C AMEND 5	2N1051	AMEND 1	2N1483	STC	AMEND 1	
2N335A	TII	37D	2N499A	SPR	AMEND 2	2N757A	none	181C AMEND 5	2N1051	SigC 138C	2N1484	STC	180D	
2N336	TEC	37D		none	AMEND 2	2N759A	none	181C AMEND 5	2N1051	AMEND 1	2N1484	STC	AMEND 1	
2N336A	TII	37D	2N501A	SPR	AMEND 2	2N760A	none	181C AMEND 5	2N1051	AMEND 1	2N1485	STC	180D	
2N337	TEC	69E		none	AMEND 2	2N869A	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1485	STC	AMEND 1	
2N338	TII	69E	2N502A	SPR	AMEND 2	2N910	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1486	STC	180D	
2N341	TEC	31C	2N502B	SPR	AMEND 2	2N911	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1487	STC	AMEND 1	
2N342	TEC	16E	2N526	GESY	AMEND 2	2N912	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1488	STC	180D	
2N342A	TEC	16E	2N537	none	AMEND 2	2N912	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1488	STC	AMEND 1	
2N343	TEC	16E		none	AMEND 2			181C AMEND 5	2N1051	AMEND 1	2N1488	STC	208B	
2N358A	TII	63D	2N539	GPD	AMEND 2	2N914	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1489	STC	208B	
2N384	APX	27E	2N539A	STC	AMEND 2	2N916	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1490	STC	208B	
2N388	TII	65B	2N545	none	AMEND 2	2N916	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1490	STC	208B	
2N389	SEN	173A	2N559	none	AMEND 2	2N918	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1493	STC	247	
2N393	STC	77C	2N559	none	AMEND 2	2N918	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1493	STC	AMEND 3	
2N393A	SPR	AMEND 1	2N560	SSI	AMEND 2	2N918	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1493	STC	EL 170A	
2N396A	none	64D	2N574	none	AMEND 2	2N929	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1499A	STC	EL 125C	
2N398A	none	174B	2N575	none	AMEND 2	2N929	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1500	STC	331A	
2N404	TII	20C	2N575A	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1553A	STC	AMEND 2	
2N404A	TII	AMEND 1	2N598	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1554A	STC	EL 331A	
2N416	none	56B	2N599	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1554A	STC	AMEND 2	
2N417	none	EL 56B	2N600	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
2N422	none	EL 66B	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
2N424	SEN	NAVY 173A	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
2N425	STC	AMEND 1	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
2N425	TII	AMEND 1	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
2N426	none	41B	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
2N427	TII	AMEND 1	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
2N428	TII	AMEND 1	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
2N456B	GPD	217B	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
2N457B	STC	217B	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
2N458B	GPD	217B	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
2N461	STC	45A	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
2N463	GPD	AMEND 2	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
		USAF 70A	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
		AMEND 1	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
		NAVY	2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	AMEND 2	
			2N604	none	AMEND 2	2N930	†MOTA	181C AMEND 5	2N1051	AMEND 1	2N1555A	STC	EL 331A	
			2N604	none	AMEND 2	2N9								

14A. TYPES WITH U.S. MILITARY SPECIFICATIONS

IN TYPE NUMBER
SEQUENCE

TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/
2N3771	1AMC 1RCA 1SOD 1SPC	413 AMEND 3 USAF	2N4405	1MOTA 1TEC	448 AMEND 4	2N5114	1INL 1NSC 1SODI	476 AMEND 2	2N5665	1SOD 1UNI	455 AMEND 2	2N6059	none	501 USAF
2N3772	1AMC 1RCA 1SOD 1SPC	413 AMEND 3 USAF	2N4416A	1NSC 1TII	428 AMEND 1	2N5115	1INL 1NSC 1SODI	476 AMEND 2	2N5666	1SOD 1UNI	455 AMEND 2	2N6060	1TEC	457A EL
2N3791	1MOTA 1TEC 1TII	379B AMEND 3	2N4440	1RCA	317D AMEND 5	2N5116	1INL 1NSC 1SODI	476 AMEND 2	2N5667	1SOD 1UNI	455 AMEND 2	2N6061	1TEC	458A EL
2N3792	1MOTA 1TEC 1TII	379B AMEND 3	2N4449	1MOTA 1TEC	317D AMEND 3	2N5157	1DEL 1SOD 1SPC	371A AMEND 2	2N5671	1RCA	488 AMEND 3	2N6062	1TEC	457A EL
2N3810	1MOTA 1NSC 1RTN 1TII	336A AMEND 2	2N4453	1MOTA 1TEC	283B AMEND 1	2N5237	1AMC 1SOD 1TEC	394 AMEND 1	2N5672	1RCA	488 AMEND 1	2N6063	1TEC	458A EL
2N3811	1MOTA 1NSC	336A AMEND 2	2N4854	1MOTA	421 AMEND 6	2N5238	1SOD	394 AMEND 1	2N5672	1RCA	488 AMEND 1	2N6211	1RCA	461 USAF
2N3821	1MOTA 1SODI 1TII 1TSC 1MOTA 1SODI	375A AMEND 1 USAF	2N4856	1MOTA 1NSC 1SIX 1SODI	385 AMEND 1 USAF	2N5241	1DEL 1SPC	394 AMEND 1	2N5672	1RCA	488 AMEND 1	2N6212	1RCA	461 USAF
2N3822	1MOTA 1SODI 1TII 1TSC 1MOTA 1SODI	375A AMEND 1 USAF	2N4857	1MOTA 1NSC 1SIX 1SODI	385 AMEND 1 USAF	2N5250	1SOD 1TEC	394 AMEND 1	2N5672	1RCA	488 AMEND 1	2N6213	1RCA	461 USAF
2N3823	1MOTA 1NSC 1SODI 1TII 1TSC	375A AMEND 1 USAF	2N4858	1MOTA 1NSC 1SIX 1SODI	385 AMEND 1 USAF	2N5251	1SOD	394 AMEND 1	2N5672	1RCA	488 AMEND 1	2N6213	1RCA	461 USAF
2N3838	1MOTA 1NSC 1SODI 1TII 1TSC none	421 AMEND 6 USAF	2N4858	1MOTA 1NSC 1SIX 1SODI	385 AMEND 1 USAF	2N5302	1MOTA 1TSC 1TEC	456A AMEND 2	2N5683	1MOTA	466 AMEND 3	2N6265	none	479 AMEND 2
2N3846	1TEC	412 AMEND 1	2N4859	1MOTA 1NSC 1SIX 1SODI	385 AMEND 3 USAF	2N5303	1MOTA 1TSC 1TEC	456A AMEND 2	2N5683	1MOTA	466 AMEND 3	2N6265	none	479 AMEND 2
2N3847	none	412 AMEND 1	2N4859	1MOTA 1NSC 1SIX 1SODI	385 AMEND 3 USAF	2N5303	1MOTA 1TSC 1TEC	456A AMEND 2	2N5684	1MOTA	466 AMEND 3	2N6266	none	480 AMEND 1
2N3866	1MOTA 1RCA	398 AMEND 4	2N4860	1MOTA 1NSC 1SIX 1SODI	385 AMEND 3 USAF	2N5304	none	499 USAF	2N5684	1MOTA	466 AMEND 3	2N6266	none	480 AMEND 1
2N3866A	1MOTA 1RCA	398 AMEND 2	2N4861	1MOTA 1NSC 1SIX 1SODI	385 AMEND 3 USAF	2N5415	1RCA 1SOD 1RCA 1SOD	485 USAF 485 USAF	2N5685	1MOTA	464 AMEND 5	2N6267	none	481 AMEND 1
2N3867	1MOTA 1TEC	350A AMEND 2	2N4861	1MOTA 1NSC 1SIX 1SODI	385 AMEND 3 USAF	2N5416	1SOD	485 USAF	2N5685	1MOTA	464 AMEND 5	2N6267	none	481 AMEND 1
2N3868	1MOTA 1TEC	350A AMEND 2	2N4865	1MOTA 1NSC 1SIX 1SODI	380A AMEND 4	2N5431	1MOTA	425 AMEND 1	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3902	1DEL 1MOTA 1SOD 1SPC	371A AMEND 2	2N4930	1MOTA 1TEC	397 AMEND 3	2N5470	1MOTA	482 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3959	1MOTA	399 AMEND 1	2N4931	1MOTA 1TEC	397 AMEND 3	2N5545	1MOTA	482 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3960	1MOTA	399 AMEND 1	2N4931	1MOTA 1TEC	397 AMEND 3	2N5546	1MOTA	482 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3966	1AMC 1SOD 1TEC 1TII 1UNI	374 AMEND 3 USAF	2N4947	none	388 AMEND 3	2N5547	1MOTA	482 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3997	1AMC 1SOD 1TEC 1TII 1UNI	374 AMEND 3 USAF	2N4948	1MOTA 1TII	388 AMEND 3	2N5581	1MOTA	482 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3998	1AMC 1SOD 1TEC 1TII 1UNI	374 AMEND 3 USAF	2N4949	1MOTA	388 AMEND 3	2N5582	1MOTA	482 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N3999	1AMC 1SOD 1TEC 1TII 1UNI	374 AMEND 3 USAF	2N4957	none	426 AMEND 4	2N5660	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4029	1AMC 1SOD 1TEC 1TII 1UNI	374 AMEND 3 USAF	2N5038	1RCA 1STC	439 AMEND 2	2N5661	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4033	1MOTA	512	2N5039	1RCA 1STC	439 AMEND 2	2N5662	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4091	1INL	431	2N5039	1RCA 1STC	439 AMEND 2	2N5662	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4092	1NSC 1INL	USAF 431	2N5071	1RCA 1STC	439 AMEND 2	2N5662	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4093	1NSC 1INL	USAF 431	2N5071	1RCA 1STC	439 AMEND 2	2N5662	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4150	1NSC 1AMC 1GSE 1SOD 1TEC 1UNI	USAF 394 AMEND 1 USAF	2N5109	1RCA	453 AMEND 4	2N5664	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4261	1MOTA 1TEC	511 AMEND 3	2N5109	1RCA	453 AMEND 4	2N5664	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL
2N4399	1MOTA 1TEC	433A AMEND 3	2N5109	1RCA	453 AMEND 4	2N5664	1UNI	454 AMEND 2	2N5686	1MOTA	464 AMEND 5	2N6274	none	514 EL

15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

THE PREFIX LETTERS OF THE OUTLINE DRAWING NUMBERS INDICATE THE FOLLOWING:

- B — MOUNTING TAB
- C — CHIP
- F — MOUNTING FLANGE
- O — OVAL
- R — ROUND
- S — SQUARE
- T — STUD (THREADED)
- TO — JEDEC TYPE
- W — MICROWAVE, STRIPLINE, COAXIAL (NO STUD)
- X — MISCELLANEOUS (Configuration including phototransistor)

Y200/TO200 — JEDEC '200' Family & Military Outlines
(See explanation under NOTES)
ZA — DRAWING REFERENCE INFORMATION

NOTES:

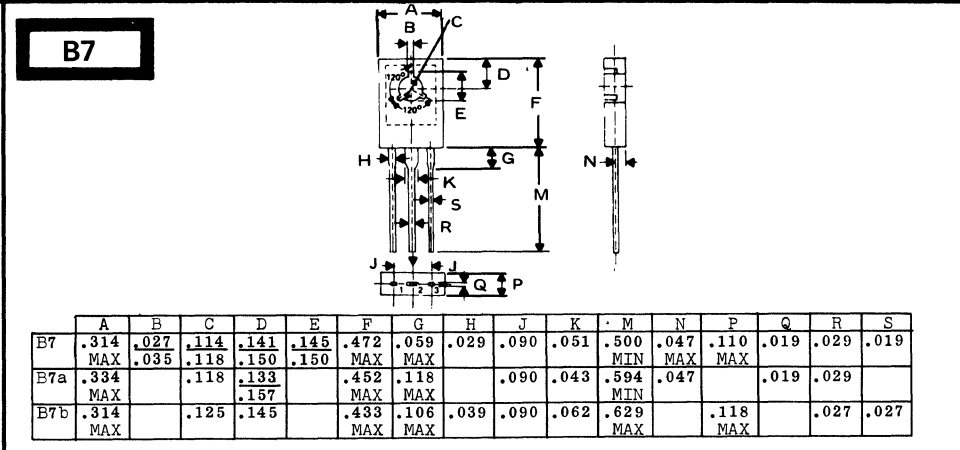
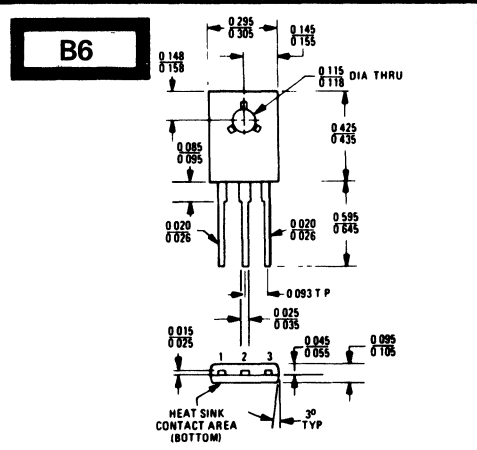
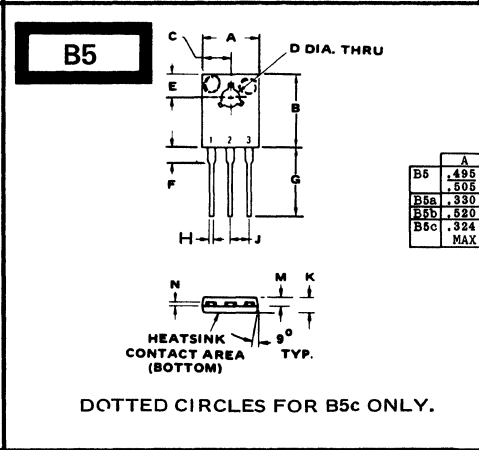
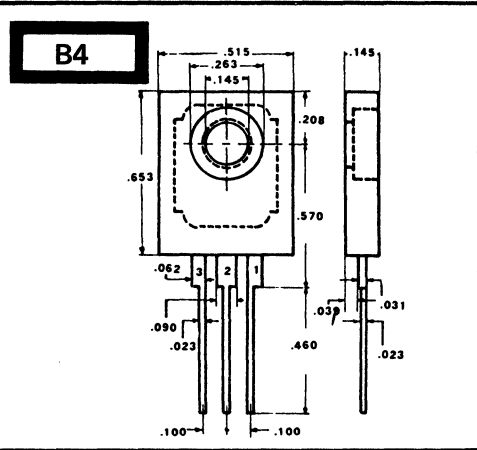
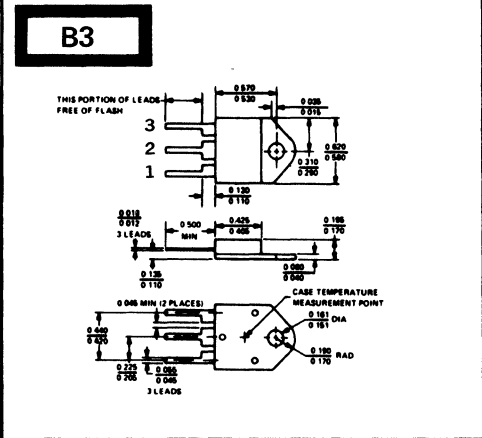
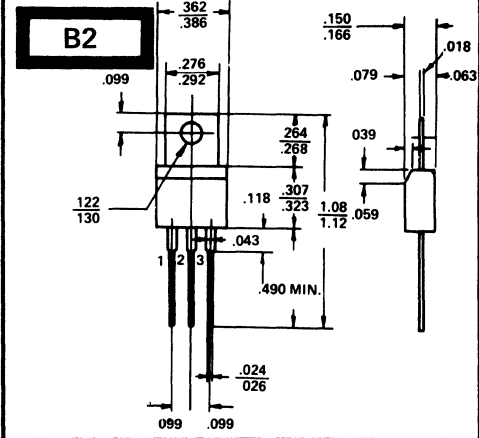
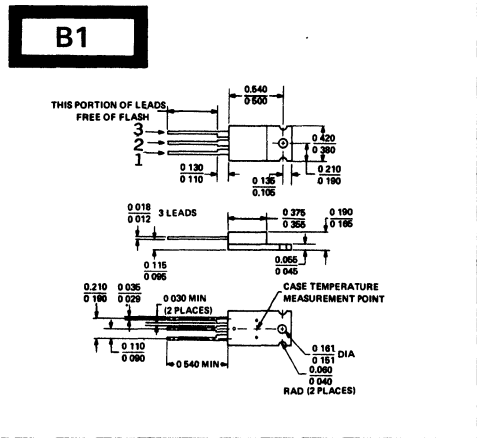
These outline drawings are intended as a guide for the user. They should not be used for construction purposes without first checking with the appropriate manufacturer.

These drawings are referenced in the Technical Sections of this D.A.T.A. BOOK in accordance with information supplied by the manufacturers.

The DO and TO drawings have been reproduced from JEDEC Registration Data Files with the permission of the National Electrical Manufacturer's Association — Electronic Industries Association. JEDEC designations are assigned only to outlines submitted by the JC-11 Committee on Mechanical Standardization. The procedure of assigning and announcing the JEDEC designation constitutes registration.

The TO200 Series (TO 200 and higher) are JEDEC-registered outlines, and are referenced in the technical sections with the prefix TO replaced by Y. Suffices such as AA, AB or MA, MB following the TO Series number indicate dimensional variations of the basic outline. For commercial outlines, the suffices start with AA replaced by a; for military outlines, the suffices start with MA replaced by a.

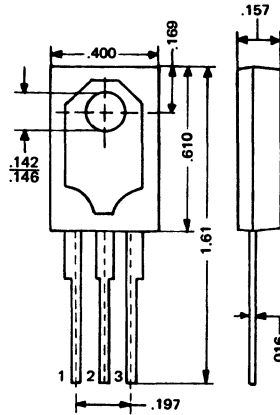
All drawings have circular symmetry unless otherwise indicated.



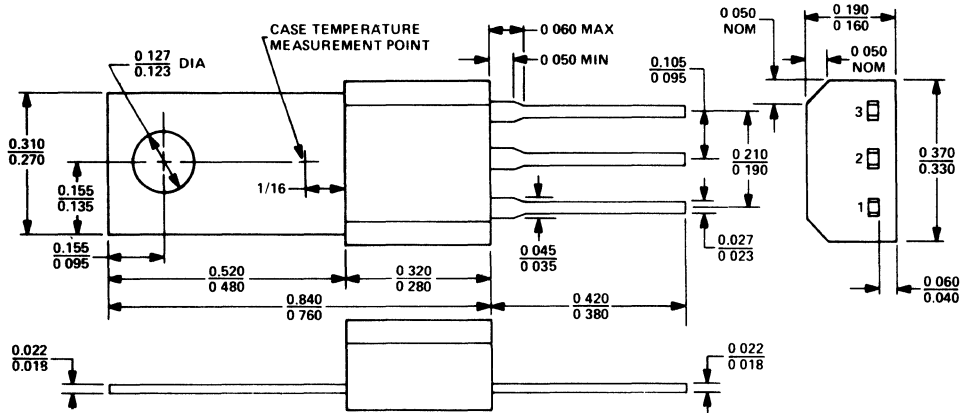
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

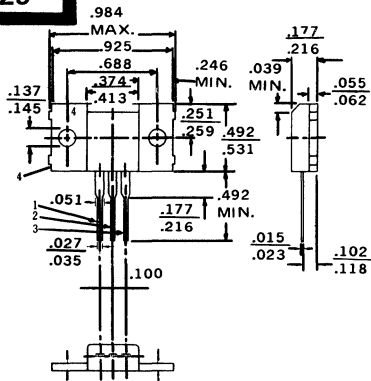
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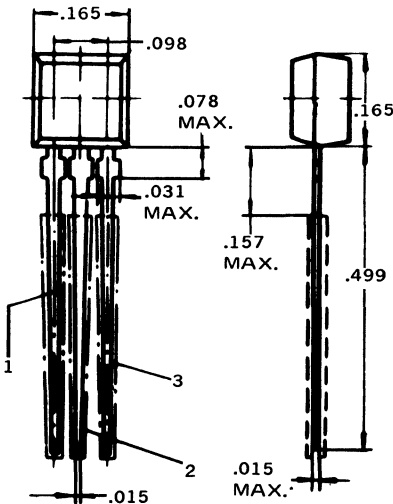
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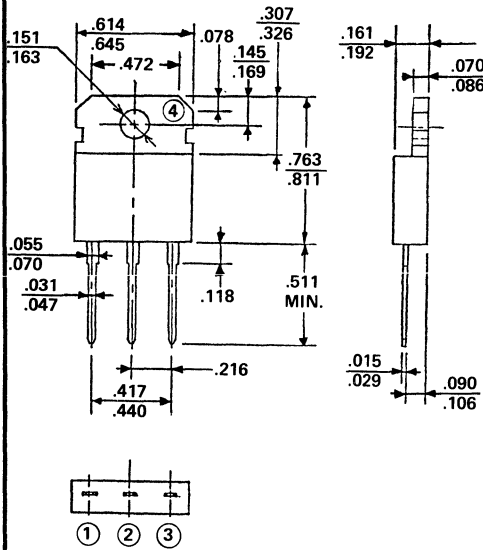
B30



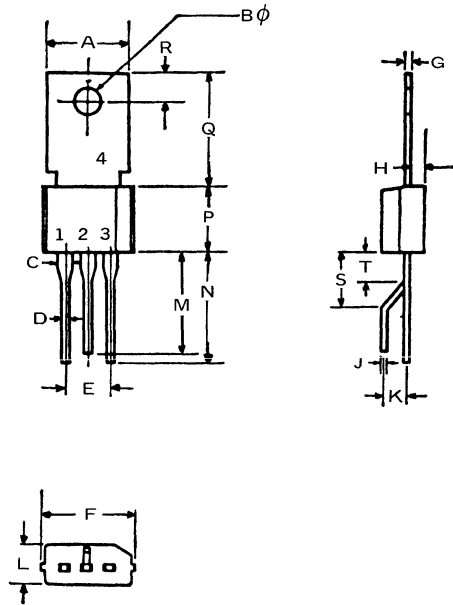
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

B35

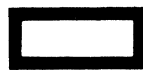
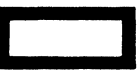
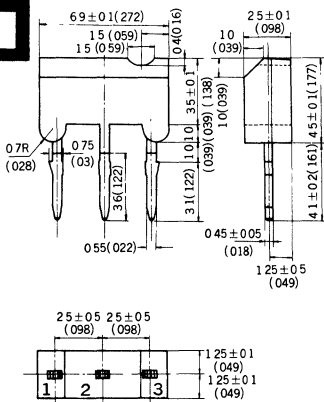


B36



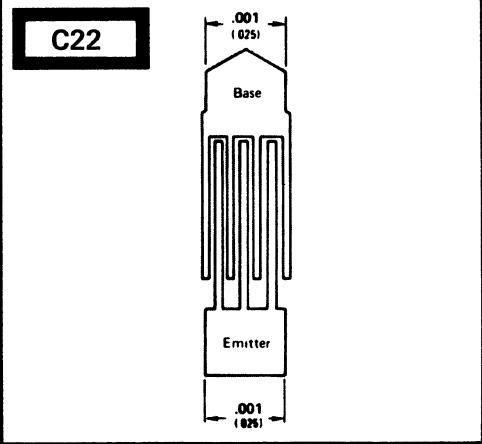
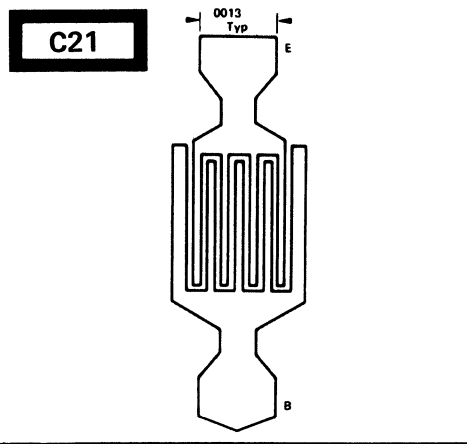
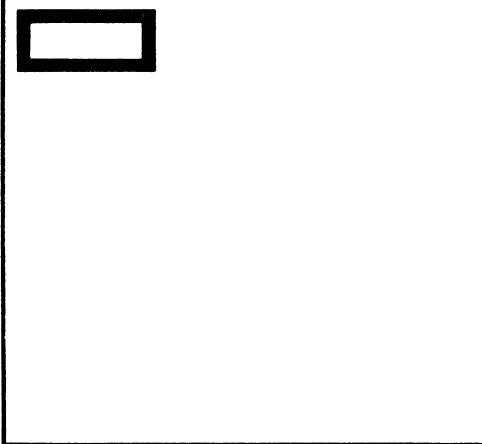
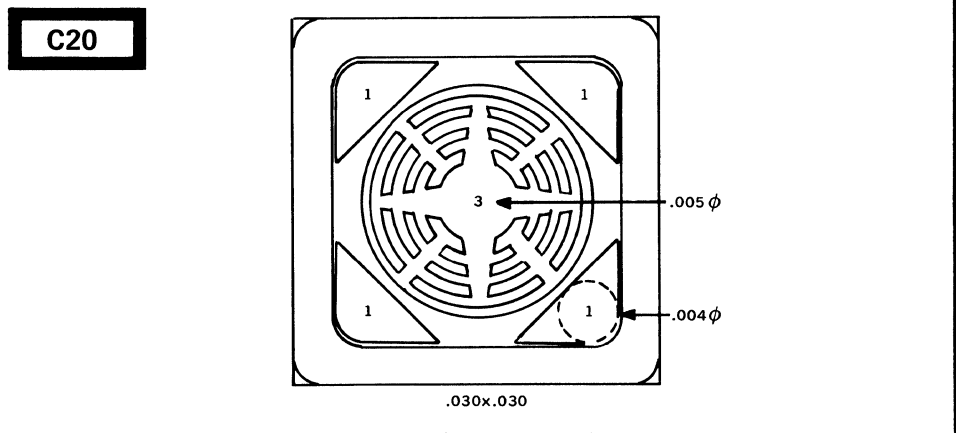
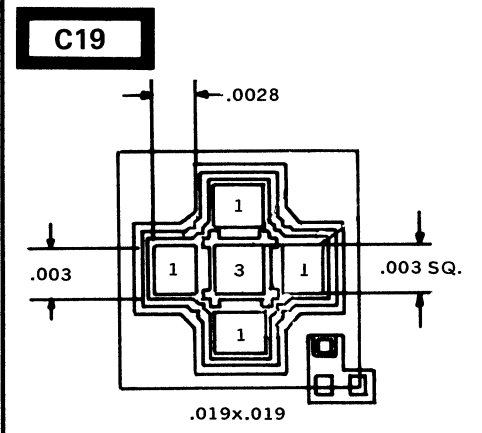
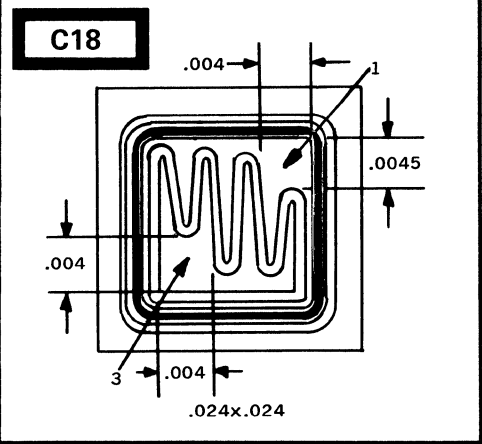
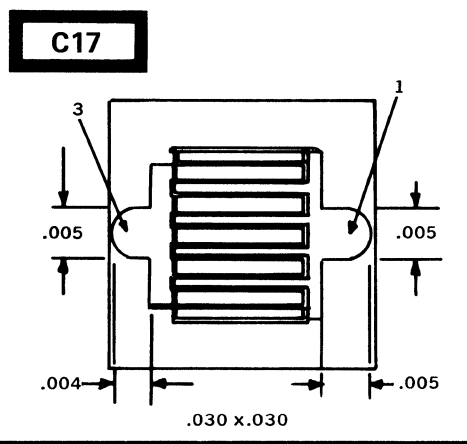
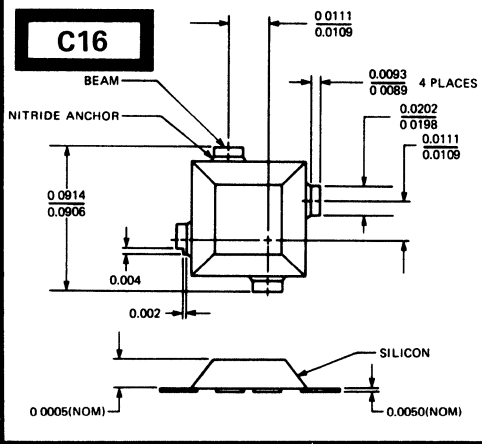
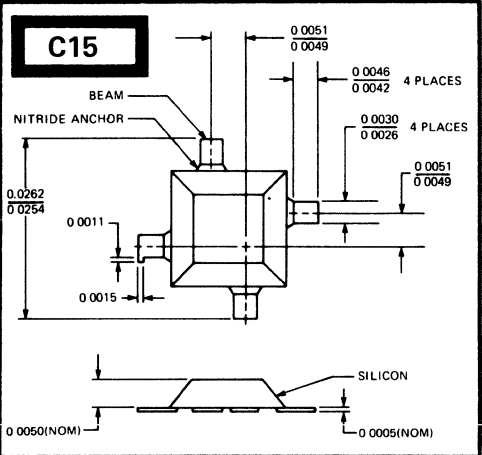
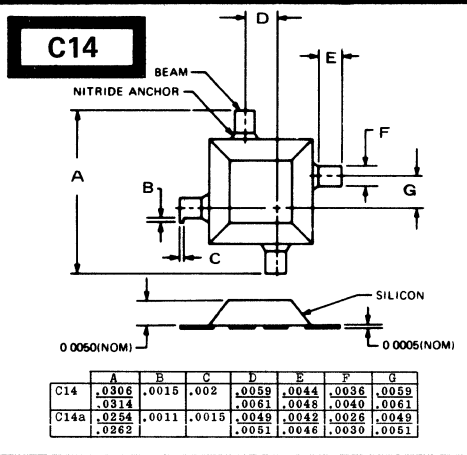
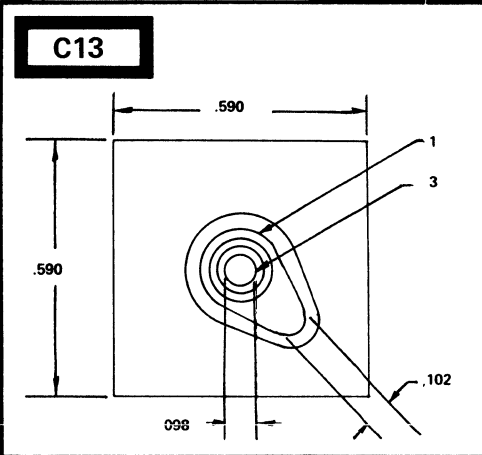
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
B36	.393	.118	.043	.024	.193	.400	.024	.053	.024	.098	.189	.433	.492	.280	.480	.126	.236	.098
	MAX	.134	.059	.047	.209	MAX		.065	.043		MAX	MIN	MIN	.319	.520		MAX	.138

B37



15. OUTLINE DRAWINGS

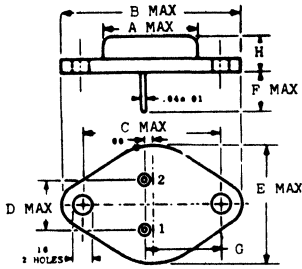
IN DRAWING NUMBER SEQUENCE



15. OUTLINE DRAWINGS

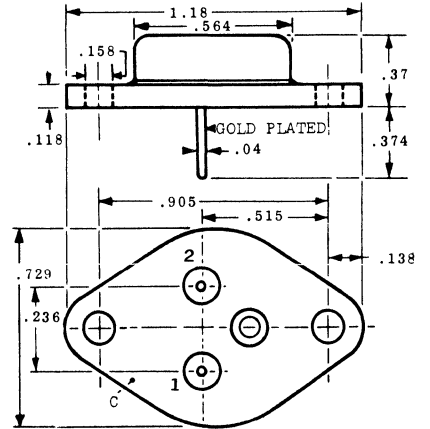
IN DRAWING NUMBER SEQUENCE

F6

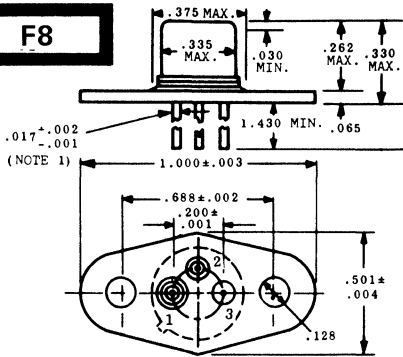


	A	B	C	D	E	F	G	H
F6	.570	1.22	.949	.322	.785	.355		.295
F6a	.590	1.22	.949	.322	.785	.355		.295
F6b	.590	1.30	.949	.322	.785	.355		.295
F6c	.875			.440		.312	.655	.250
F6d	.570	1.27	.953	.193	.708	.393	.571	.314
F6e	.787	1.57	1.195	.436	1.023	.433	.658	.394
F6f	1.290	2.087	1.702	.760	1.417	.460	.972	.590
F6g	.570	1.22	.897	.228	.728	.354	.907	.265
F6h	.787	1.53	1.17	.244	1.02	.393	.523	MAX
F6j	.500	1.25	.962	.210	.700	.360	.580	.340

F7

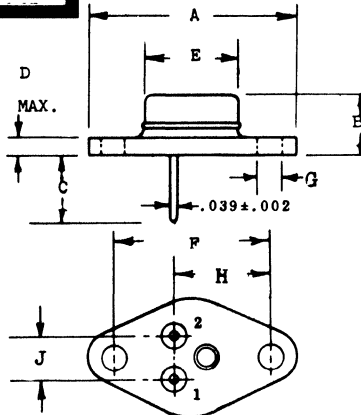


F8



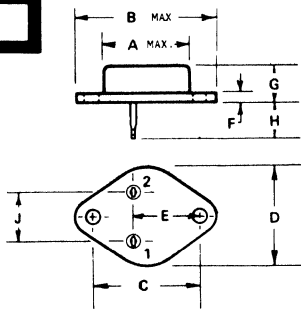
NOTE 1: Lead diameter is controlled in the zone between .050 and .250 from the base seat. Between .250 and end of lead a max. of .021 is held.

F9



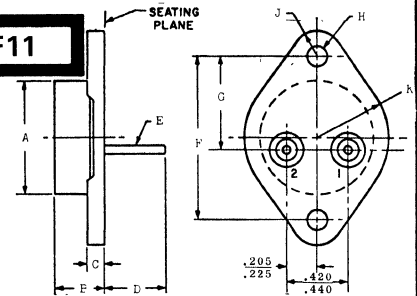
	A	B	C	D	E	F	G	H	J
F9	1.18	.350	.350	.071	.562	.900	.157	.506	.226
F9a	1.23	.315	.394	.079	.562	.910	.165	.526	.250
F9b	1.23	.350	.354	.106	.574	.897	.157	.506	.226
F9c	1.56	.275	.400	.150	.900	1.18	.157	.506	.226
F9d	1.42	.283	.472	.078	.790	1.18	1.61	.650	.424
	1.54	.345			.800			.680	.434

F10



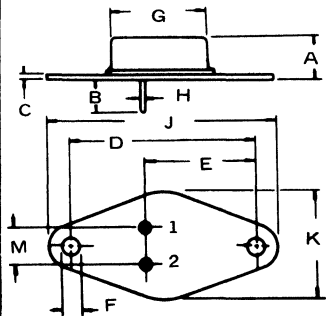
	A	B	C	D	E	F	G	H	J
F10	1.30	2.09	1.69	1.41	.990	.148	.589	.450	.760
F10a	1.22	2.32	1.81	1.54	1.20	.138	.610	.547	.512

F11



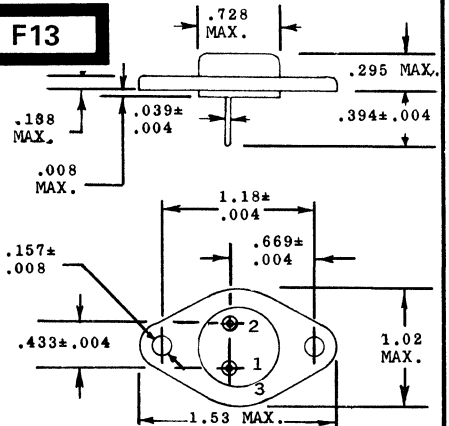
	A	B	C	D	E	F	G	H	J	K
F11	.800	.300	.114	.440	.059	1.177	.655	.151	.188	.525
F11a	MAX	MAX	MAX	.470	.061	1.197	.675	.161	MAX	MAX
F11b	.760	.400	.120	.430	.038	1.18	.658	.151	.166	.495
F11c	.770	.420	.130	.470	.062	1.19	.672	.161	.178	.505
	MAX	.325	.114	.465	.043	1.190	.668	.159		

F12



	A	B	C	D	E	F	G	H	J	K	M
F12	.295	.374	.020	.898	.512	.159	.575	.035	1.23	.750	.232
F12a	MAX	.376	MAX	.904	.520	.164	MAX	.043	MAX	MAX	.240
F12b	.354	.275	.098	.937	.521	.153	.590	.031	1.20	.748	.305
F12c	MAX	.354	MAX	.952	.541	.165	MAX	.047	MAX	MAX	.324
F12c	.347	.394	.099	.961	.579		.591	.029	1.272	.717	.199
F12c	MAX	MAX	MAX	MAX	MAX		MAX	MAX	MAX	MAX	MAX
F12c	.433	.441	.047	1.18	.654	.152	.875	.038	1.57	1.05	.419
F12c	MAX	.480	.071	1.20	.677	.163	MAX	.043	MAX	MAX	.439

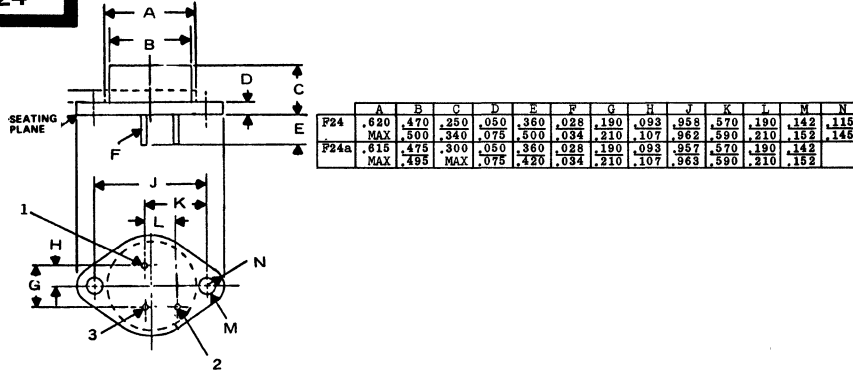
F13



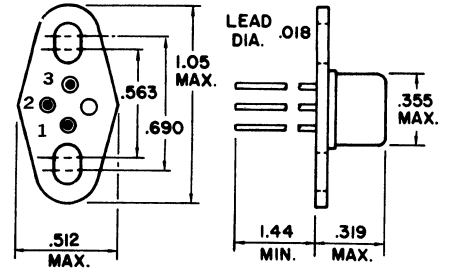
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

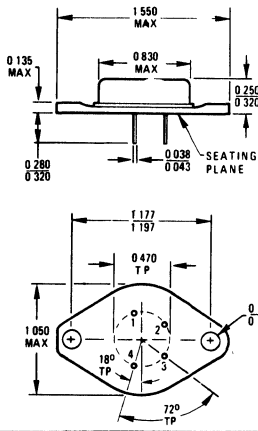
F24



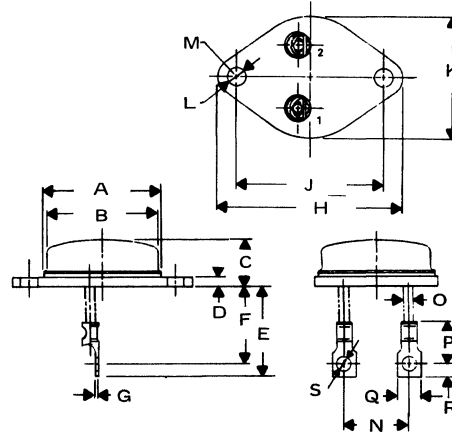
F25



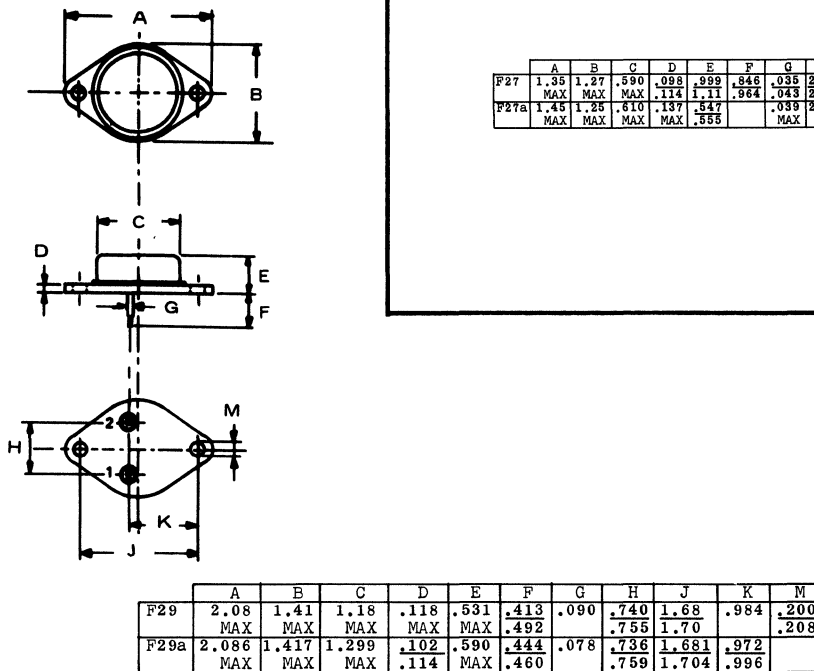
F26



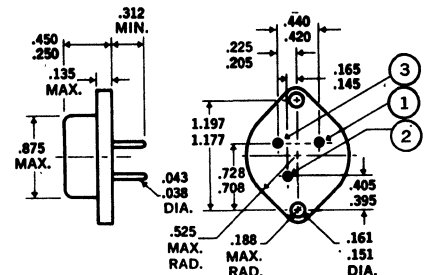
F27



F29



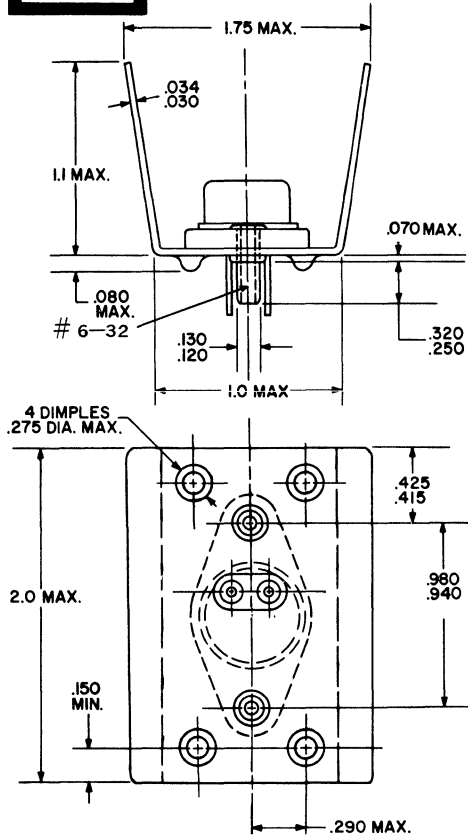
F30



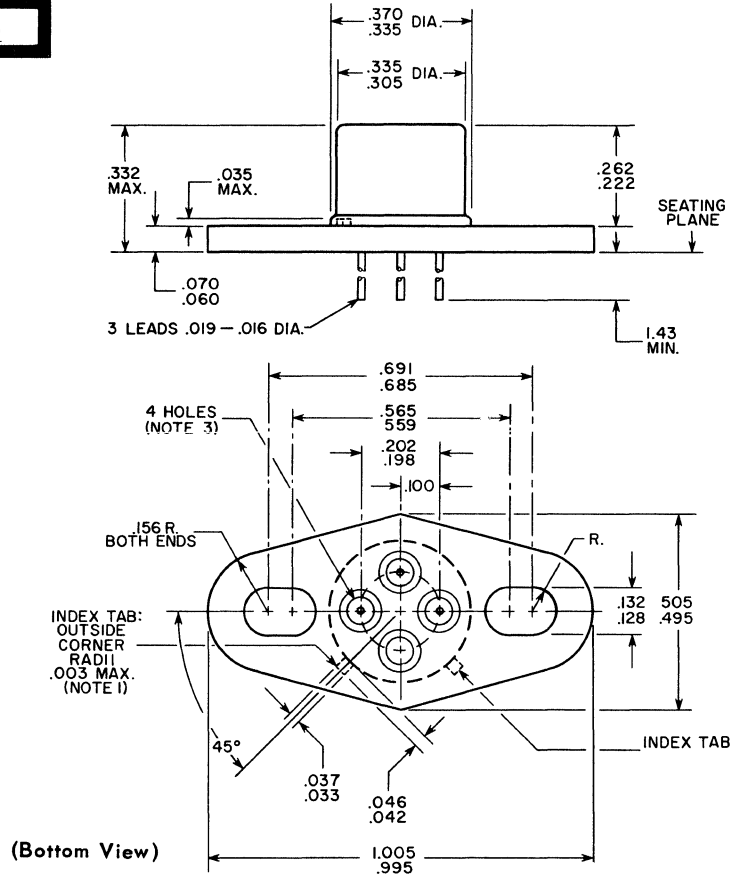
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

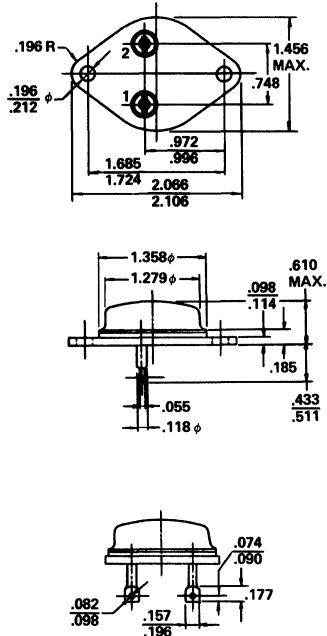
F42



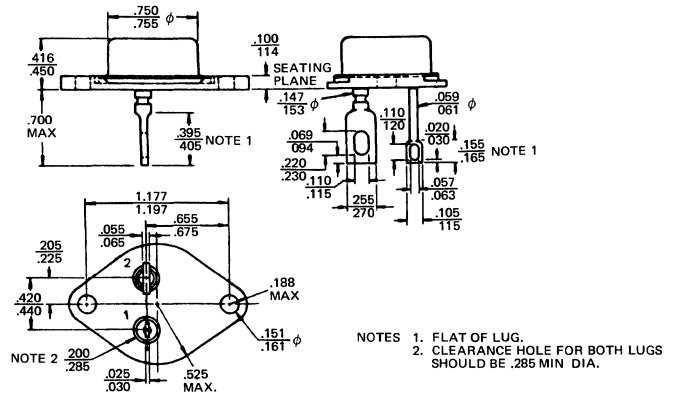
F43



F44



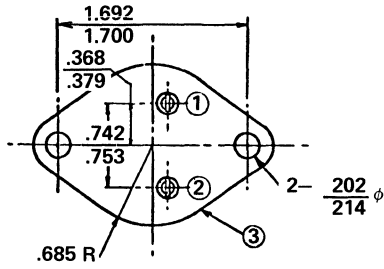
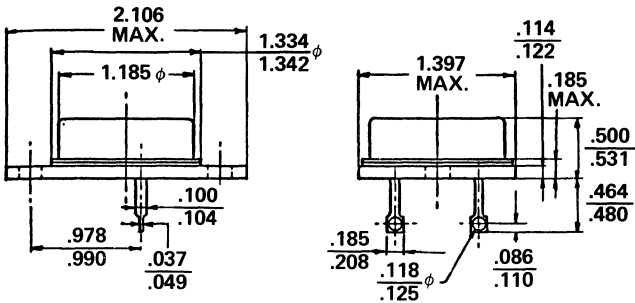
F45



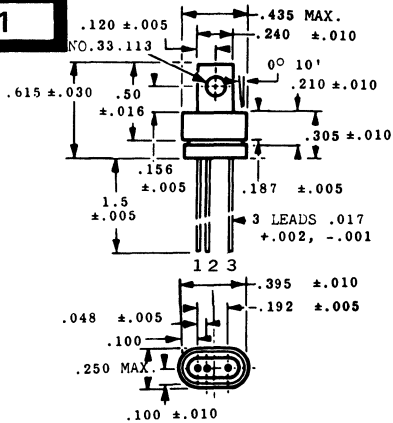
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

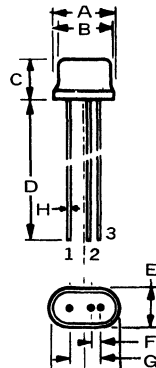
F50



O1



O3



	A	B	C	D	E	F	G	H
O3	.420 MAX	.390 MAX	.310 MAX	1.400 MAX	.150	.045	.230 MAX	
O3a	.420 MAX	.390 MAX	.460 MAX	1.500 MIN	.230 MAX	.080		.016
O3b	.496 MAX	.382 MAX	.365 MAX	1.532 MAX	.300 MAX	.053	.202 MAX	.018 MAX
O3c	.490 MAX	.382 MAX	.365 MAX	1.437 MIN	.300 MAX	.058	.202 MAX	.018 MAX
O3d	.385 MAX	.360 MAX	.340 MAX	1.437 MAX	.195	.043	.187 MAX	.016
O3e	.405 MAX	.370 MAX	.360 MAX	1.562 MAX	.215	.053	.197 MAX	.019
O3f	.405 MAX	.370 MAX	.315 MAX	1.440 MAX	.215	.053	.197 MAX	.019
O3g	.405 MAX	.365 MAX	.310 MAX	1.500 MIN	.215	.058	.202 MAX	.019
O3h	.405 MAX	.360 MAX	.295 MAX	1.438 MAX	.218	.043	.187 MAX	.019
O3i	.370 MAX	.315 MAX	.315 MAX	1.532 MAX	.215	.053	.197 MAX	.019
O3j	.280 MAX	.280 MAX	.185 MAX	.200		.048	.137	.151

15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

R2

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R5

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R8

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

	A	B	C
R 8	.619	.236	1.46
R 8a	.375	.250	1.25

R9

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R12

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R18

	A	B	C	D
R18	.216	1.156	.115	.158
	MAX	MIN	MAX	MAX
R18a	.160	1.250	.030	.130
	MAX	MIN	MAX	MAX
R18b	.130	1.250	.038	.100
	MAX	MIN	MAX	MAX

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R19

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R26

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R27

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R31

	A	B	C	D	E	F	G
R31	.328	.125	.177	.327	.025	1.5	.460
		MAX				MIN	MAX
R31a	.328	.080	.177	.282	.025	1.5	.440
		MAX		MAX		MIN	MAX

NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

R32

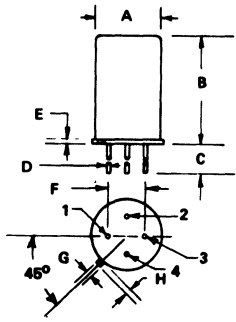
NOTE 1:
THIS ZONE OF THE LEAD IS NOT TINNED.

NOTE 2:
THE COLORED DOT INDICATES THE POSITION OF THE COLLECTOR.

15. OUTLINE DRAWINGS

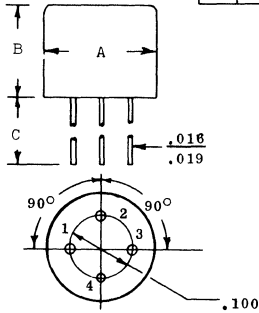
IN DRAWING NUMBER SEQUENCE

R90



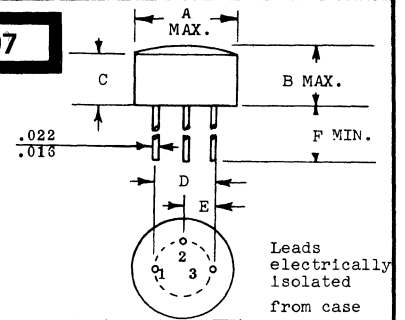
	A	B	C	D	E	F	G	H
R90	.190	.350	.500	.017	.012	.100	.041	.039
	MAX	MAX	MIN					
R90a	.220	.366	.521	.017	.011	.102	.035	.035
	MAX	MAX	MIN					
R90b	.334	.259	.748	.018	.015	.196	.031	.039
	MAX	MAX	MIN					

R92



	A	B	C
R92	.230	.210	.50 MIN.
	MAX	MAX	
R92b	.240	.240	1.5 MAX.
	MAX	MAX	

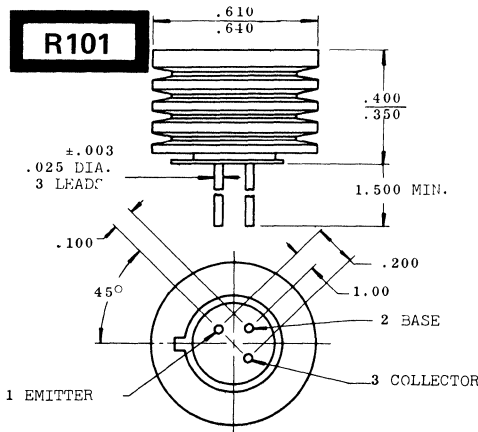
R97



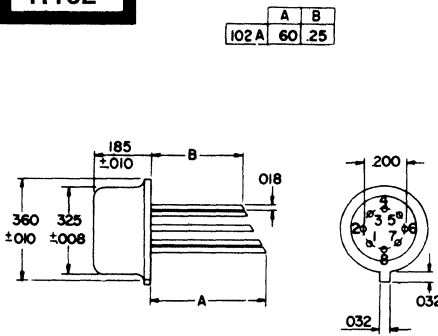
	A	B	C	D	E	F
R97	.330	.250	.200	.100	.400	
R97a	.215	.250	.115	.100	.050	.400
R97b	.210	.200		.100	.050	.500
R97c	.215	.200		.100	.050	
R97d	.215	.250		.100	.050	.400
R97e	.320	.220		.200	.100	.400

Leads electrically isolated from case

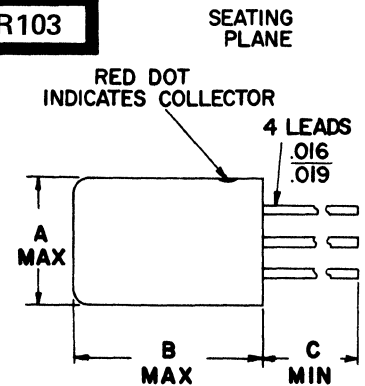
R101



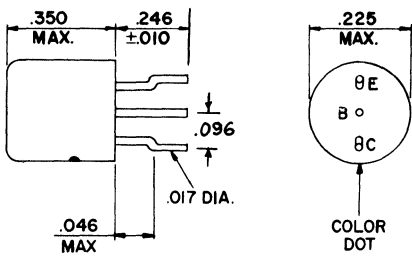
R102



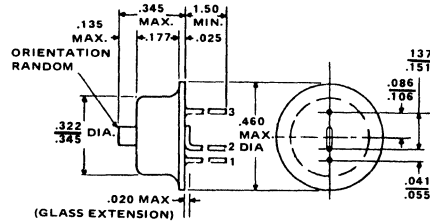
R103



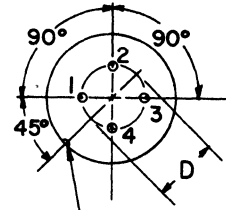
R108



R109



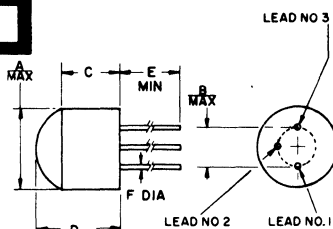
LEAD NO. 4 (SHIELD .177 SHORTER ON R103A ONLY.)



INDENT BETWEEN SHIELD AND EMITTER

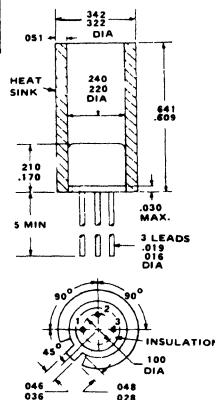
	A	B	C	D
R103	.240	.410	1.50	.100
R103a	.236	.236	.699	.100

R110

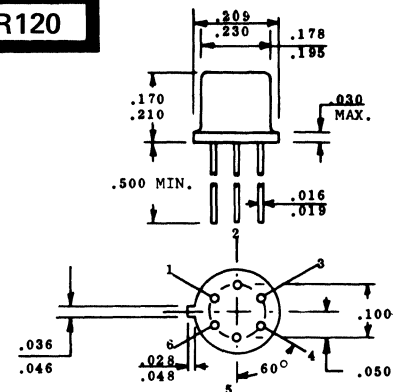


	A	B	C	D	E	F
R110	.210	.100	.100	.140	.400	.016
						.022
R110a	.330	.200	.100	.140	.400	.016
						.022
R110b	.250	.100		.250	.500	.016
						.019
R110c	.210	.100		.200	.490	.020
	MAX			MAX	MAX	.510
R110d	.320	.200		.250	.500	.020
				MAX	MIN	MAX

R119



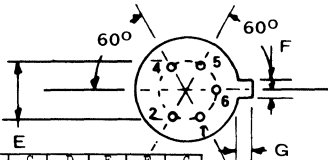
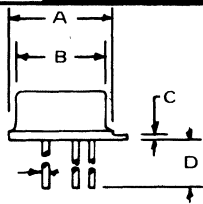
R120



15. OUTLINE DRAWINGS

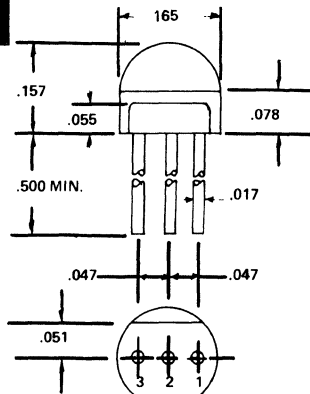
IN DRAWING NUMBER SEQUENCE

R144

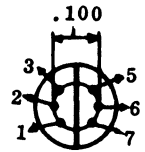
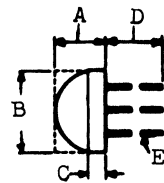


	A	B	C	D	E	F	G
R144	.288	.195	.007	.500	.100	.039	.040
	MAX	MAX		MIN			
R144a	.223	.194	.007	.492	.099	.037	.041
	MAX	MAX		MAX			

R145

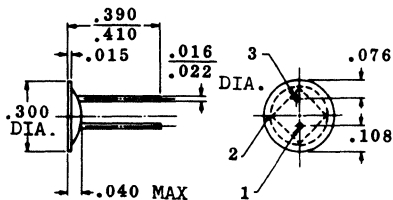


R148

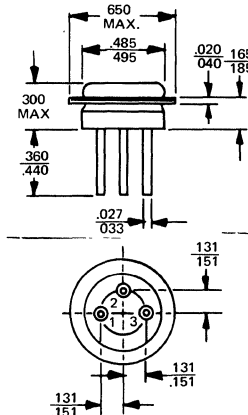


	A	B	C	D	E
R148	.120	.160	.060	.500	.016
	MAX	MAX	MIN	MIN	MAX
R148a	.200	.210		.490	.020
	MAX			MAX	

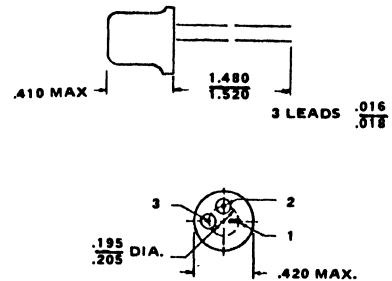
R151



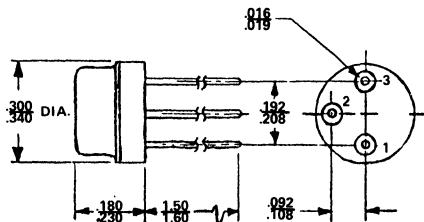
R155



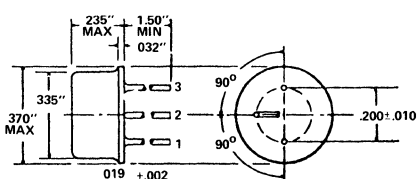
R156



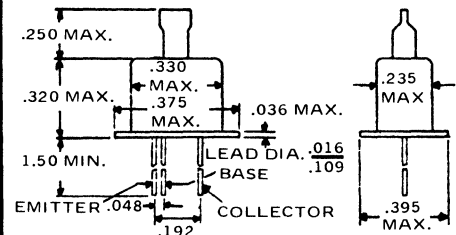
R157



R158



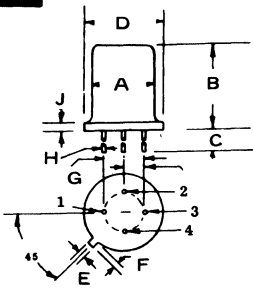
R163



15. OUTLINE DRAWINGS

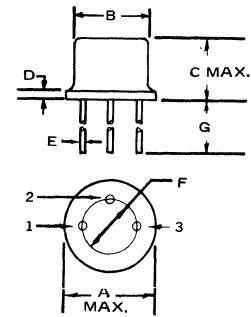
IN DRAWING NUMBER SEQUENCE

R176



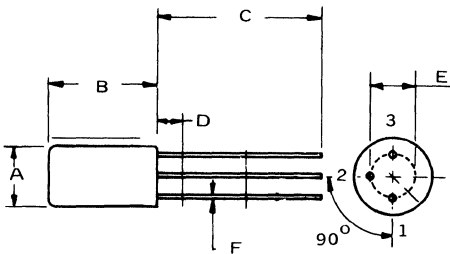
	A	B	C	D	E	F	G	H	J
R176	.195	.210	.500	.230	.036	.036	.100	.016	.030
			MIN		.046	.048		.019	
R176a	.195	.346	.500	.230	.036	.036	.100	.016	.030
			MIN		.046	.048		.019	
R176b	.220	.170	.500		.028	.028	.100	.016	.030
	.240	.210	MIN		.046	.048		.019	MAX
R176c	.305	.150	.500	.335	.028	.029	.200	.016	.009
	.335	.260	MIN	.370	.034	.045	BSC	.021	.125
R176d	.324	.259	.748	.370	.031	.029	.200	.017	.027
		MAX	MAX						
R176e	.315	.240	.500	.340	.028	.029		.016	
	.335	.260	MIN	.370	.034	.043		.021	
R176f	.194	.208	.539	.228			.098	.018	
								MAX	
R176g	.192	.208	.118	.229			.106	.019	
	MAX							MAX	
R176h	.335	.260	.748	.370	.031	.031	.200	.016	.039
	MAX	MAX	MIN	MAX				MIN	
R176j	.334	.259	.925	.369	.031	.031	.200	.016	.039
	MAX	MAX	MIN	MAX				MIN	

R177



	A	B	C	D	E	F	G
R177	.209	.178	.170	.009	.016	.100	.500
	.230	.195	.210	.125	.019		
R177a	.248	.226	.325	.010	.016	.090	1.470
	.278	.242	.350	.030	.019	.110	1.530
R177b	.255	.230	.320	.011	.016	.096	1.500
	.275	.240	.340	.019	.019	.104	MIN
R177c	.370	.335	.260	.125	.019	.200	1.500
R177d	.370	.310	.490	.079	.018	.011	1.50
	MAX		MAX		.029	MIN	

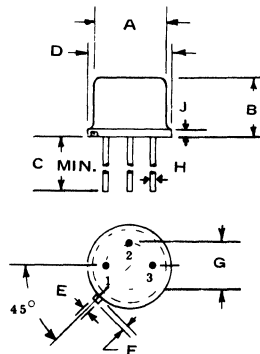
R178



	A	B	C	D	E	F
R178	.175	.285	.500	.050	.100	.019
	.195	.410	MIN	MAX		MAX
R178a	.209	.170	.500		.100	.016
	.230	.210	MIN			.019
R178b	.236	.610	1.450		.087	.018
R178c	.240	.435	1.450		.072	.016
	MAX	MAX	MIN			

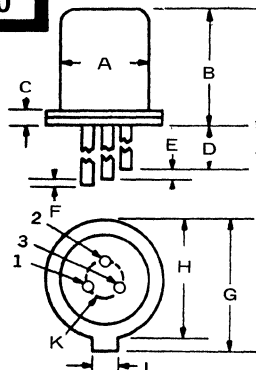
R179

	A	B	C	D	E	F	G	H	J
R179	.126	.285	.500	.209	.036	.028	.100	.018	.040
	.195	.410	MIN	.230	.046	.048		.021	.060
R179a	.178	.100	.500	.210	.036	.028	.100	.018	.030
	.196		MIN		.046	.048		.019	MAX
R179b	.181	.085	1.500	.210	.041	.042	.100		
	.193	.085	MIN	.230					
R179c	.185	.315	.710	.224	.039	.035	.098	.017	.016
	MAX	MAX	MAX						
R179d	.220	.170	.500	.370	.036	.028	.100	.016	.030
	.240	.210	MIN		.046	.048		.019	MAX
R179e	.275	.200	.500	.335	.028	.029	.200		
	.335	.260		.370	.034	.045			
R179f	.275	.200	1.500	.290	.028	.029			
	.335	.260		.370	.034	.045			
R179g	.290	.200	1.500	.290	.028	.029			
	.335	.260		.370	.033	MIN			
R179h	.305	.090	.500	.335	.028	.029	.200	.018	.008
	.335	.120	MIN	.370	.034	.045		.019	.050
R179j	.305	.090	1.500	.335	.028	.029	.200	.018	.008
	.335	.120	MIN	.370	.034	.045		.019	.125
R179k	.305	.090	1.500	.335	.028	.029	.200	.018	.008
	.335	.120	MIN	.370	.034	.045		.019	.125
R179m	.305	.150	1.500	.335	.028	.029	.200		
	.335	.260		.370	.034	.045			
R179n	.305	.150	.500	.335	.028	.029	.200		
	.335	.190		.370	.034	.045			
R179p	.305	.240	.300	.335	.028	.029	.200	.018	.008
	.335	.260	MIN	.370	.034	.045		.019	.125
R179q	.205	.240	1.500	.335	.028	.029	.200		
	.335	.260		.370	.034	.045			
R179r	.305	.240	1.500	.335	.028	.029	.200	.018	.008
	.335	.260		.370	.034	.045		.019	.125
R179s	.305	.240	1.500	.340	.028	.035	.200		
	.335	.260	1.750	.370	.034				
R179t	.305	.240	1.500	.335	.028	.029	.141		
	.335	.260	1.500	.370	.034	.045			
R179u	.305	.240	1.500	.335	.028	.029	.200		
	.335	.270		.370	.034	.045			
R179w	.314	.240	1.500	.340	.026	.041	.188	.021	
	.335	.270	MIN	.360	.036	MAX	.205	.026	
R179x	.330	.259	1.000	.335	.028	.029	.200		
				.370	.034	.045			
R179y	.334	.133	.500	.370	.034	.045	.200		
	MAX	MIN	MIN	MAX	MAX	MAX			
R179z	.181	.182	.527	.196			.100	.017	
	.187	.204	MIN	.216					
R179aa	.178	.208	.500	.208	.036	.028	.100	.018	.030
	.195	.208	MIN	.246	.046	.048		.019	MAX



NOTE: R179t = LOCATOR TAB IS OPTIONAL

R180

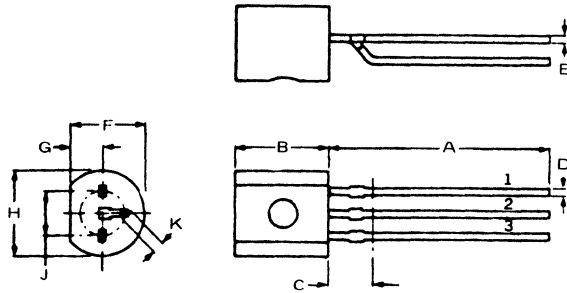


	A	B	C	D	E	F	G	H	J	K
R180	.100	.130	.015	1.25	.094	.094	.145	.130	.025	.038
	MAX		MAX	MIN	.156	.156	MAX	MAX	MAX	
R180a	.095	.155	.015	1.50x3	0.0	0.0	.140	.125	.025	.035
	.100	.160	MAX	1.75			.145	.130	MAX	.041

15. OUTLINE DRAWINGS

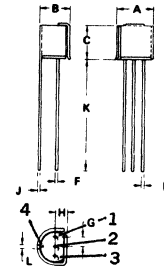
IN DRAWING NUMBER SEQUENCE

R189



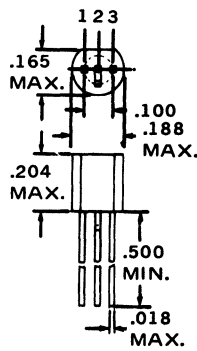
	A	B	C	D	E	F	G	H	J	K
R189	.500 MIN	.204 MAX	.098 MAX	.019 MAX	.011 MIN	.165 MAX	.062 MAX	.188 MAX	.100 MAX	.023 MAX
R189a	.500 MIN	.204 MAX	.098 MAX	.019 MAX	.014 MIN	.165 MAX	.062 MAX	.188 MAX	.100 MAX	.025 MAX
R189b	.551 MIN	.217 MAX	.098 MAX		.020 MIN	.165 MAX		.205 MAX	.100 MAX	

R190

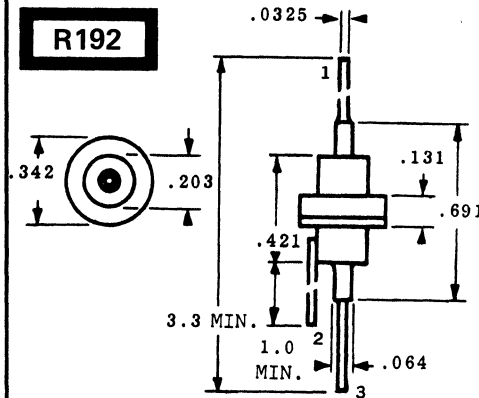


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.03	5.18	0.198	0.204
B	4.01	4.27	0.158	0.168
C	4.44	4.70	0.175	0.185
D	0.41	0.48	0.016	0.019
F	0.25	0.38	0.010	0.015
G	1.14	1.40	0.045	0.055
H	1.40	1.65	0.055	0.065
J	0.23	0.28	0.009	0.011
K	12.70	-	0.500	-
L	0.33	0.38	0.013	0.015

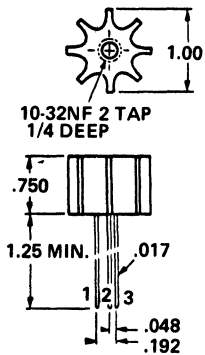
R191



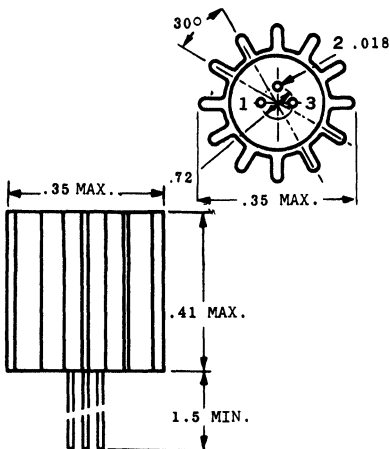
R192



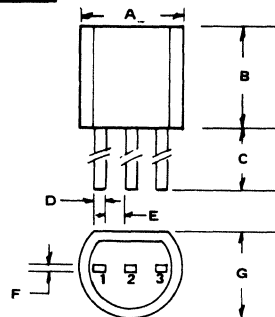
R193



R194

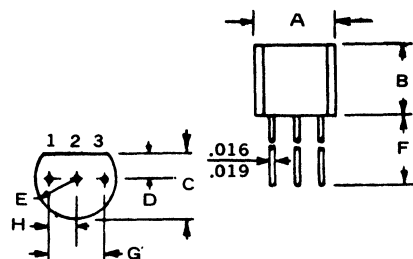


R195



	A	B	C	D	E	F	G
R195	.070 MAX	.070 MAX	.090 MAX	.010 MIN	.003 MIN	.050 MAX	
R195a	.196 MAX	.228 MAX	.300 MAX	.021 MIN	.100 MIN	.019 MIN	.157 MAX
R195b	.236 MAX	.330 MAX	.490 MAX	.017 MIN	.059 MIN	.016 MIN	.200 MAX
R195c	.204 MAX	.334 MAX	.397 MAX	.019 MIN	.030 MIN		.165 MAX
R195d	.192 MAX	.196 MAX	.393 MAX	.019 MIN	.049 MIN	.015 MIN	.149 MAX
R195e	.070 MAX	.070 MAX	.090 MAX	.010 MIN	.003 MIN	.020 MAX	
R195f	.196 MAX	.228 MAX	.300 MAX	.021 MIN	.020 MIN	.019 MIN	.157 MAX
R195g	.070 MAX	.070 MAX	.090 MAX	.011 MIN		.009 MIN	.059 MAX

R196

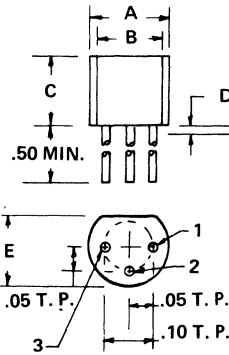


	A	B	C	D	E	F	G	H
R196	.200 MIN	.160 MIN	.160 MIN	.095 MIN	.095 MIN	.500 MIN	.085 MIN	.045 MIN
R196a	.200 MIN	.180 MIN	.160 MIN	.055 MIN	.095 MIN	.500 MIN	.085 MIN	.045 MIN
R196d	.175 MIN	.175 MIN	.165 MIN	.045 MIN	.045 MIN	.500 MIN	.085 MIN	.045 MIN
R196e	.221 MIN	.241 MIN	.170 MIN	.055 MIN	.095 MIN	.500 MIN	.105 MIN	.045 MIN
R196f	.175 MIN	.170 MIN	.125 MIN	.045 MIN	.080 MIN	.450 MIN	.085 MIN	.045 MIN
R196g	.175 MIN	.170 MIN	.165 MIN	.045 MIN	.105 MIN	.500 MIN	.085 MIN	.045 MIN
R196h	.204 MIN	.204 MIN	.161 MIN	.059 MIN	.115 MIN	.511 MIN	.105 MIN	.045 MIN

15. OUTLINE DRAWINGS

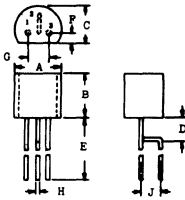
IN DRAWING NUMBER SEQUENCE

R203



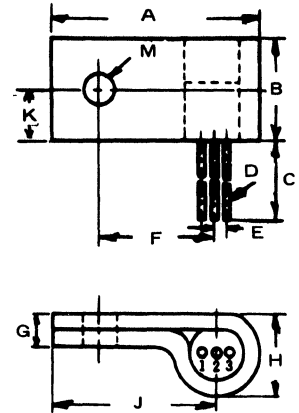
	A	B	C	D	E
R203	.195 .205	.150 .170	.180 .190	.015	.155 .165
R203a	.175 .205	.135 .170	.170 .210	.050 MAX	.125 .165
R203b	.205 MAX	.205 MAX	.079 MAX		.165 MAX
R203c	.200	.150 .165	.177 .188	.062	.149 .169
R203d	.200	.156 .166	.179 .190	.062	.151 .190
R203e	.175 .205	.135 MIN	.170 .210	.050	.125 .165

R204



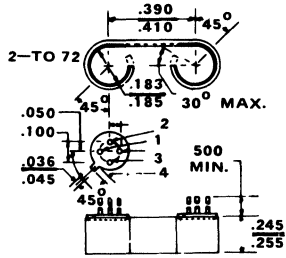
	A	B	C	D	E	F	G	H	J
R204	.197	.197	.157	.087	.492	.059	.098	.016	.048
R204a	.175 .205	.170 .210	.125 .165	.050	.500		.095 .105	.016 .018	.050
R204b	.174 .188	.175 .181	.134 .148	.098 MAX	.492 .570		.093 .103	.017	
R204c	.196 .212	.196 .212	.157 .173	.098 MAX	.547 .562			.015	
R204d	.188 MAX	.204 MAX	.165 MAX	.500 MIN			.100	.017	
R204e	.175 .204	.170 .209	.125 .164	.118 MAX	.459 MIN	.044 .055	.094 .105	.016 .021	.049 TYP

R205

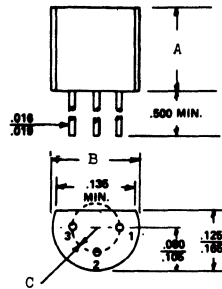


	A	B	C	D	E	F	G	H	J	K	M
R205	.728 MAX	.374 MAX	.787 MIN	.018	.050	.394	.126 MAX	.295 MAX	.551		.118
R205a	.748 MAX	.393 MAX	.551 MIN	.019	.049	.393	.149 MAX	.307 MAX		.177	.129 .145

R206

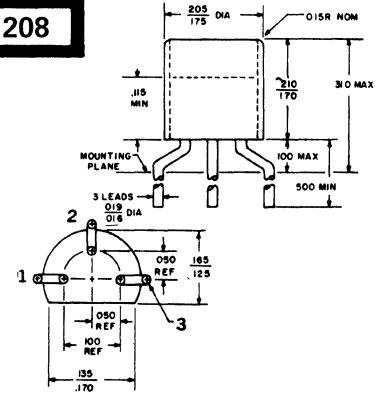


R207

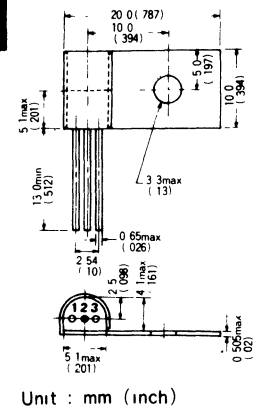


	A	B	C
R207	.170 .210	.175 .205	.090 .110
R207a	.160 .210	.165 .205	.085 .105
R207b	.160 .210	.165 .205	.045 .050

R208

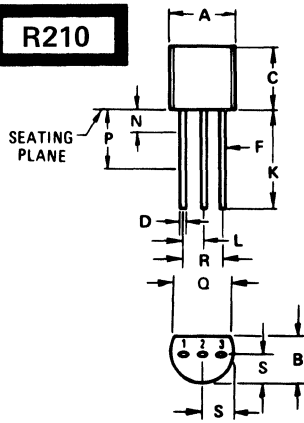


R209



Unit : mm (inch)

R210

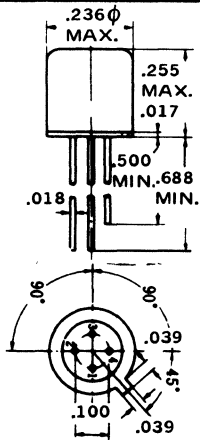


	A	B	C	D	F	K	L	N	P	Q	R	S
R210	.175 .205	.125 .165	.175 .185	.018 .019	.593 .055	.045 .055					.095 .105	.080 .105
R210a	.175 .205	.125 .165	.170 .210	.016 .021	.500 MIN	.045 .055	.050 MAX	.250 MIN	.135 MIN	.085 .105	.080 .105	
R210b	.175 .205	.125 .165	.175 .185	.016 .021	.500 MIN	.045 .055				.085 .105	.080 .110	

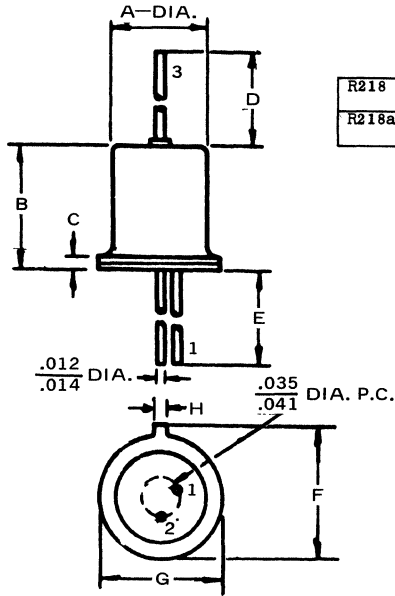
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

R217

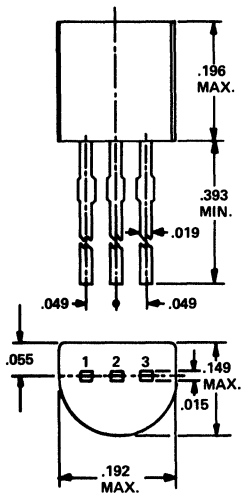


R218

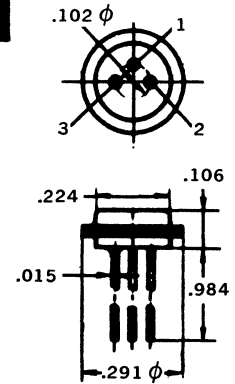


	A	B	C	D	E	F	G	H
R218	.100 MAX	.160 MAX	.015 MAX	1.500 MIN	1.500 MIN	.145 MAX	.130 MAX	.025 MAX
R218a	.095 MAX	.155 MAX	.015 MAX	1.719 MIN	1.250 MIN	.140 MAX	.125 MAX	.020 MAX

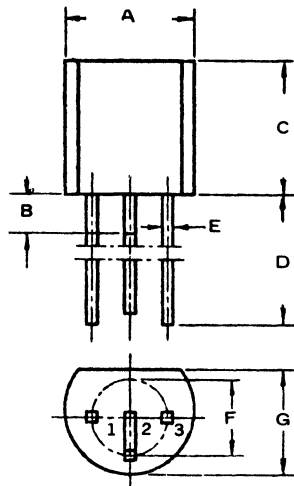
R219



R220

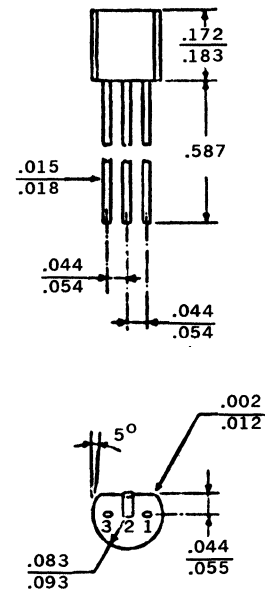


R221



	A	B	C	D	E	F	G
R221	.205 MAX	.098 MAX	.217 MAX	.551 MIN	.020 MIN	.100 MAX	.165 MAX
R221a	.188 MAX		.204 MAX	.499 MIN	.018 MIN		.165 MAX

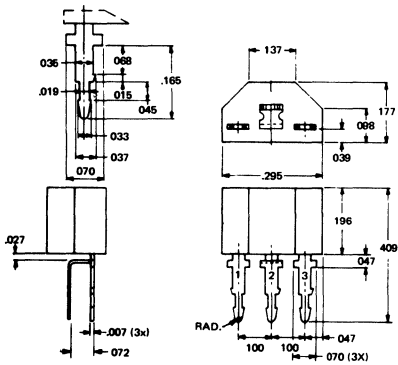
R222



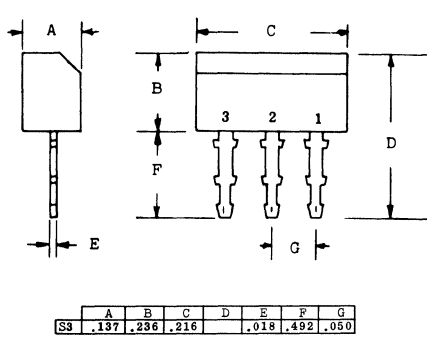
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

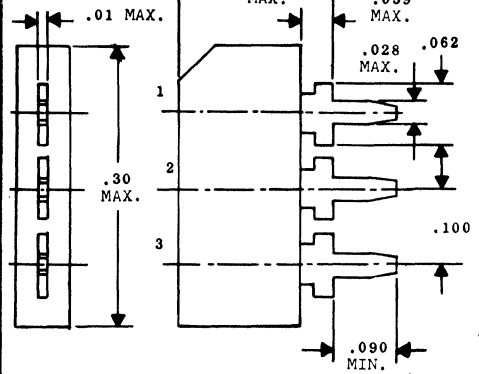
S1



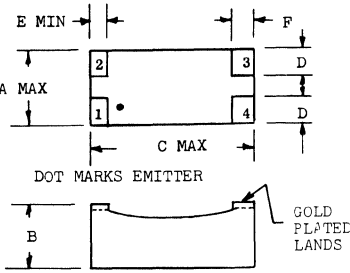
S3



S4

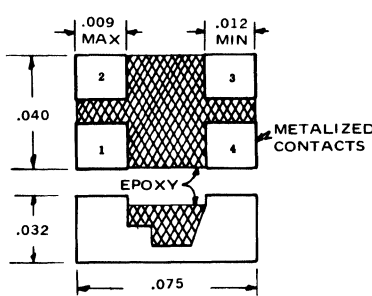


S5

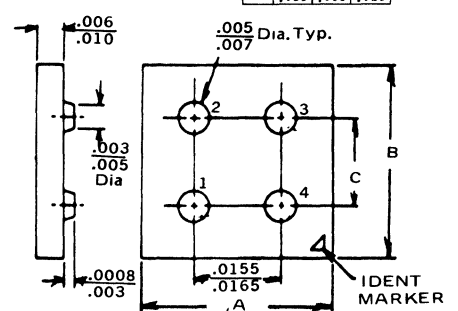


	A	B	C	D	E	F
S5	.042	.033	.078	.015	.009	.012
S5a	.084	.057	.114	.031	.0135	.0135

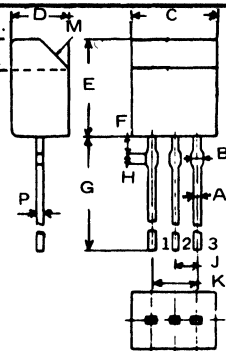
S6



S7

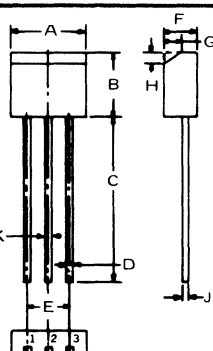


S8



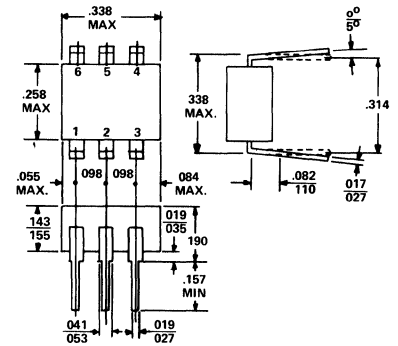
	A	B	C	D	E	F	G	H	J	K	M	N	P
S8	.017	.021	.218	.137	.236	.031	.500	.019	.050	.100	.068		
S8a	.031	.021	.216	.137	.236	.021	.600	.019	.050	.100	.068		
S8b	.020	.023	.173	.070	.149	.059	.374	.031		.100	.028	.027	.035
S8c			.181	.086	.165	.082	.482	.047					

S9

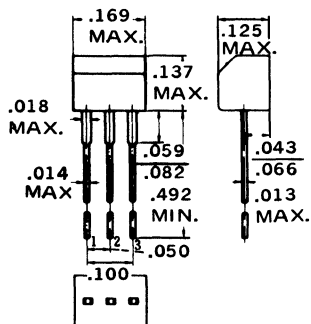


	A	B	C	D	E	F	G	H	J	K
S9	.189	.189	.354	.025	.100	.091	.039	.028	.025	
S9a	.275	.354	.472	.019	.133	.157	.047	.078	.017	.027
S9b									.025	.035

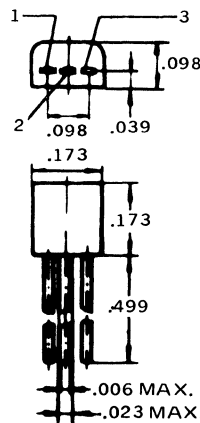
S10



S13

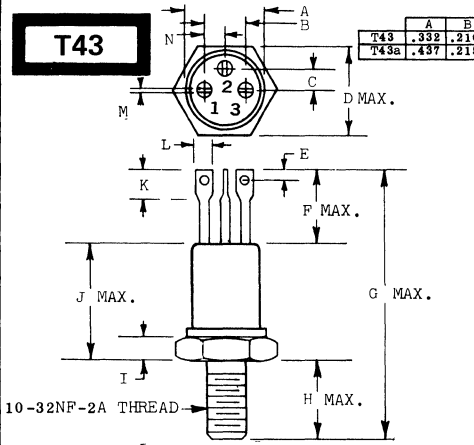
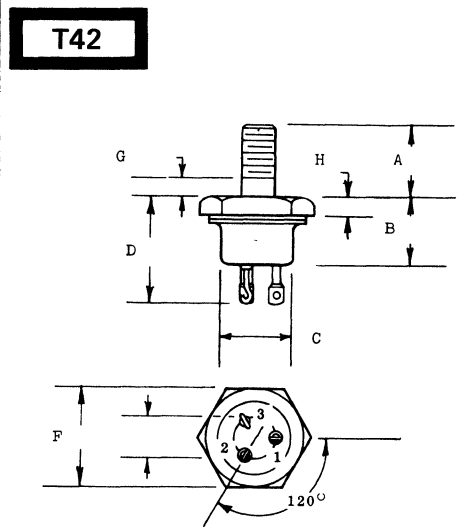
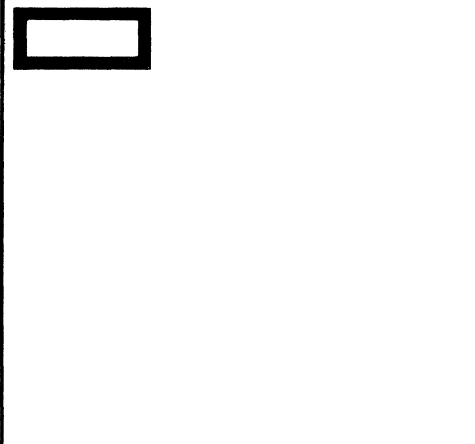
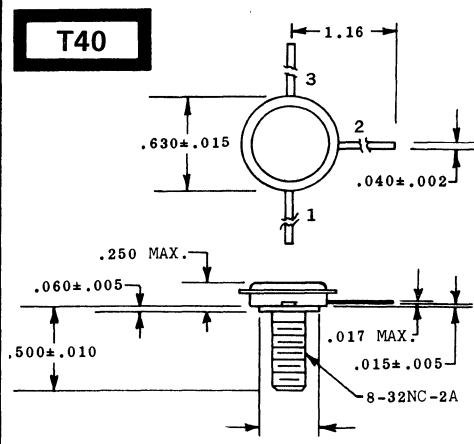


S14



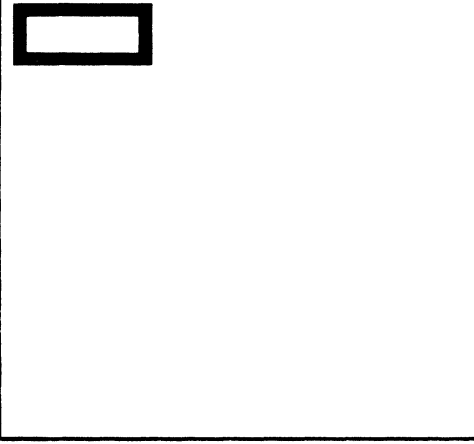
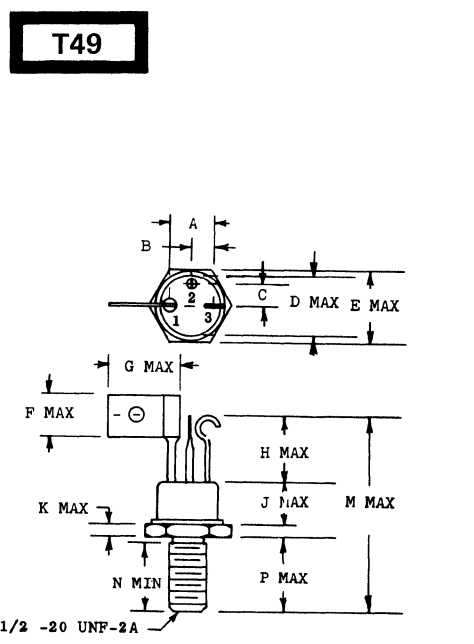
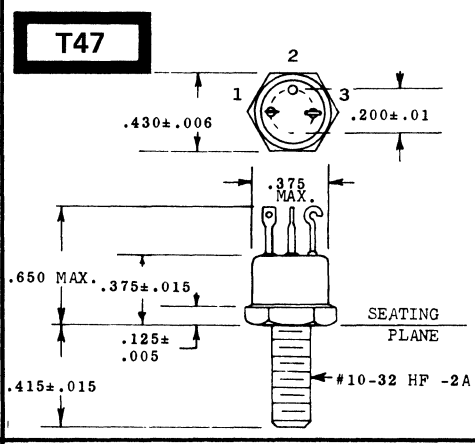
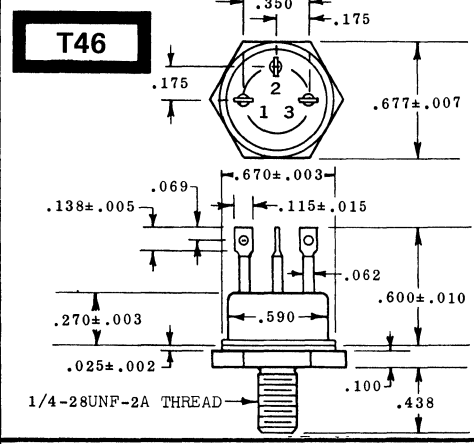
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
T43	.332	.210	.105	.438	.055	.330	1.25	.455	.099	.455	.125	.090	.024	.105
T43a	.437	.215	.110	.437		.295	1.22	.455	.150	.468				

	A	B	C	D	E	F	G	H	THR
T42	.437	.394	.382	.489	.175	.437	.125	.078	10-32 UNF-2A
T42a	.440	.400	.385	.495	.190	.437	.125	.078	10-32 UNF-2A
T42b	.455	.408	.390	.483	.145	.437	.078	.150	10-32 UNF-2A
T42c	.425	.390	.375	.480	.200	.437	.055	.078	10-32 UNF-2A
T42d	.400	.405	.388	.475	.185	.437	.078	.085	10-32 UNF-2A
T42e	.455	.400	.380	.475	.215	.437	.140	.140	

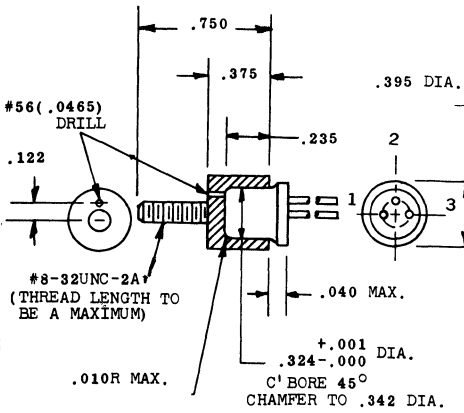


	A	B	C	D	E	F	G	H	J	K	M	N	P
T49	.584	.335	.312	.903	1.067	.640	.890	.880	.530	.2132	.433	.700	.810
T49a		.254	.317	.910	1.062			.485	.590	.1852	.495	.690	.815

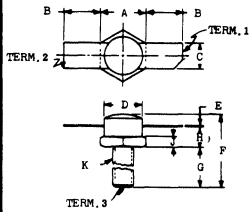
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

T60

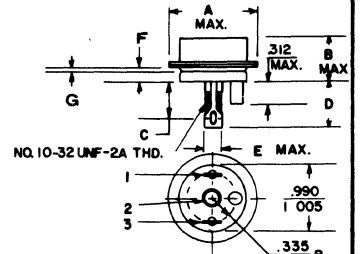


T62



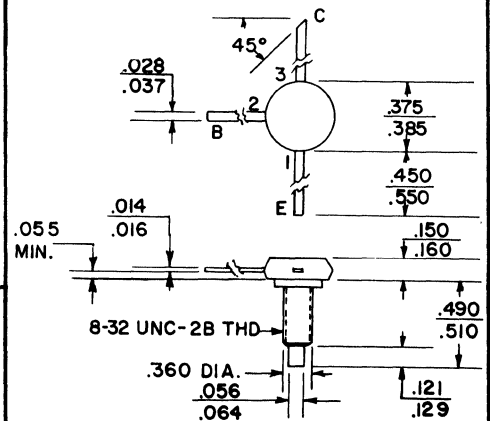
T62	A	B	C	D	E	F	G	H	J	K
T62a	.420	.380	.250	.375	.005	.765	.440	.190	.100	10-32
T62b	.435	.425	.380	.500	.007	.850	.440	.260	.150	1/4-28
T62b	.431	.350	.250	.407	.006	.725	.440	.190	.110	10-32UNF-2A

T63

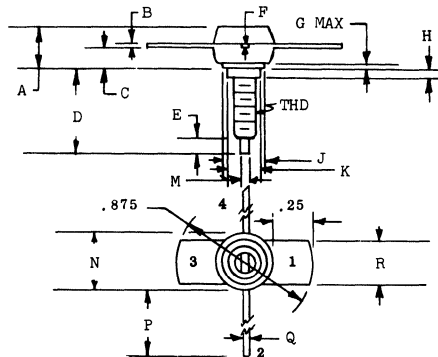


T63	A	B	C	D	E	F	G
T63	1.250	.520	.375	.610	.185		
			.500	.710			

T65

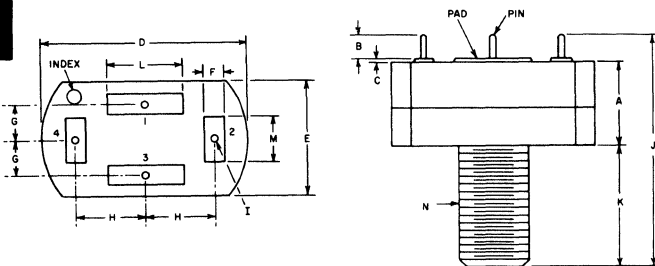


T66



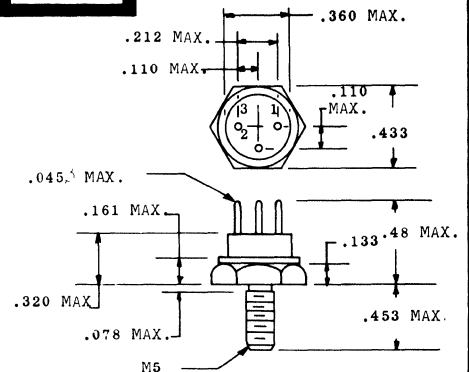
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	THD
T66	.165	.015	.055	.515	.145	.015	.020	.060	.285	.250	.060	.375	.500	.030	.290	8-32UNC2A
T66a	.220	.003	.106	.512	.118	.007		.323	.275	.079	.433	.075	.079	.118	M4	

T67



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
T67	.218	.072	.015	.489	.337	.055	.089	.140	.021	.655	.360	.145		10-32UNF-2A
	.234	.085	MAX	.490	.345		.105	.150	.023	.724	.390			
T67a	.280	.068	.015	.650	.360	.055	.111	.213	.020	.785	.420	.235	.135	1/4-28UNF-2A
	.315	.085	MAX	.680	.380	.065	.131	.233	.025	.850	.420	.250	.150	
T67b	.285	.114	.015	.650	.300	.055	.111	.213	.020	.715	.420	.235	.135	1/4-28UNF-2A(MOD)
	.325	.135	MAX	.680	.380	.065	.131	.233	.025	.785	.460	.250	.150	
T67c	.378			.661	.370		.216			.818	.440	.248	.141	M6

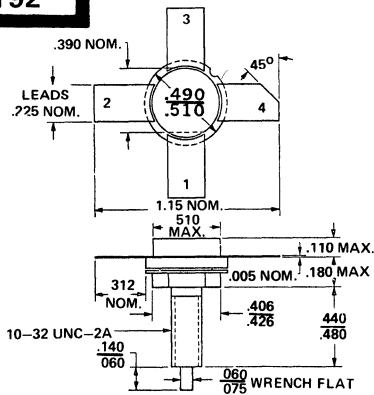
T68



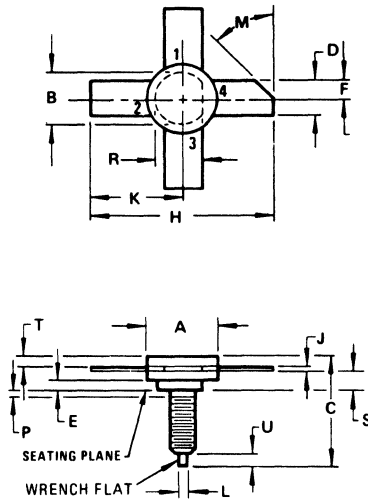
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

T92

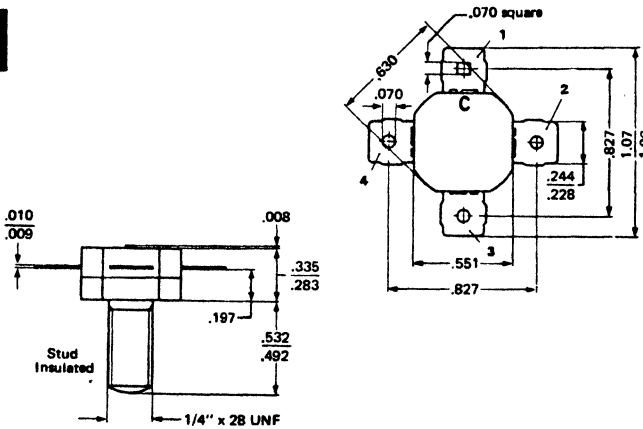


T93

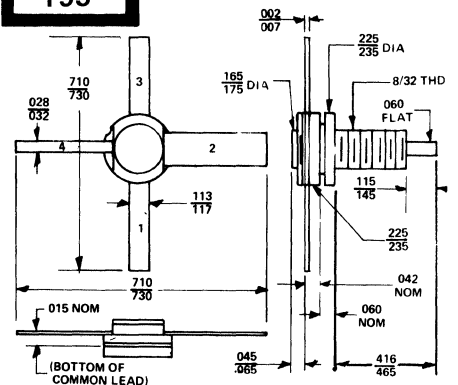


	A	B	C	D	E	F	H	J	K	L	M	P	R	S	T	U
T93	.300 MAX	.255 NOM	.645 MAX	.220 MAX		.110 MAX	1.000 MAX	.004 MAX	.500 MAX		45° NOM	NA	NA	.120 MAX	.100 MAX	.115 MAX
T93a	.370 MAX	.336 MAX	.719 MAX	.220 MAX		.110 MAX	1.055 MAX	.004 MAX	.527 MAX		45° NOM	NA	.299 MAX	.158 MAX	.085 MAX	.115 MAX
T93b	.375 MAX	.320 MAX	.710 MAX	.220 MAX	.070 MAX	.110 MAX	1.040 MAX	.004 MAX	.520 MAX		45° NOM	.050 MAX	.299 MAX	.158 MAX	.085 MAX	.100 MAX
T93c	.383 MAX	.330 MAX	.750 MAX	.230 MAX	.080 MAX	.115 MAX	1.130 MAX	.066 MAX	.565 MAX		45° NOM	.062 MAX	NA	.106 MAX	.106 MAX	.141 MAX
T93d	.400 MAX	.415 MAX	.775 MAX	.215 MAX	.072 MAX	.107 MAX	.870 MAX	.003 MAX	.435 MAX		45° NOM	.050 MAX	.383 MAX	.151 MAX	.083 MAX	.098 MAX
T93e	.370 MAX	.320 MAX	.700 MAX	.215 MAX	.070 MAX	.107 MAX	.870 MAX	.003 MAX	.435 MAX		45° NOM	.050 MAX	.299 MAX	.158 MAX	.083 MAX	.098 MAX

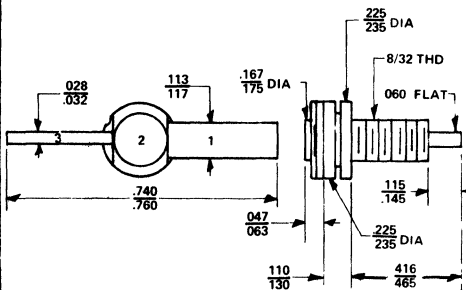
T94



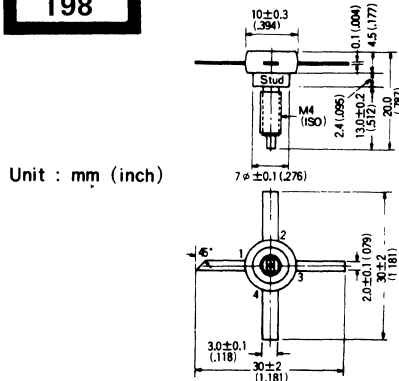
T95



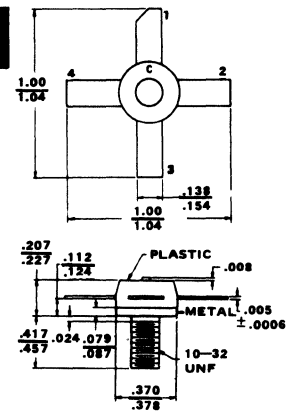
T96



T98



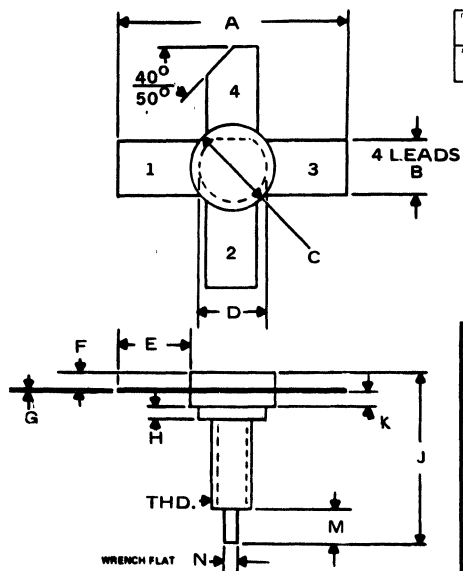
T103



15. OUTLINE DRAWINGS

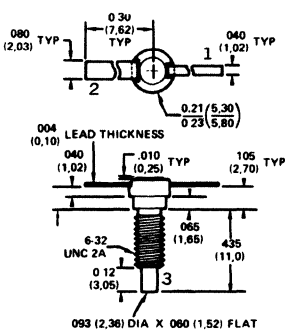
IN DRAWING NUMBER SEQUENCE

T111

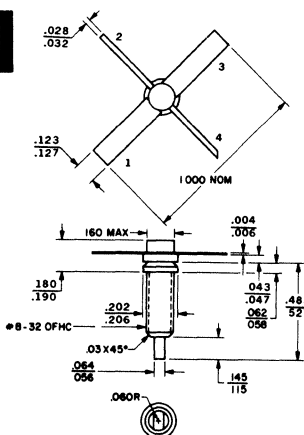


	A	B	C	D	E	F	G	H	J	K	M	N	THD
T111	1.055	.221	.370	.300	.300	.085	.004	.070	.710	.086	.100	.055	8-32UNC-3A
T111a	1.065	.229	.380	.300	.350	.095	.006	.080	.750	.094	.130	.065	
	1.000	.225		.225	NOM	.095	.005		.545		.115		8-32UNC-2A
							NOM		.635		.145		

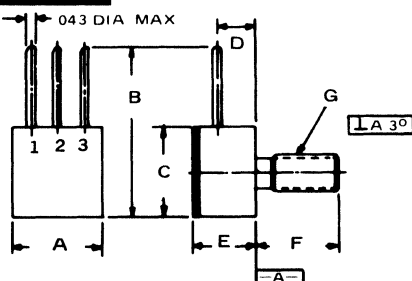
T112



T114

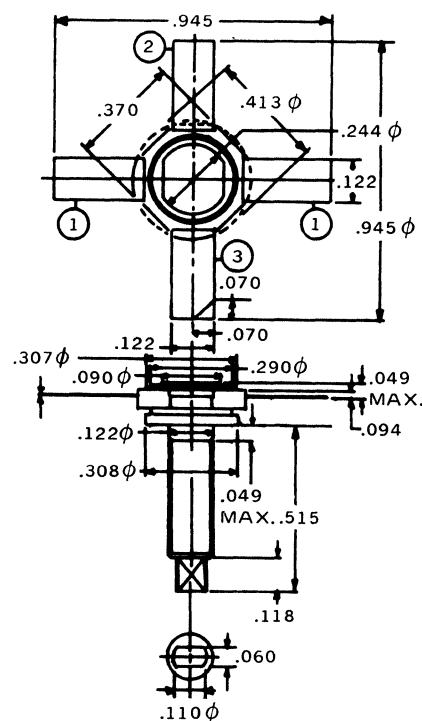


T118

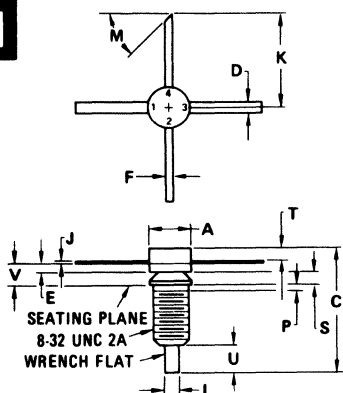


	A	B	C	D	E	F	G
T118	.525	1.000	.625	.215	.350	.440	#10-32UNF-2A
T118a	.625	1.085	.625	.230	.370	.445	1/4-28UNF-2A

T121



T123

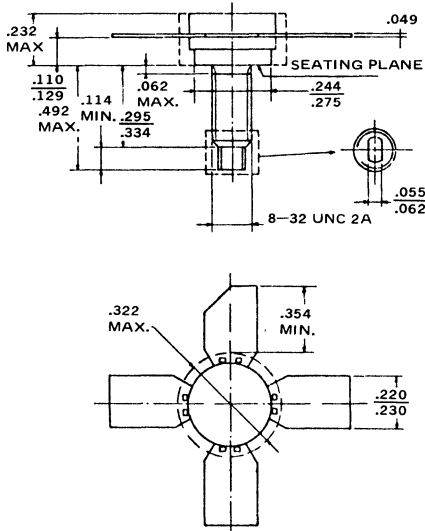


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.08	5.59	0.200	0.220
C	13.97	16.26	0.550	0.640
D	1.40	1.65	0.055	0.065
E	1.02	1.27	0.040	0.050
F	0.64	0.89	0.025	0.035
J	0.08	0.18	0.003	0.007
K	11.05	-	0.435	-
L	1.40	1.65	0.055	0.065
M	-	45° NOM	-	45° NOM
P	-	1.27	-	0.050
S	1.40	1.65	0.055	0.065
T	1.40	1.78	0.055	0.070
U	2.79	3.81	0.110	0.150
V	2.41	2.92	0.095	0.115

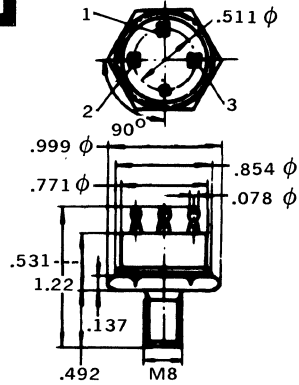
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

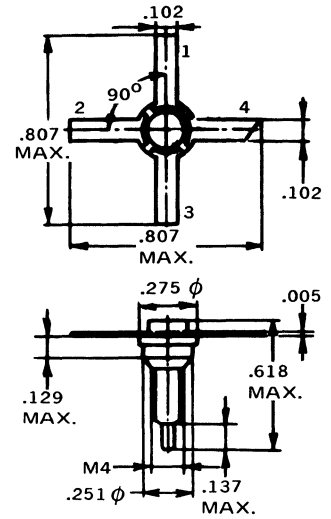
T132



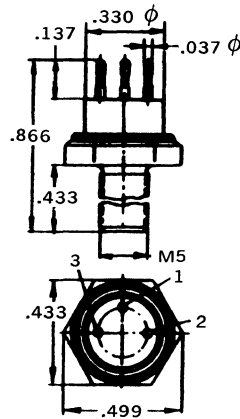
T133



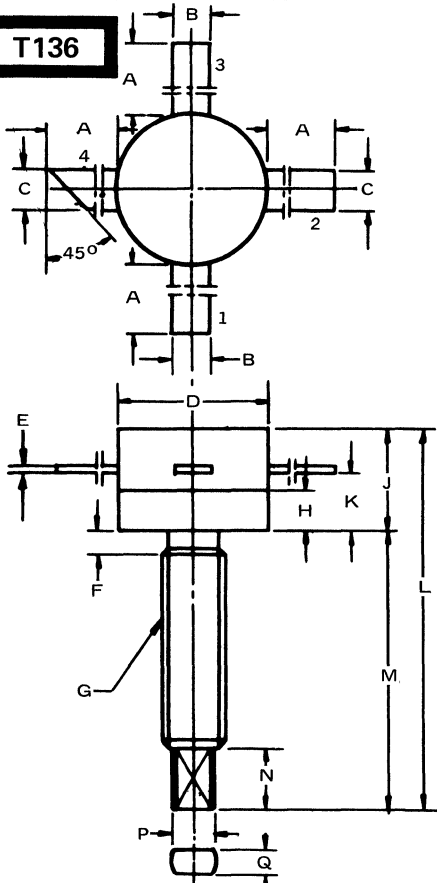
T134



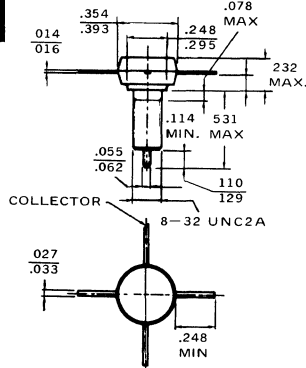
T135



T136



T137

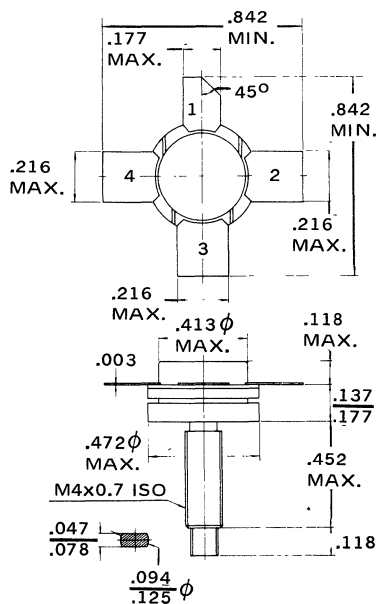


	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
T136	.196 MIN	.070 MAX	.070 MAX	.295 MAX	.004 MAX	.039 MAX	M3	.078	.220 MAX	.106 MAX	.744 MAX	.511	.118	.078φ	.055
T136a	.196 MIN	.098 MAX	.098 MAX	.295 MAX	.004 MAX	.039 MAX	M3	.078	.193 MAX	.129		.508 MAX	.118	.078φ	.055

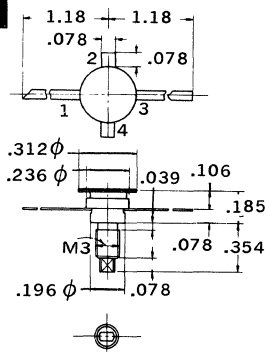
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

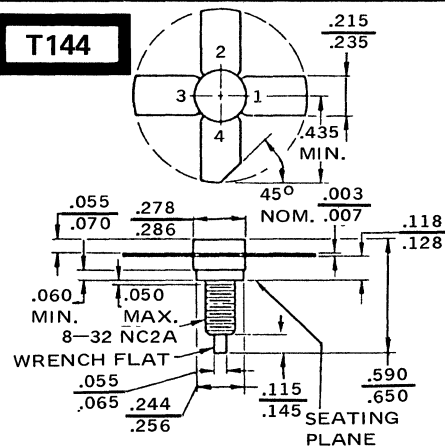
T142



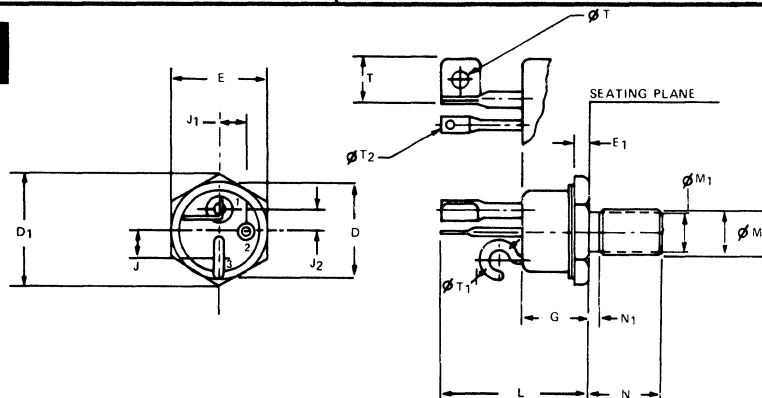
T143



T144



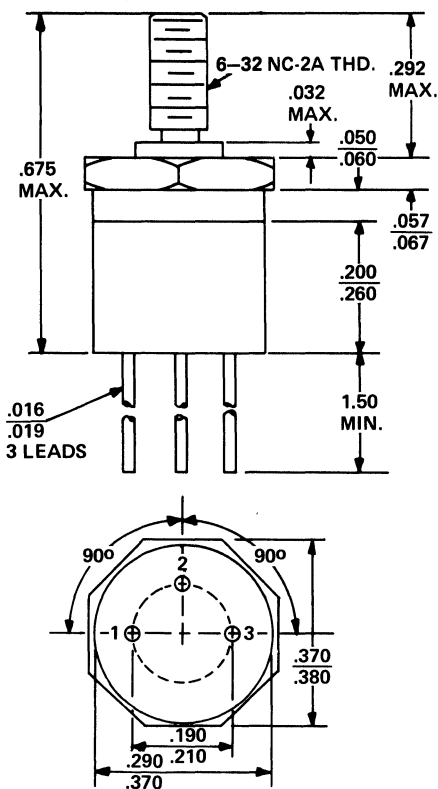
T145



NOTES:

1. Chamfer or undercut on one or both ends of hexagon; portion is optional.
2. Package contour with the exception of the hexagon is optional within dimensions specified.
3. Pitch diameter: 1/2 - 20 UNF - 2A (plated).
4. Position of leads in relation to the hexagon is not controlled.
5. Length of incomplete or undercut threads of φ M.
6. Controlling dimensions: inch.

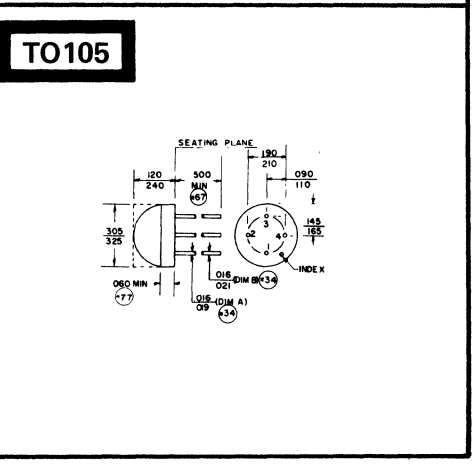
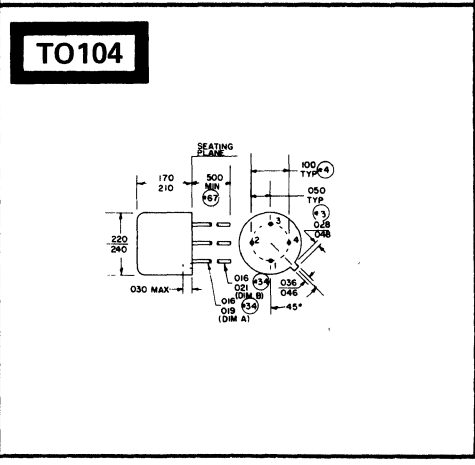
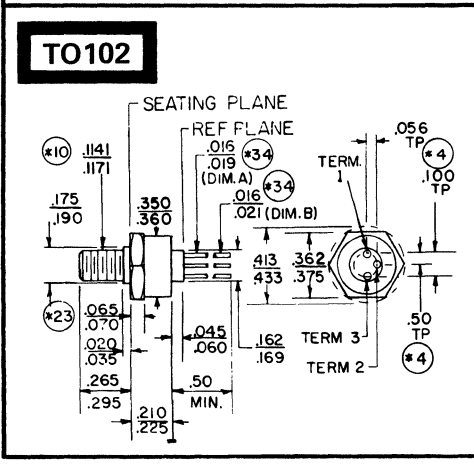
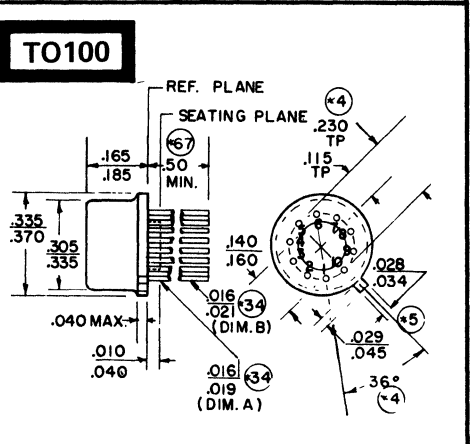
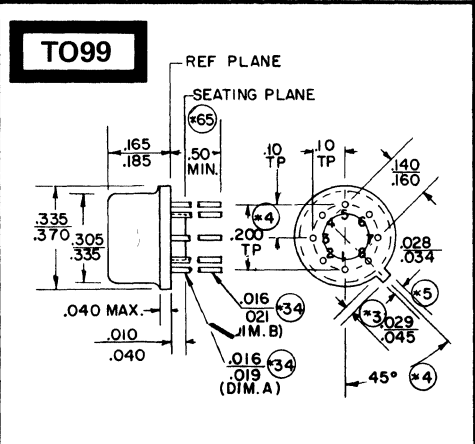
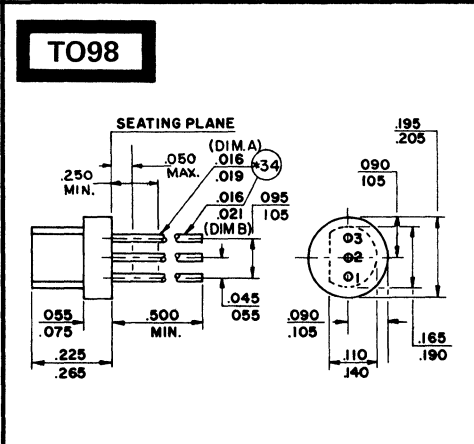
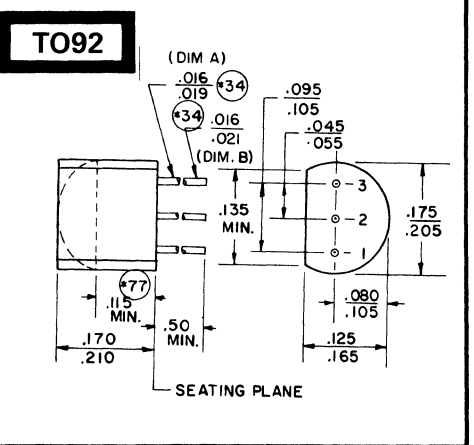
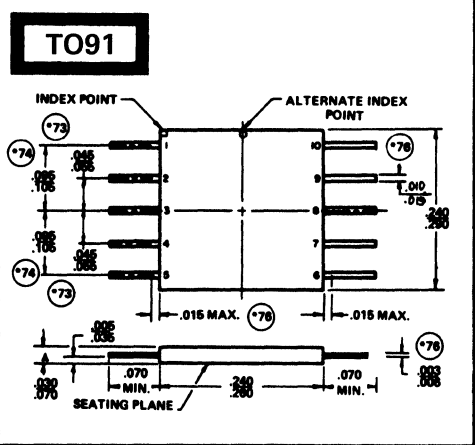
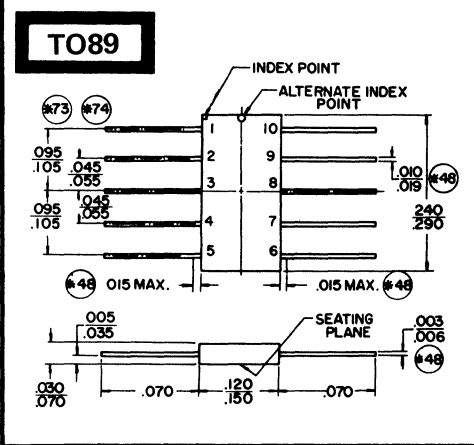
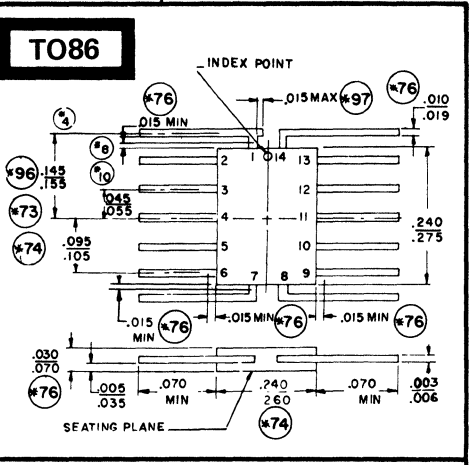
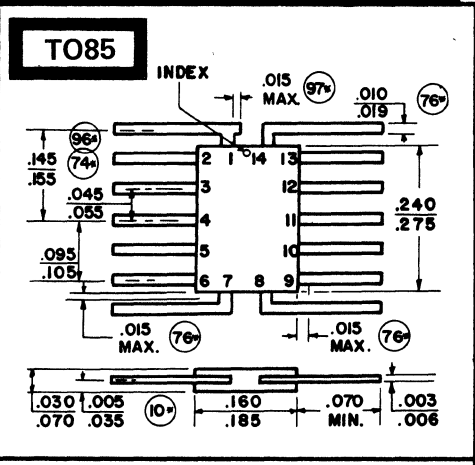
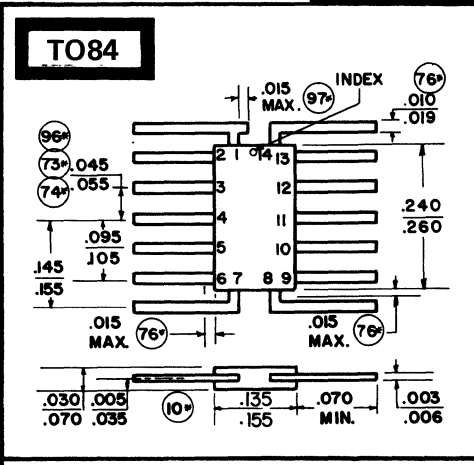
T146



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
∅D	0.885	1.031	22.48	26.19
∅D		1.227		31.17
E	1.031	1.065	26.19	27.05
E1		0.185		4.70
G		0.775		19.69
J1	0.297	0.317	7.54	8.05
J	0.320	0.340	8.13	8.64
J2	0.234	0.254	5.94	6.45
L		1.680		42.67
∅M				
∅M1	0.425	0.500	10.80	12.70
N	0.781	0.828	19.84	21.03
N1		0.125		3.18
T		0.512		13.01
∅T	0.180	0.210	4.57	5.33
∅T1	0.234	0.281	5.94	7.14
∅T2		0.104		2.64
NOTE	6		6	

15. OUTLINE DRAWINGS

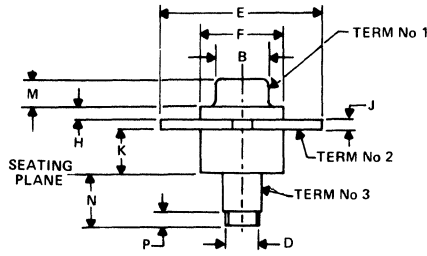
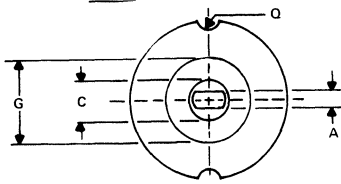
IN DRAWING NUMBER SEQUENCE



15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

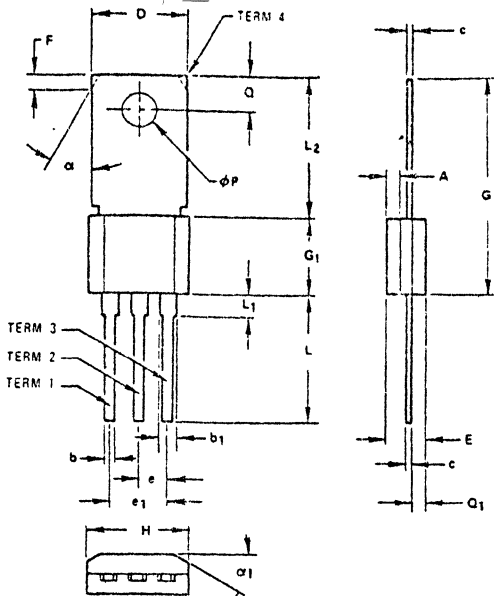
Y201/TO201



NOTES
1 REFER TO RULES FOR DIMENSIONING SEMICONDUCTOR PRODUCT OUTLINES INCLUDED IN PUBLICATION No.76.

	A	B	C	D	E	F	G	H	J	K	M	N	P	Q
Y201a/	.045	.165	.115	.090	.495	.245	.245	.045	.025	.145	.095	.165	.040	.027
TO201AA	.055	.175	.125	.110	.505	.255	.255	.060	.035	.175	.115	.195	.060	.033

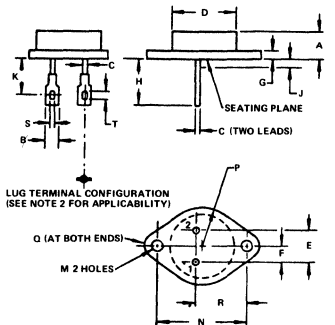
Y202/TO202



NOTES: 1. REFER TO APPLICABLE SYMBOL LIST.
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5 - 1973.
3. CONTOUR OPTIONAL WITHIN DIMENSIONS SPECIFIED.
4. LEAD DIMENSIONS UNCONTROLLED IN THIS ZONE TO ALLOW FOR BODY AND LEAD IRREGULARITIES.
5. CONTROLLING DIMENSIONS: INCH.

	A	b	b1	c	D	E	e	e1	F	G	G1	H	L	L1	L2	ØP	Q	Q1	a	a1	NOTES
Y202a/	.045			.010	.360	.120	.095	.190			.280		.371	.100	.480	.123	.095	.039			1,2,5
TO202AA	.055			.026	.400	.190	.105	.210			.320		.520	MAX	.520	.132	.155	.076			
NOTES:																					
Y202b/	.060	.023	.035	.018	.270	.130	.095	.190	.070	.760	.230	.330	.360	.050		.123	.115	.039	30°	50°	1,2,5
TO202AB	MAX	.031	.055	.026	.410	.190	.105	.210	MAX	.840	.320	.420	.450	.100		.132	.135	.070	MAX	MAX	
NOTES:	3		3						3					3,4					3		
Y202c/	.062	.023	.065	.019	.390	.173	.095	.190	.060	.860	.310	.390	.480	.067		.140	.140	.042		50°	1,2,5
TO202AC	MAX	.029	.080	.026	.410	.183	.105	.210	MAX	.880	.360	.400	.510	.077		.150	.160	.069		MAX	
NOTES:	3								3					4						3	

Y204/TO204



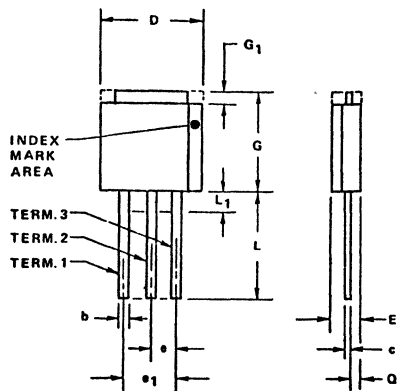
NOTES
1 Refer to rules for dimensioning semiconductor product outlines included in Publication No. 76
2 Lug terminal configuration required
3 Lug terminal configuration not applicable - straight pins required
4 Square or radius on end of terminal and hole configuration optional
5 These dimensions should be measured at points .050 .055 below seating plane. When gauge is not used, measurement will be made at the seating plane
6 C applies between J and H Diameter is uncontrolled in J
7 The seating plane of the header shall be flat .001 concave to .004 convex inside a .930 diameter circle on the center of the header and flat within .001 concave to .006 convex overall

	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T	NOTES	REF	
Y204a/	.250	.038	.875	.420	.205	.060	.312	.050		.151	1.177	.495	.131	.655				1,3,7	TO3	
TO204MA	.450	.043	MAX	.440	.225	.135	.500	MAX		.161	1.197	.525	.188	.675						
NOTES:	5		5		5		5		5		.500	.151	1.177	.495	.131	.655	.072	.072	1,2,7	TO41
Y204b/	.250	.125	.038	.875	.420	.205	.060	.560	.050		.151	1.177	.495	.131	.655					
TO204MB	.450	.210	.053	MAX	.440	.225	.135	.880	MAX	.581	1.197	.525	.188	.675			.120	.120		
NOTES:	4	6			5		5		6											
Y204c/	.250	.048	.875	.420	.205	.060	.312	.050		.151	1.177	.495	.131	.655						
TO204MC	.450	.053	MAX	.440	.225	.135	.500	MAX		.161	1.197	.525	.188	.675						
NOTES:		6			5		5		6											

15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

Y221/TO221

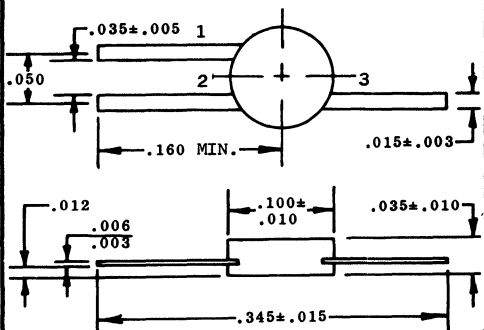


- NOTES:
1. REFER TO APPLICABLE SYMBOL LIST.
 2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5 - 1966.
 3. LEAD DIMENSIONS UNCONTROLLED IN THIS ZONE TO ALLOW FOR BODY AND LEAD IRREGULARITIES.
 4. LEAD SPACING TO BE MEASURED BETWEEN .125 AND .150 FROM THE POINT OF EMERGENCE FROM THE BODY.
 5. CONTROLLING DIMENSIONS: INCH.

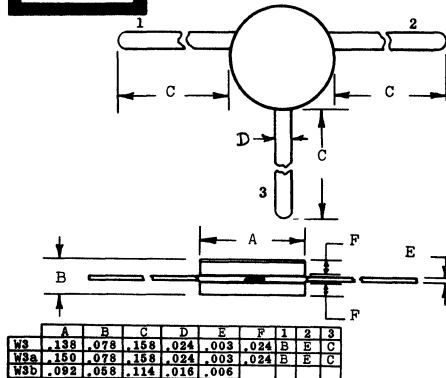
	b	c	D	E	e	e1	G	G1	L	L1	J	NOTES
Y221a/ TO221AA	.045 .055	.010 .026	.360 .400	.120 .190	.095 .105	.190 .210	.220 .370	.050 MAX.	.371 .520	.100 MAX.	.039 .076	1, 2, 5
NOTES:					4	4				3		
Y221b/ TO221AB	.023 .029	.010 .026	.360 .400	.120 .190	.095 .105	.190 .210	.220 .370	.050 MAX.	.371 .520	.100 MAX.	.039 .076	1, 2, 5
NOTES:					4	4				3		



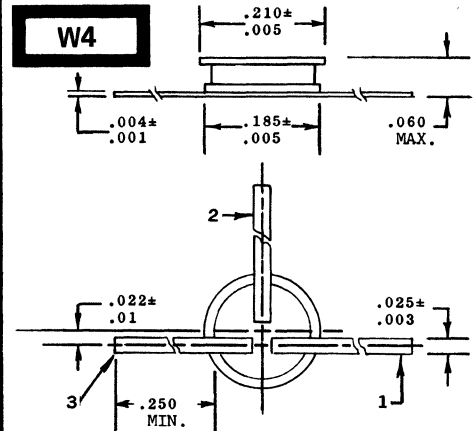
W2



W3



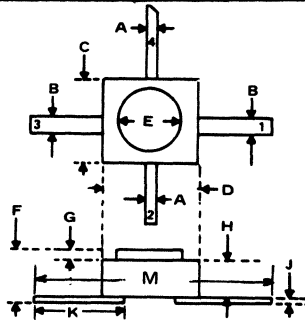
W4



15. OUTLINE DRAWINGS

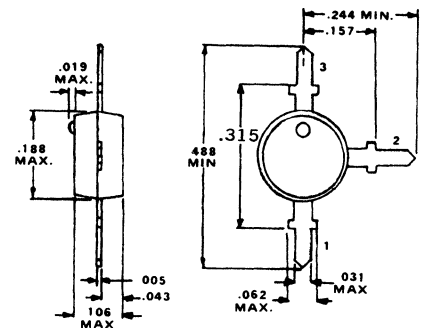
IN DRAWING NUMBER SEQUENCE

W14

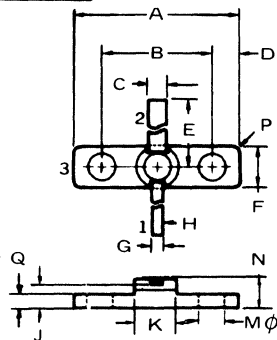


	A	B	C	D	E	F	G	H	J	K	M	REMARKS
W14	.020	.040	.070	.070	.070	NA	NA	.030	.004	.250		
			TYP	TYP	DIA			TYP		TYP		
W14a	.039	.020	.098	.098	.098	NA	NA	.040	.004		.500	LEAD 1 SLANTED
			TYP	TYP	TYP			TYP				
W14b	.024	.050	.126			.050						
			TYP									
W14c	.015	.035	.092	.092				.039	.002		.432	
			TYP	TYP				TYP			TYP	
	.023	.043	.104	.104				.051	.004		.510	

W15

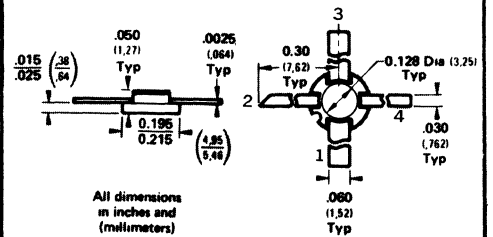


W16



	A	B	C	D	E	F	G	H	J	K	M	N	P	Q
W16	.800	.560	.080	.120	.300	.200	.040	.004	.125	.220	.120	.150	.310	
	TYP	TYP	TYP	TYP	TYP	TYP	TYP	TYP	TYP	TYP	TYP	TYP	TYP	
W16a	.825	.531	.078	.295		.275	.059			.230		.196		.078
	MAX	MAX	MAX	MAX		MAX	MAX					MAX		MAX

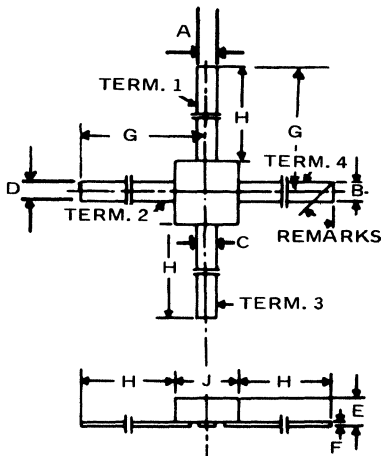
W17



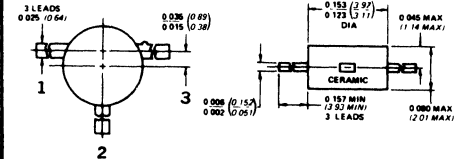
All dimensions in inches and (millimeters)

W18

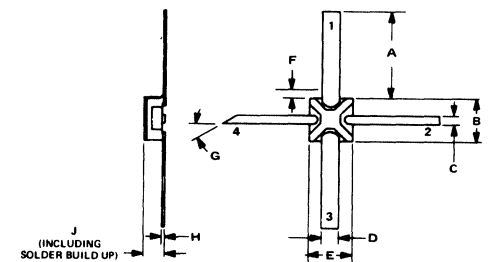
	A	B	C	D	E	F	G	H	J	REMARKS
W18	.021	.021	.021	.021	.035	.002		.196	.066	LEAD 4 SLANTED 45°
	.026	.026	.026	.026	.060	.007			.093	
W18a	.019	.019	.019	.019	.055	.003	.157		.068	LEAD 2 SLANTED
					MAX		MIN	MIN		
W18b	.062	.019	.062	.019	.055	.003	.157	.216	.098	LEAD 2 SLANTED 45°



W20



W21

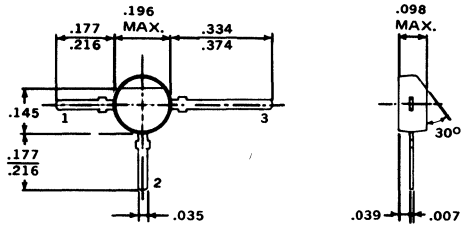


	A	B	C	D	E	F	G	H	J
W21	.200	.090	.017	.036	.090	.020	30°	.003	.050
	MIN	.110	.023	.042	.110			.006	MAX
W21a	.275	.131	.023	.074	.131		45°	.003	.059
		.143	.031	.082	.143				
W21b	.230	.095	.016	.036	.095			.002	.050
	.280	.105	.074	.044	.105			.006	MAX
W21c	.230	.065	.016	.036	.065			.002	.050
	.280	.075	.024	.044	.075			.006	MAX

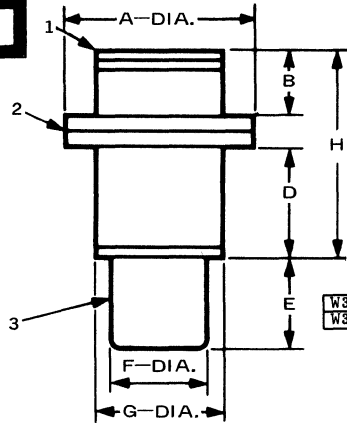
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

W31

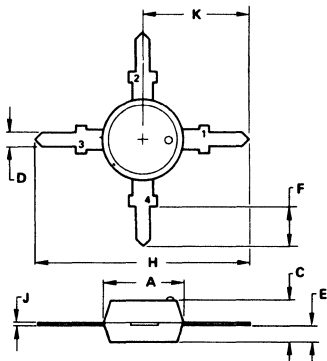


W32



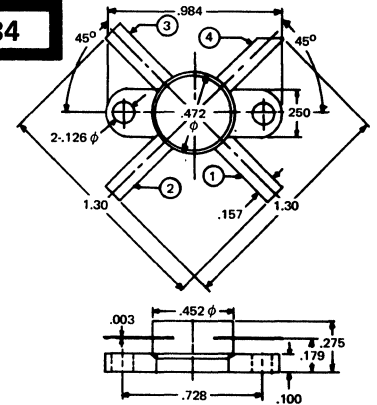
	A	B	C	D	E	F	G	H
W32	.120	.045	.135	.067	.062	.062	.080	
W32a		.047	.136	.067	.062	.060	.080	.198

W33

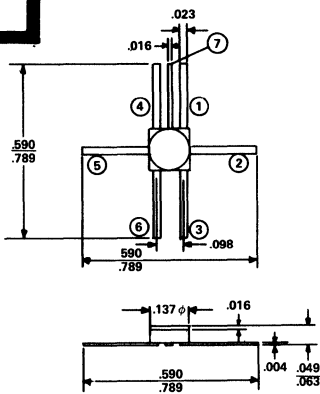


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	-	4.78	-	0.188
C	-	3.05	-	0.120
D	0.64	0.89	0.025	0.035
E	0.97	1.22	0.038	0.048
F	2.21	2.46	0.087	0.097
H	12.40	12.90	0.488	0.508
J	0.10	0.15	0.004	0.006
K	6.20	6.45	0.244	0.254

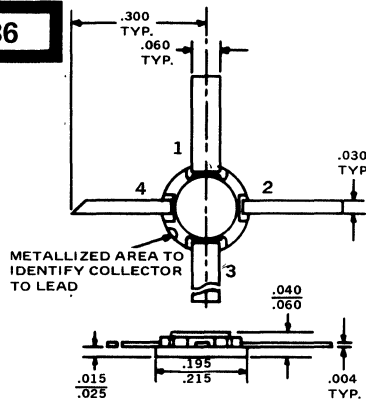
W34



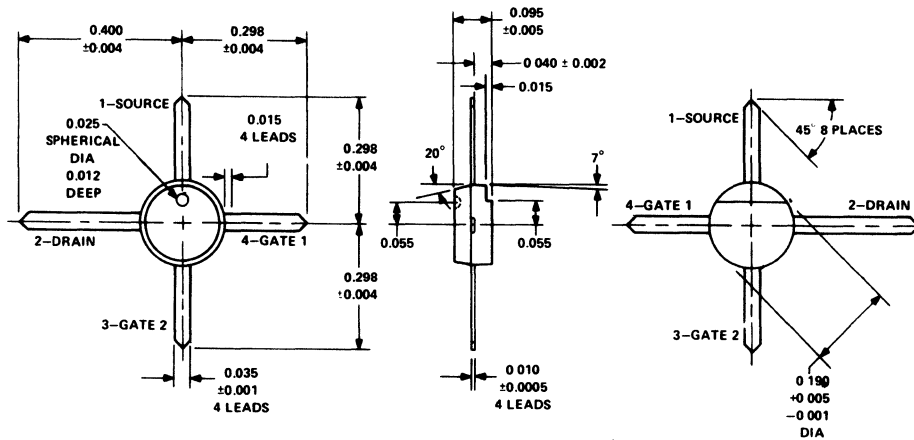
W35



W36



W37

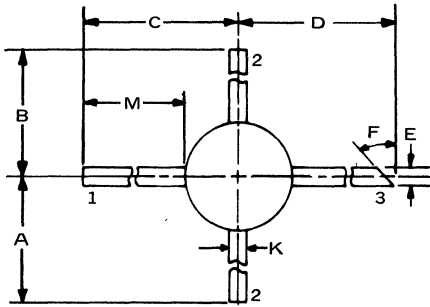


15. OUTLINE DRAWINGS

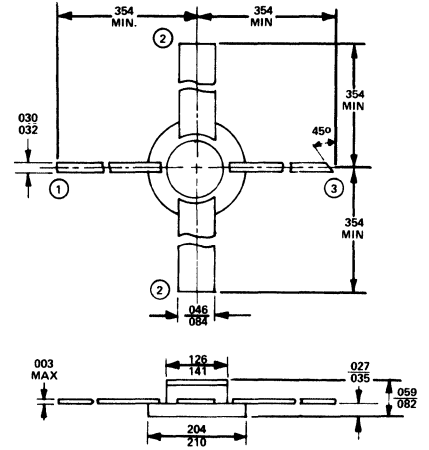
IN DRAWING NUMBER SEQUENCE

W69

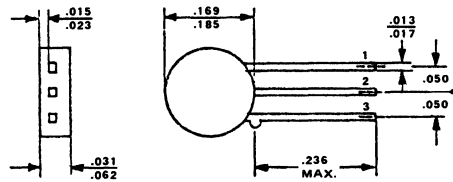
	A	B	C	D	E	F	G	H	J	K	M
W69	.354 MIN	.354 MIN	.354 MIN	.354 MIN	.017 .029	45°	.133 .149	.039 .063	.005 MAX		
W69a	.200 TYP	.200 TYP	.200 TYP	.200 TYP	.020 TYP	45°	.062 TYP	.031 TYP	.004 TYP		
W69b					.015 .023	45°	.068 .128	.039 .051	.003 .005	.035 .043	.216 .255
W69c	.200 TYP	.200 TYP	.200 TYP	.200 TYP	.020 TYP	45°	.062 TYP	.031 TYP	.004 TYP	.030 TYP	



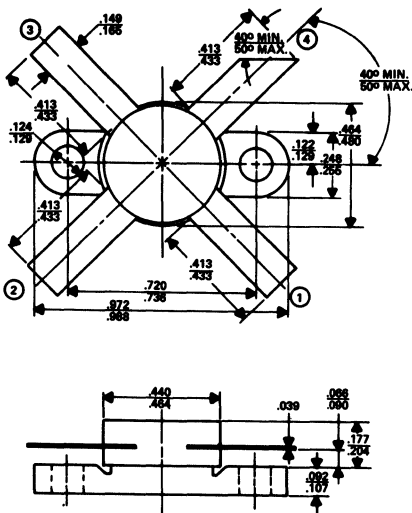
W70



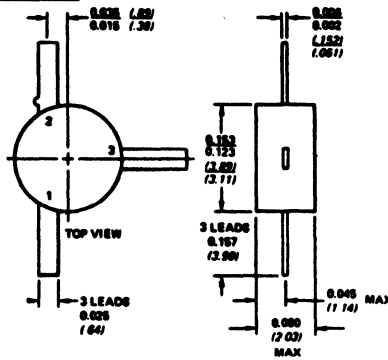
W71



W72



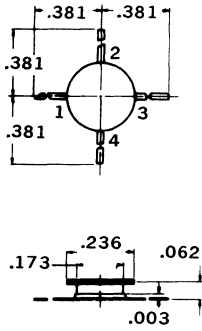
W73



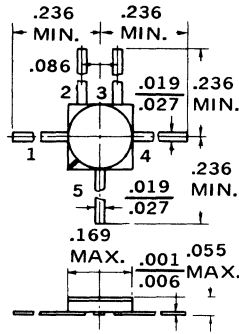
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

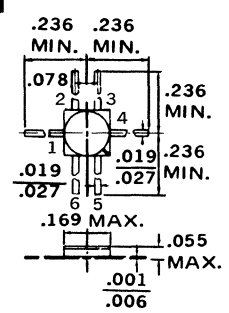
W83



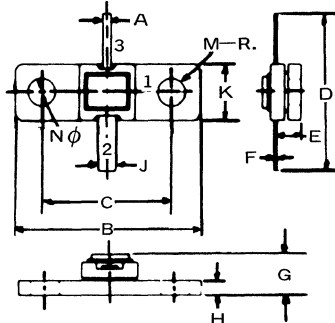
W84



W85

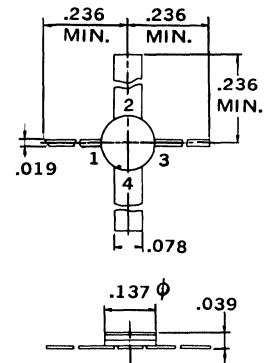


W86

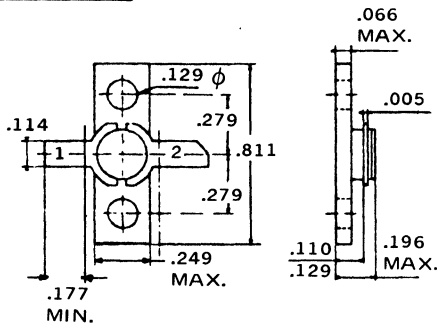


	A	B	C	D	E	F	G	H	J	K	M	N
W86	.039	.787	.551	.685	.118	.003	.161	.055	.078	.259	.039	.118
W86a	.059	.826	.531	.685	.098	.003	.196	.078	.098	.275	.039	.102
			.570		.137							.118

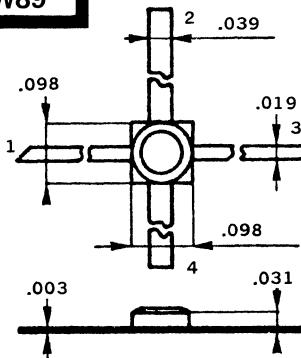
W87



W88

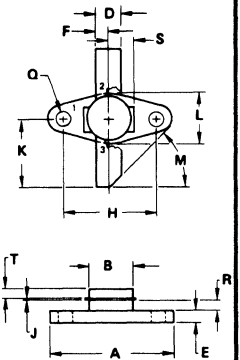


W89

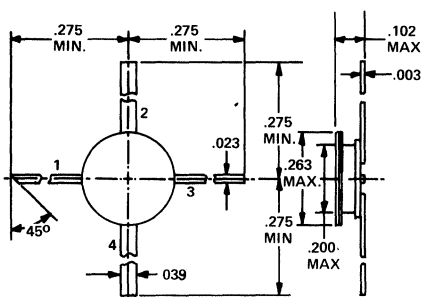


W91

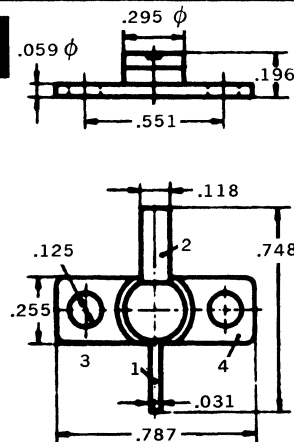
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	21.08	21.59	0.830	0.850
B	9.27	9.78	0.365	0.385
D	5.59	5.84	0.220	0.230
E	2.03	2.41	0.080	0.095
F	2.79	2.92	0.110	0.115
H	15.11	15.37	0.595	0.605
J	0.10	0.15	0.004	0.006
K	13.08	13.59	0.515	0.535
L	9.91	10.41	0.390	0.410
M	45°	NOM	45°	NOM
Q	2.92	3.18	0.115	0.125
R	1.52	2.03	0.060	0.080
S	-	5.38	-	0.212
T	2.03	2.54	0.080	0.100



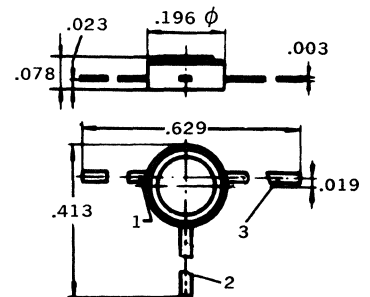
W93



W94



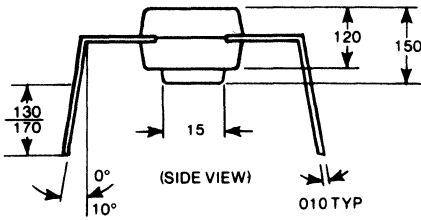
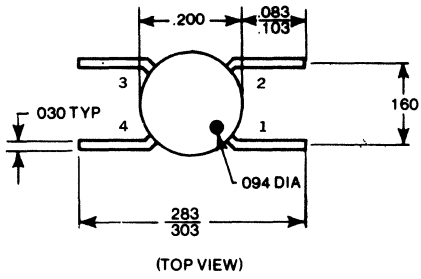
W95



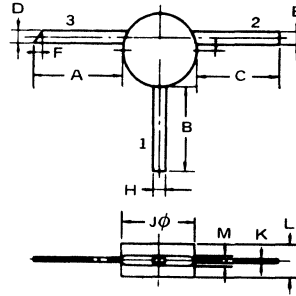
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

W105

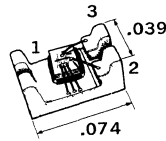


W106

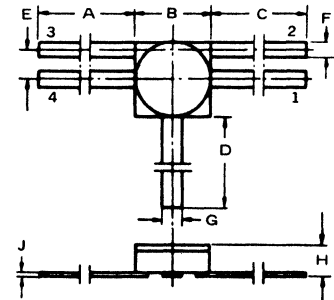


	A	B	C	D	E	F	G	H	J	K	L	M
W106	.157	.157	.157	.023	.023	.013	.023	.023	.149	.003	.078	.023
	MIN	MIN	MIN						MAX		MAX	

W107

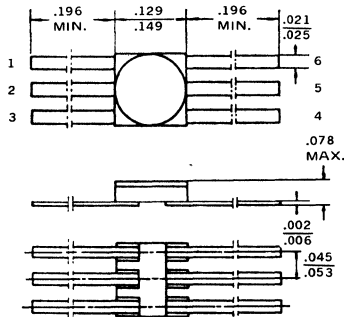


W108

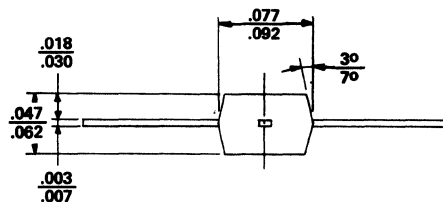
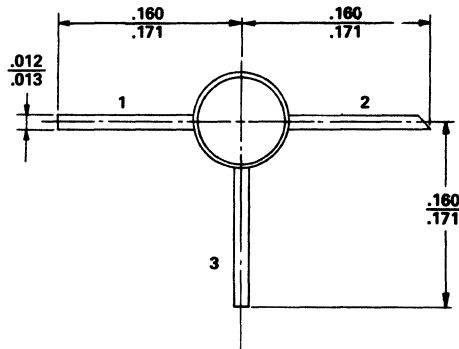


	A	B	C	D	E	F	G	H	J
W108	.196	.128	.196	.196	.045	.019	.019	.078	.002
	MIN	.148	MIN	MIN	.053	.027	.027	MAX	.004

W109



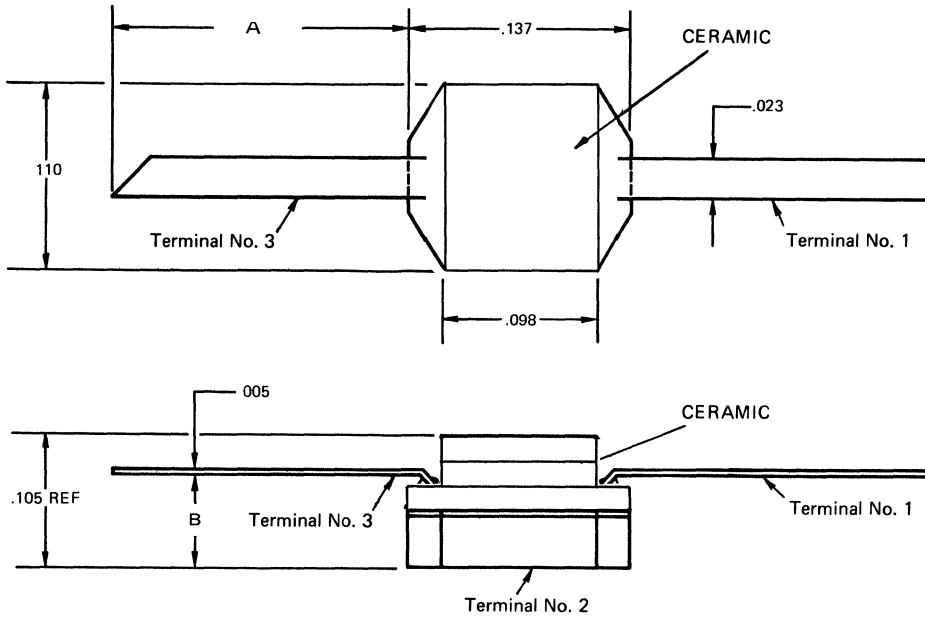
W110



15. OUTLINE DRAWINGS

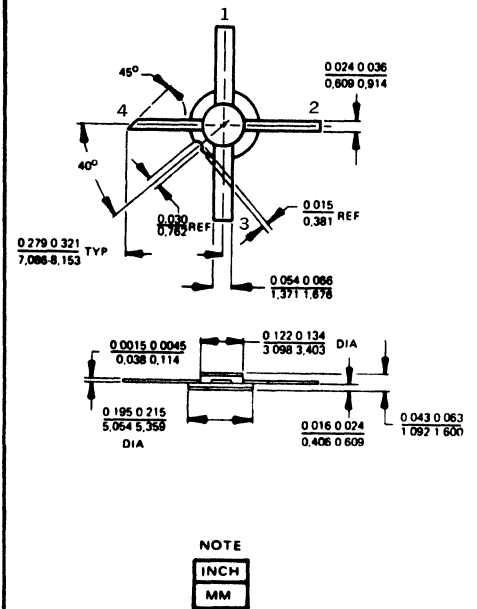
IN DRAWING NUMBER
SEQUENCE

W114

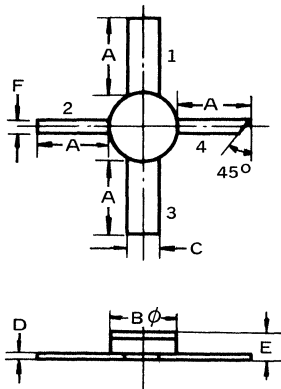


	A	B
W114	.125 TYP	.055
W114a	.187 TYP	.065

W115

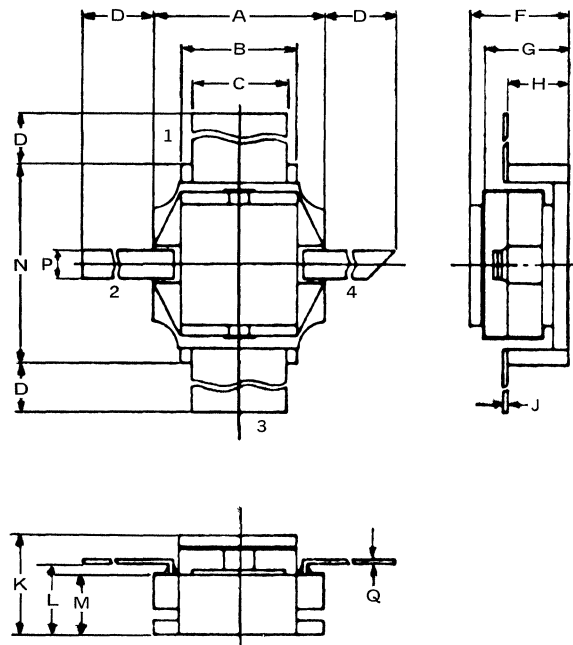


W116



	A	B	C	D	E	F
W116	.196	.130	.070	.004	.047	.035
	MIN	.150	.090		.070	.043
W116a	.158	.157	.070	.004	.055	.020
	MIN	.177	.090		.075	.028
W116b	.196	.150	.070	.004	.079	.035
	MIN	MAX	.090		MAX	.043

W117

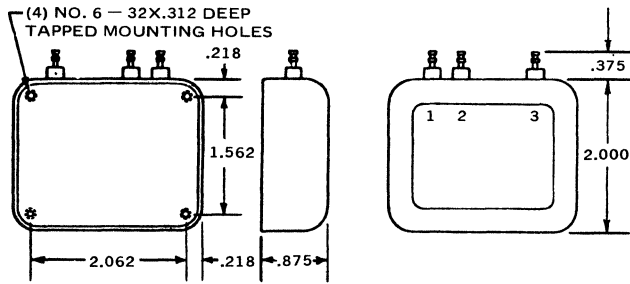


	A	B	C	D	F	G	H	J	K	L	M	N	P	Q
W117	.126	.087	.071	.196	.106	.083	.035	.004	.106	.043	.043	.146	.020	.004
	MIN	.102	.087	MAX	MAX	.087	.059		MAX	.067	.059	.169	.028	

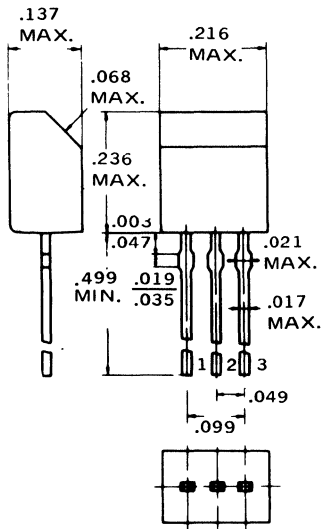
15. OUTLINE DRAWINGS

IN DRAWING NUMBER
SEQUENCE

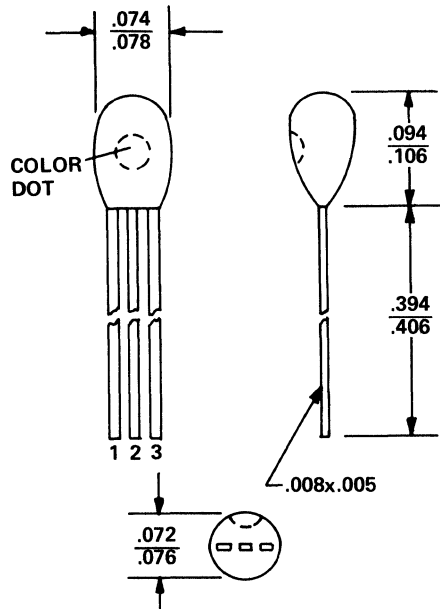
X171



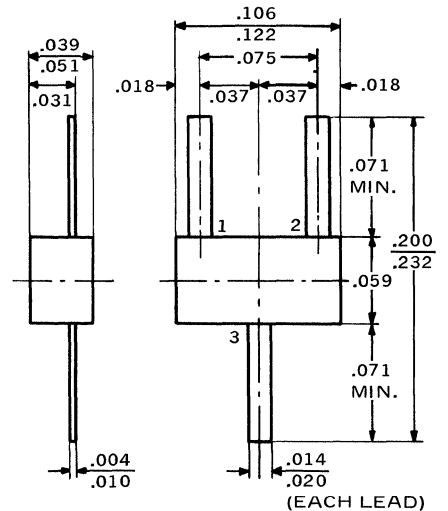
X172



X173



X174



Y200 SERIES

THE Y200 SERIES (Y200 & HIGHER) REPRESENTS THE TO200 SERIES, WITH THE PREFIX "TO" REPLACED BY "Y" FOR SPACE-SAVING PURPOSES. THESE DRAWINGS ARE LOCATED IN ORDER IN THE "TO" SERIES.

JEDEC "TO" DRAWING NOTES

10. 6-32NC-2A. Maximum pitch diameter of plated threads shall be basic pitch diameter (.1177, 2.98MM). Reference (screw thread standards for federal services 1957) handbook H28-part 1.
11. Complete threads shall extend to within three threads of the seating plane and shall remain within tolerances to within two threads tip of stud.
12. Maximum (.019, .483MM) diameter leads and maximum (.230, 5.84MM) stud shoulder to within .007 (.178MM) radius of true location relative to the (.460, 11.68MM) diameter flange at a gauging plane .054 (1.37 MM) .001 (.025MM), - .000 (.000MM), from the reference plane.
13. Dimension does not include sealing flanges.
14. The outline contour with exception of hexagon is optional within zones or dimension specified.
15. Pitch diameter of 10-32 UNF-2A (coated) threads. (ASA B1.1-1960).
16. This terminal can be flatten and pierced or hook type.
17. Position of leads in relation to the hexagon is not controlled.
18. Pitch diameter - thread 1/4-28 UNF-2A (coated). Reference screw thread standards for federal services - handbook H-28 or ASA B1.1 - 1960.
19. Pitch diameter - thread 5/16-24 UNF-2A (coated). Reference (screw thread standards for federal services - handbook H-28 or ASA B1.1 - 1960).
20. Contour and orientation of fixed terminal lugs are optional.
21. Minimum flat.
22. Minimum diameter of seating plane.
23. A chamfer (or undercut) on one or both ends of hexagonal portion is optional.
24. Minimum difference in terminal lengths to establish datum line for numbering terminals.
25. Minimum spacing between terminals.
26. The device may be measured by direct methods or by the gage and gaging procedure described on gage drawing GS-1.
27. Four leads.
28. These dimensions should be measured at points .050 to .055 below seating plane. When gage is not used, measurement will be made at seating plane.
29. Two leads.
30. Insulation rundown.
31. Three leads.
32. (Insulated) locator pin.
33. Externally coated devices shall not have coating on the leads beyond this zone.
34. (All leads) Diameter is uncontrolled to .050 from seating plane and beyond minimum tolerance of lead length (1.5 or .5) from seating plane. Dim A applies between .050 and .250 from seating plane. Dim B applies between .250 and minimum tolerance of lead length from seating plane.
35. Four holes.
36. Four equally spaced feet to lie within this zone. Minimum distance between a lead and a foot .031.
37. Angular orientation of individual terminals is undefined.

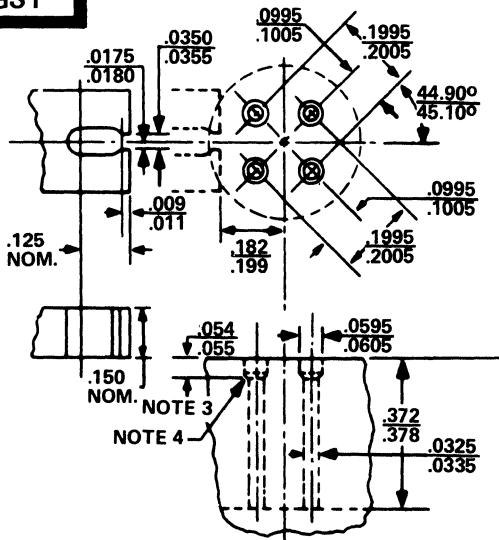
JEDEC "TO" DRAWING NOTES

66. (Four leads). Maximum number of leads omitted in this outline, none (0). The number and position of leads actually present are indicated in the product registration. Outline designation determined by the location and minimum angular or linear spacing of any two adjacent leads.
67. (Four, six, ten, or twelve leads). Maximum number of leads omitted in this outline, one (1). The number and position of leads actually present are indicated in the product registration. Outline designation determined by the location and minimum angular spacing of any two adjacent leads.
68. Length of incomplete or undercut threads.
69. Lead diameter uncontrolled above the seating plane.
70. Contour and orientation of terminal flats are undefined.
71. The body and terminals of the device, with the exception of the extended lug length, lies within the cylinder defined by the dotted outline.
72. Pitch diameter of 1/2-20 UNF-2A (coated) threads (ASA-B1.1).
73. Leads missing from their designated positions shall also be counted when numbering leads for specific applications.
74. Lead spacing shall be measured within .030 (.762MM) from the point of emergence from the body.
75. Diameter of hole or width of slot out either side of terminals.
76. Lead dimensions uncontrolled in this zone to allow for body and lead finish irregularities.
77. Contour of the package beyond this zone is uncontrolled.
78. Seated height with lead bent at right angles.
79. Flexible leads for terminals 1 and 2 are identified by color coding for specific applications.
80. Pitch diameter of 3/4-16 UNF-2A (coated) threads (ASA B1.1).
81. Irregularity in body outline not controlled in this zone.
82. Terminal configurations optional between the body of the device and the flats on the terminals.
83. Visual or mechanical index is optional if one lead is omitted.
84. The body of the device with exception of the hexagon, thread, and flexible lead extensions lies within the cylinder defined by the dotted outline.
85. Pitch diameter of 1-12 UNF-2A (coated) threads. (ASA Bul. 1-1960)
86. The body of the device with the exception of heat sink and flexible leads lies within the cylinder defined by the dotted outline.
87. Pitch diameter of threads - 1/2-20 UNF2B (ASA Bul. 1-1960).
88. Parallel, twisted or coaxial flexible leads for terminals 1 and 2 are identified by color for specific applications. Coaxial shielded lead has shield as terminal 2.
89. When dimensions less than .180 (4.58mm) are used, clearance in the second fin will be provided.

JEDEC GAUGE DESIGNATIONS

The Gauge Designations below are referenced in the JEDEC TO Outline Drawings

GS1



NOTES:

1. THE LOCATION OF THE TAB LOCATOR WITHIN THE LIMITS INDICATED WILL BE DETERMINED BY THE TAB AND FLANGE DIMENSIONS OF THE DEVICE BEING CHECKED.

2. THE FOLLOWING GAUGING PROCEDURE SHALL BE USED:

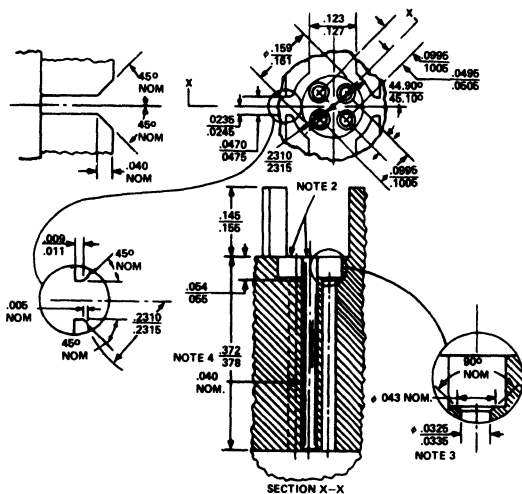
THE DEVICE BEING MEASURED SHALL BE INSERTED UNTIL ITS SEATING PLANE IS $.125''$ (3.18 MM) $\pm .010''$ ($.254 \text{ MM}$) FROM THE SEATING SURFACE OF THE GAUGE. A FORCE OF $8 \pm .5 \text{ OZ.}$ SHALL THEN BE APPLIED PARALLEL AND SYMMETRICAL TO THE DEVICE'S CYLINDRICAL AXIS. WHEN EXAMINED VISUALLY AFTER THE FORCE APPLICATION (THE FORCE NEED NOT BE REMOVED) THE SEATING PLANE OF THE DEVICE SHALL BE SEATED AGAINST THE GAUGE.

THE USE OF A PIN STRAIGHTENER PRIOR TO INSERTION IN THE GAUGE IS PERMISSIBLE.

3. GAUGING PLANE.

4. DRILL ANGLE.

GS2



NOTE 1: THE FOLLOWING GAUGING PROCEDURE SHALL BE USED:

THE DEVICE BEING MEASURED SHALL BE INSERTED UNTIL ITS SEATING PLANE IS $0.125'' \pm .010''$ FROM THE SEATING SURFACE OF THE GAUGE. A FORCE OF $8 \pm 0.5 \text{ OZ.}$ SHALL THEN BE APPLIED PARALLEL AND SYMMETRICAL TO THE DEVICE'S CYLINDRICAL AXIS. WHEN EXAMINED VISUALLY AFTER THE FORCE APPLICATION (THE FORCE NEED NOT BE REMOVED) THE SEATING PLANE OF THE DEVICE SHALL BE SEATED AGAINST THE GAUGE.

THE USE OF A PIN STRAIGHTENER PRIOR TO INSERTION IN THE GAUGE IS PERMISSIBLE.

A SPACER MAY BE USED TO OBTAIN THE $0.125''$ DISTANCE FROM THE GAUGE SEAT PRIOR TO FORCE APPLICATION.

NOTE 2: THESE SURFACES TO BE PARALLEL AND IN SAME PLANE WITHIN $\pm .001''$

NOTE 3: FOUR HOLES.

NOTE 4: PRESSED IN.



TRANSISTORS

Manufacturers' Local Offices

These manufacturers have listed their local offices in this section for your convenience. Please contact the local office nearest you for any additional information you may need.

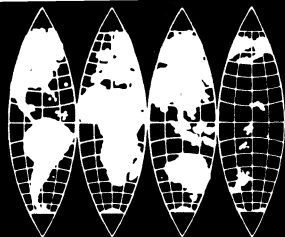
(MANUFACTURERS IN ORDER OF D.A.T.A. CODE LETTERS)

AEIL — AEI — SEMICONDUCTORS LIMITED

	Zip Code	Telephone No.	Telex
Carholme Road, Lincoln, England	LN1 1SG	0522-29992	56163

ALGG — AEG-TELEFUNKEN

	Zip Code	Telephone No.	Telex
Postfach 1109, Heilbronn, Germany	D7100	07131-8821	728746



Manufacturers' Local Offices

CEN – CENTRAL SEMICONDUCTOR

DIVISION CENTRAL STATE INDUSTRIES, INC.

148-B Lamar Street, West Babylon, New York 11704 516-643-1444 510-224-6493

INTERNATIONAL

ASIA Hong Kong 45 Hillwood Road 3-672429
Kowloon
Telex
73116

EAST EUROPE Austria Eurodia GmbH A-1100 646224 01/2150
Walgasse 37
Vienna

CRI – CRIMSON SEMICONDUCTOR, INC.

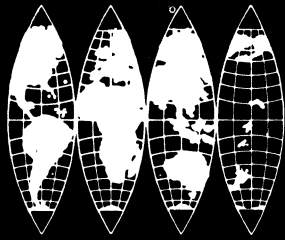
440 Park Avenue South, New York, New York 10016 212-686-7590 12319 EAST EUR NYI
422149 CRIM UI

CSI – CALVERT SEMICONDUCTORS, INC.

220 East 23rd Street, New York, New York 10010 212-481-5300 710-531-4088
Telex
223-415

CSR – CSR INDUSTRIES, INC.

35 Central Avenue, East Farmingdale, New York 11735 516-694-3404 510-224-6444



Manufacturers' Local Offices

FERB – FERRANTI LIMITED

	Zip Code	Telephone No.	Telex
Gem Mill, Chadderton, Oldham, Lancashire, England	OL9 8NP	061-624-0515	668038
GERMANY 8 Munich 22 Ferranti GmbH		089 293871	523980
Widenmayerstrasse 5			
UNITED STATESNew York Ferranti Electric, Inc.	11803	516-293-8383	510-224-6483
East Bethpage Road			

FSC – FAIRCHILD SEMICONDUCTOR

	Zip Code	Telephone No.	TWX
DIVISION OF FAIRCHILD CAMERA & INSTRUMENT CORP. 464 Ellis Street, Mountain View, California	94042	415-962-5011	910-379-6435
			Cable FAIRSEMCO

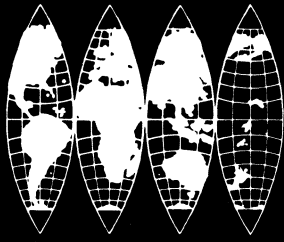
GESY – GENERAL ELECTRIC COMPANY

	Zip Code	Telephone No.	TWX
SEMICONDUCTOR PRODUCTS DEPARTMENT Electronics Park, Bldg. 7, Room 230, Syracuse, New York	13201	315-456-3487	710-541-0498
<u>EUROPE</u>			
IRELAND Dundalk General Electric Marketing		Dundalk 2371	Telex 33816
The Electronic Trading Company		thru 2380	

GPD – GERMANIUM POWER DEVICES CORPORATION

	Zip Code	Telephone No.	Telex
Shetland Industrial Center, Bldg. 4 - York Street Post Office Box 65 - Shawsheen Village Station Andover, Massachusetts	01810	617-475-5982	94-7150 GPD ANDR

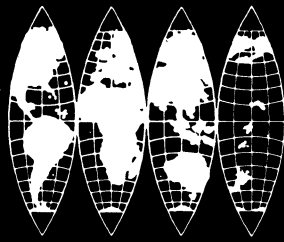
SEE OUR AD ON PAGE 202a



Manufacturers' Local Offices

IDI – INTERNATIONAL DEVICES, INC.

			Zip Code	Telephone No.	
SUBSIDIARY OF VSI CORPORATION					
3370 Livonia Avenue, Los Angeles, California					
			90034	213-559-4741	
ALABAMA	Huntsville	K & E Associates	35801	205-883-9720	Telex
TENNESSEE		3313 Memorial Parkway, S.E.			594421
(Eastern)		Suite 122			
ARIZONA	Phoenix	Cleveland Enterprises, Inc.	85020	602-944-4670	
UTAH		8902 North Central			
CALIFORNIA	Los Altos	PM Sales Company	94022	415-941-4444	
(Northern)		475 South San Antonio Road			
NEVADA					
(Northern)					
LOS ANGELES CTY. .	Sherman Oaks	Astralonics	91403	213-990-5903	
VENTURA CTY.		15300 Ventura Blvd.			
ORANGE CTY.		Suite 206			
COLORADO	Denver	Cleveland Enterprises of Colorado, Inc.,	80231	303-751-3252	
		9700 East Iliff			
		Suite H94			
FLORIDA	Clearwater	Chaco Sales	33516	813-536-9503	
		1409½ South Belcher Road			
GEORGIA	Hartwell	K & E Associates	30643	404-376-5438	
NORTH CAROLINA		Light Log Creek – Rt. 2			
SOUTH CAROLINA					
ILLINOIS	Highland Park	Bransky Sales	60035	312-433-2375	
(Northern)		1279 Lincoln Avenue, South			
WISCONSIN					
MASSACHUSETTS	Needham	McCarthy Associates	02192	617-449-1472	
NEW HAMPSHIRE		58 Beaufort Avenue			
MAINE					
RHODE ISLAND					
VERMONT					



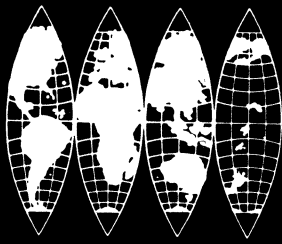
Manufacturers' Local Offices

KER — KERTRON, INC.

7516 Central Industrial Drive, Riviera Beach, Florida	Zip Code 33404	Telephone No. 305-848-9606	TWX 510-952-7611
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LTE — LANSDALE TRANSISTOR & ELECTRONICS, INC.

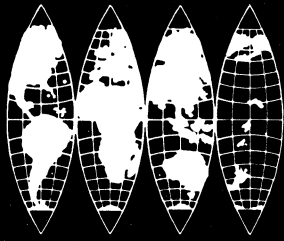
3600 West Osborn Road, Phoenix, Arizona	Zip Code 85019	Telephone No. 602-269-6262	Telex 669-416
ALABAMA Huntsville	REMCO	35801	205-883-9260
GEORGIA	3322 South Memorial Parkway		
MISSISSIPPI	Suite 65		
TENNESSEE			
CALIFORNIA Los Altos	W. W. Posey Company, Inc.	94022	415-948-7771
	895 Sherwood Avenue		
	San Diego	Van Gott & Associates	92109
		Post Office Box 99989	714-272-8452
	San Gabriel	Van Gott & Associates	91776
		900 South San Gabriel Blvd.	213-285-2148
COLORADO Littleton	Lange Sales	80120	303-795-3600
UTAH	1899 West Littleton Road		TWX 910-935-0824
CONNECTICUT Southington	The Orion Group	06489	203-621-5941
	22 Highwood Avenue		
FLORIDA Maitland	Delmac Sales, Inc.	32751	305-423-7562
AND CARIBBEAN	Post Office Box 1425		
ILLINOIS Chicago	Lansdale Transistor & Electronics Inc.	60641	312-685-5252
	(Regional Office)		
	Post Office Box 41363		
ILLINOIS (North)..... Barrington	Janus, Inc.	60010	312-381-4479
WISCONSIN (East)	991 Bosworth Field		



Manufacturers' Local Offices

LTE – LANSDALE TRANSISTOR & ELECTRONICS, INC. (Cont'd)

			Zip Code	Telephone No.	Telex
3600 West Osborn Road, Phoenix, Arizona			85019	602-269-6262	669-416
NEW JERSEY	Jericho	J-Square Marketing, Inc.	11753	516-433-5330	TWX
(North)	(New York)	Post Office Box 103			510-222-1048
NEW YORK CITY					
NEW YORK	Endwell	Tri-Tech Electronics, Inc.	13760	607-754-1094	TWX
		3215 East Main Street			510-252-0891
	Fairport	Tri-Tech Electronics, Inc.	14450	716-223-5720	
		290 Perington Hills Office Park			
	Fayetteville	Tri-Tech Electronics, Inc.	13066	315-446-2881	TWX
		6836 East Genesee Street			710-541-0604
	Jericho	J-Square Marketing, Inc.	11753	516-433-5330	TWX
		11 Montgomery Place			510-222-1048
		Box 103			
	Poughkeepsie	Tri-Tech Electronics, Inc.	12603	914-473-3880	
		15 Collegeview Avenue			
NORTH CAROLINA ...	High Point	Engineering Devices	27262	919-869-7200	
SOUTH CAROLINA		Post Office Box 5067			
OHIO	Brunswick	Kimconics Sales, Inc.	44212	216-225-6111	
KENTUCKY		4271 Center Road			
PENNSYLVANIA (West)					
WEST VIRGINIA					
	Dayton	Kimconics Sales, Inc.	45415	513-898-1783	TWX
	(Ohio)	8459 North Main Street			810-472-2828
OREGON	Beaverton	L. D. Electronics	97005	503-649-6177	TWX
		Post Office Box 626			910-467-8713



Manufacturers' Local Offices

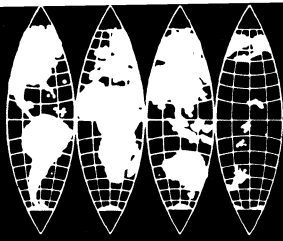
MATJ – MATSUSHITA - PANASONIC ELECTRIC CORPORATION OF AMERICA

	Zip Code	Telephone No.	TWX
ELECTRONIC COMPONENT DIVISION 1 Panasonic Way, Secaucus, New Jersey	07094	201-348-7276	710-992-5920

SEE OUR AD INSIDE FRONT COVER

MEHK – MICRO ELECTRONICS LTD.

	Zip Code	Telephone No.	Telex
38 Hung To Road, Kwun Tong, Kowloon, Post Office Box 9477		K-430181	HX 73510
ENGLAND Middlesex York House Empire Way Wembley		01-903-2721	934263
GERMANY Munich M. E. Micro Electronics GmbH		188 182 184 640	5216194
U. S. A. California Micro Electronics Corporation 3001 Redhill Avenue 3rd Floor - Room 207 Costa Mesa	92626	714-549-0375	TWX 910-595-1759



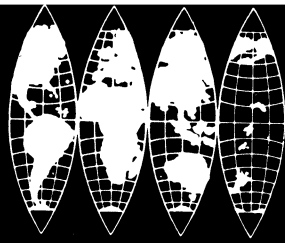
Manufacturers' Local Offices

NSC – NATIONAL SEMICONDUCTOR CORPORATION

2900 Semiconductor Drive, Santa Clara, California	Zip Code 95051	Telephone No. 408-732-5000	TWX 910-339-9240
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SALES OFFICES AND REPRESENTATIVES

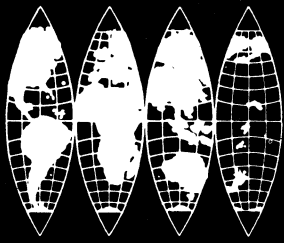
ALABAMA	Huntsville	National Semiconductor	35801	205-881-0622	810-726-2207
		(Dixie Regional Office) 3322 Memorial Parkway, SW Suite 14			
		Interep Associates, Inc.	35801	205-881-3677	
		3322 Memorial Parkway, SW No. 67			
ARIZONA	Scottsdale	National Semiconductor	85251	602-945-8473	910-950-1195
		(Rocky Mountain Regional Office) 7353 Sixth Avenue			
		Fred Board Associates	85252	602-994-9388	910-950-1195
		Post Office Box 1906			
CALIFORNIA	Santa Clara	National Semiconductor	95051	408-247-6397	910-338-0537
		(Northwest Regional Office) 1333 Lawrence Expressway Suite 258			
		Criterion Sales, Inc.	95050	408-243-3600	
		2225 J. Martin Avenue			
	Irvine	National Semiconductor	92714	714-957-1626	
		(Area Office) 17870 Sky Park Circle No. 108			
	Sherman Oaks	National Semiconductor	91403	213-783-8272	910-495-1773
		(Los Angeles Regional Office) Valley Freeway Center Building 15300 Ventura Boulevard Suite 405			
	San Diego	National Semiconductor	92111	714-565-8411	910-335-1566
		(District Sales Office) 8333 Clairemont Mesa Boulevard			
		S. R. Electronics	92121	714-455-0300	910-335-1566
		10951 Sorrento Valley Road			
	Tustin	National Semiconductor	92680	714-832-8113	910-595-1523
		(Southern California Regional Office) 17452 Irvine Boulevard Suite B			



Manufacturers' Local Offices

NSC – NATIONAL SEMICONDUCTOR CORPORATION (Cont'd)

			Zip Code	Telephone No.	TWX
	2900 Semiconductor Drive, Santa Clara, California.....		95051	408-732-5000	910-339-9240
INDIANA	Indianapolis	National Semiconductor..... (North-Central Regional Office) Post Office Box 40073	46240	317-255-5822	810-341-3300
		Advanced Component Sales	46226	317-545-6441	810-341-3233
		5746 Brendon Way West Drive Post Office Box 26407			
	Fort Wayne	Advanced Component Sales..... 1010 Memorial Way Suite 1	46805	219-484-0722	810-332-1472
IOWA	Cedar Rapids	Gassner & Clark Company	52402	319-393-5763	910-525-2051
		1834 Blairs Ferry Road, NE			
MARYLAND	Glen Burnie	National Semiconductor	21061	301-760-5220	710-867-0508
		(Capitol Regional Office) 95 Aquahart Road Suite 204			
		TRIMARK, Inc.	21061	301-768-2800	710-867-0508
		95 Aquahart Road Suite 204			
MASSACHUSETTS ...	Lexington	National Semiconductor	02173	617-861-6090	710-326-6979
		(North-East Regional Office) 9 Meriam Street Suite 16			
		A/D Systems Sales, Inc.	02173	617-861-6370	
		594 Marrett Road			
MICHIGAN	Farmington Hills	National Semiconductor	48018	313-553-0600	810-242-2902
		(District Sales Office) 27650 Farmington Road			
		Grand Rapids	Representative of Electronic Products	49506	616-942-1320
		3501 Lake Eastbrook SE			
	Southfield	Representative of Electronic Products	48075	313-559-1080	810-224-4976
		North Park Office Plaza 17117 West 9-Mile Road Suite 420			

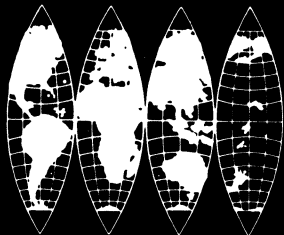


Manufacturers' Local Offices

NSC – NATIONAL SEMICONDUCTOR CORPORATION (Cont'd)

		Zip Code	Telephone No.	TWX
2900 Semiconductor Drive, Santa Clara, California		95051	408-732-5000	910-339-9240
NORTH CAROLINA ... Highpoint	Engineering Devices Corporation..... Post Office Box 5067	27262	919-869-7200	
OHIO	Highland Heights National Semiconductor	44143	216-461-0191	810-427-2972
	(East Central Regional Office) 19 Alpha Park			
	Micro-Tec, Inc.	44143	216-461-0191	810-427-2972
	19 Alpha Park			
	Columbus Micro-Tec, Inc.	43029	614-888-9761/2	
	6076 Busch Blvd. Suite 3			
	Dayton Micro-Tec, Inc.	45419	513-294-6441	810-459-1615
	1413 Acorn Drive			
OREGON	Beaverton Vantage Corporation	97005	503-646-3466	
	3950 SW 102nd Street Suite 122			
PENNSYLVANIA	Fort Washington National Semiconductor	19034	215-628-8877	510-661-3986
	(Liberty Regional Office) 500 Office Center Drive			
	Huntington Valley... Omega Electronic Sales, Inc.	19006	215-947-4135	510-665-5485
	1 Fairway Plaza Philmont Avenue Red Lion Road Suite 210			
TEXAS	Dallas National Semiconductor	75243	214-690-4552	910-867-4741
	(South-Central Regional Office) 13773 North Central Expressway Suite 1132			
	El Paso A. O. Electronics	79903	915-545-2363	
	2211 East Missouri Street Suite N-218			
	Garland Carter Associates, Inc.	75040	214-276-7151	910-860-5097
	Post Office Box 87			
	Houston Carter Associates Inc. **	77027	713-621-6930	
	3701 West Alabama Street Suite 360			

** Applications Engineer Available

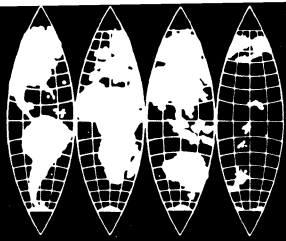


Manufacturers' Local Offices

PHIN — PHILIPS GLOEILAMPENFABRIEKEN

		Zip Code	Telephone No.	Cable
PRODUCT DIVISION ELCOMA				
Building BA, Eindhoven, Netherlands			(040) 79 11 11	PHILIPS EINDHOVEN
ARGENTINA	Buenos Aires	Fapesa I.y.C. Ave. Crovara 2550	652 3983	
AUSTRALIA	Lane Cove	Philips Industries, Ltd. Elcoma Division 67 Mars Road	2066 N.S.W.	42 1261
AUSTRIA	Wien	Oesterreichische Philips	A1101	62 91 11
		Bauelemente Industrie G.m.b.H. Triesterstrasse 64		
BELGIUM	Bruxelles	M.B.L.E. 80 Rue des Deux Gares	B-1070	523 00 00
BRAZIL	Sao Paulo, SP	Ibrape S.A. Av. Pualista 2073-S/ Loja	01311	278-7144
CANADA	Scarborough	Philips Electronics Ltd. Electron Devices Division 601 Milner Avenue	M1B 1M8	416-292-5161
		(Ontario)		Telex 06-2221
DENMARK	København NV	Miniwatt A/S	DK-2400	(01) 69 16 22
		Emdrupvej 115A		
FINLAND	Helsinki 10	Oy Philips Ab	SF-00100	1 72 71
		Elcoma Division Kaivokatu 8		
FRANCE	Paris 11	R.T.C. (RTCF)*	F-75540	355 44 99
		La Radiotechnique Compelec 130 Avenue Ledru Rollin		

* Manufacturer Code inside () can be found in Section 17,
Manufacturers Code Names & Addresses

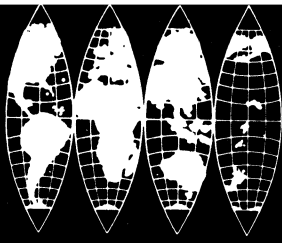


Manufacturers' Local Offices

PHIN — PHILIPS GLOEILAMPENFABRIEKEN (Cont'd)

			Zip Code	Telephone No.	Cable
PRODUCT DIVISION ELCOMA					
Building BA, Eindhoven, Netherlands				(040) 79 11 11	PHILIPS EINDHOVEN
NORWAY	Oslo 4	Electronica A/S		(02) 150590	
		Vitaminveien 11			
SOUTH AFRICA	Johannesburg	EDAC (Pty.) Ltd.	2001	24/6701	
		South Park Lane			
		New Doornfontein			
SPAIN	Barcelona 7	Copresa S.A.		329 63 12	
		Balmes 22			
SWEDEN	Stockholm 27	A.B. Elcoma	S-10250	08/679780	
		Lidingövägen 50			
SWITZERLAND	Zürich	Philips A. G.	CH-8027	01/44 22 11	
		Elcoma Abteilung			
		Edenstrasse 20			
TAIWAN.....	Taipei	Philips Taiwan Ltd.		57 13231	
		Elcoma Diviaion			
		San Min Bldg., 3rd Fl.			
		57-1 Chung Shan N. Road			
UNITED KINGDOM ...	London	Mullard Ltd. (MULB)*	WC1E7HD	01-580-6633	
		Mullard House			
		Torrington Place			
UNITED STATES	Rhode Island	Amperex Electronic Corp. (APX)*	02876	401-762-9000	TWX 710-387-1591
		Sem. & Microcircuits Division			
		Providence Pike, Slatersville			

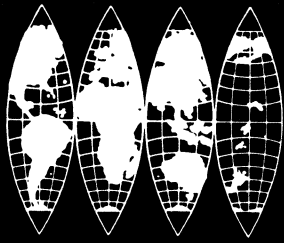
* Manufacturer Code inside () can be found in Section 17,
Manufacturers Code Names & Addresses



Manufacturers' Local Offices

SCA — SEMICOA

			Zip Code	Telephone No.	TWX
333 McCormick Avenue, Costa Mesa, California			92626	714-979-1900	910-595-1961 Telex 678315
ARIZONA	Tempe	Delta Electronic Sales	85283	602-838-5087	
NEVADA (South)		1421 Steamboat Bend Drive			
NEW MEXICO					
CALIFORNIA.....	Redwood	Logan Sales	94063	415-369-6726	910-378-5928
(Northern)		463 Brewster Street			
CALIFORNIA	Marina Del Rey	Westaironics	90291	213-821-7958	910-343-7409
(Southern)		4676 Admiralty Way			
CALIFORNIA	Long Beach	SEMI - DICE	90804	213-597-0358	
(Chips Only)		5199 East Pacific Coast Highway Suite 303A			
FLORIDA	Satellite Beach	Reynolds & Associates	32937	305-773-4700	
		476 North A1A Suite No. 1			
ILLINOIS	Park Ridge	Metcom Associates	60068	312-696-1490	910-253-5941
IOWA		Two Talcott Road			
WISCONSIN (South)					
INDIANA	Carmel	Rich Electronic Marketing	46032	317-844-8462	810-260-2631
		240 South Rangeline Road Suite 8			
MARYLAND	Baltimore	Conroy Sales	21204	301-296-2444	
DIST. OF COLUMBIA		31 Allegheny			
VIRGINIA					
MASSACHUSETTS	Burlington	Contact Sales, Inc.	01803	617-273-1520	710-332-6569
CONNECTICUT		101 Cambridge Street			
MAINE					
NEW HAMPSHIRE					
RHODE ISLAND					
VERMONT					
MINNESOTA	Minneapolis	Furber Sales Company	55431	612-881-3620	
NORTH DAKOTA		1501 West 80th Street			
SOUTH DAKOTA					
WISCONSIN (North)					



Manufacturers' Local Offices

SCE — SEMICONDUCTOR COMPONENTS, INC.

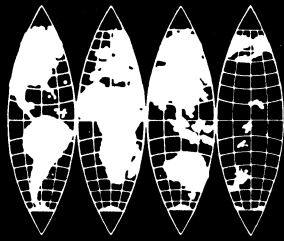
1353 East Edinger Street, Santa Ana, California	Zip Code	Telephone No.
	92705	714-547-6059
		714-547-9389

SEI — SEMICONDUCTORS, INC.

542 Industrial Way West, Eatontown, New Jersey	Zip Code	Telephone No.
	07724	201-842-9111

SEN — SENSITRON SEMICONDUCTOR

DIV. RSM ELECTRON POWER CORPORATION	Zip Code	Telephone No.	Telex
221 West Industry Court, Deer Park, New York	11729	516-586-7600	96-7737



Manufacturers' Local Offices

SGAI – SGS-ATES COMPONENTI ELETTRONICI S.P.A.

			Zip Code	Telephone No.	Telex
Via C. Olivetti 2, Agrate Brianza, Italy			20041	039-650141	36131
ENGLAND	Aylesbury Bucks	SGS-ATES (United Kingdom) Ltd.		5977	83245
		Walton Street			
FRANCE	Paris	SGS-ATES France SA	75643	584 2730	0/25938
	Cedex 13	Residence "Le Palatino"			
		17, Avenue de Choisy			
GERMANY	Wasserburg (Inn)	SGS-ATES Deutschland GmbH	809	08071/721	05-25143
		Postfach 1269			
ITALY	Milano	SGS-ATES Componenti Elettronici S.p.A. ..	20149	4695651	31481
		Via Tempesta 2			
SINGAPORE	Singapore	SGS-ATES Singapore (PTE) Ltd.	12	531411	21412
		Lorong 4 and 6 Toa Payoh			
SWEDEN	Marsta	SGS-ATES Scandinavia AB	19501	0760/40120	10932
		Tingvallavagen 9J			
		Box 30			
U. S. A.	Massachusetts	SGS-ATES Semiconductor Corporation ...	02154	617-891-3710	923495
		79 Massasoit Street			
		Waltham			

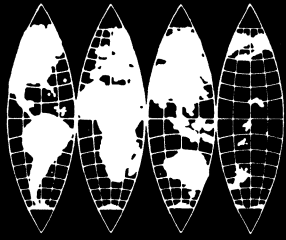
SLD – SOLID STATE INDUSTRIES, INC.

			Zip Code	Telephone No.	Telex
1060 Thomas Jefferson Street, N.W., Washington, D. C.			20007	202-338-3150	64100
					SOLIDSTA

Factories in:

CONNECTICUT – Hamden
 FLORIDA – Riviera Beach
 NEW JERSEY – Linden

MALAYSIA – Kuala Lumpur
 HONG KONG – Macao
 TAIWAN – Taipei



Manufacturers' Local Offices

SPC — SOLID POWER CORPORATION

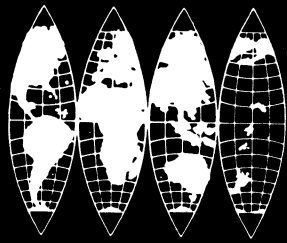
	Zip Code	Telephone No.	TWX
440 Eastern Parkway, Farmingdale, New York	11735	516-694-2883	510-224-6582

SPE — SPACE POWER ELECTRONICS, INC.

	Zip Code	Telephone No.	TWX
Jeffrey Lane, R.D. 1, Glen Gardner, New Jersey	08826	201-537-2184/5	510-235-4290
(CUSTOM DEVICES AVAILABLE)			

SPR — SPRAGUE ELECTRIC COMPANY

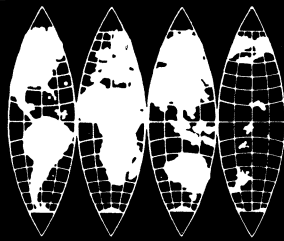
	Zip Code	Telephone No.	Telex
SEMICONDUCTOR DIVISION			
50 Pembroke Road, Concord, New Hampshire	03301	603-224-1961	943346



Manufacturers' Local Offices

SSI – SOLID STATE DEVICES, INC. (Cont'd)

			Zip Code	Telephone No.	TWX
14830 Valley View Avenue, La Mirada, California			90638	213-921-9660	910-583-4807
MICHIGAN	Warren	DEM Electronics Sales	48093	313-575-9444	810-226-8015
		30833 Hoover Road			
MINNESOTA	Minneapolis	Bitronic Sales Company, Inc.	55435	612-835-7744	910-576-1158
IOWA		4565 West 77th Street			
NORTH DAKOTA		Suite 125			
SOUTH DAKOTA					
NEW JERSEY	Wallington	Comp-Tech Sales	07057	201-935-5454	710-989-0270
NEW YORK		437 Paterson Avenue			
NEW YORK	Rochester	ONTEC	14619	716-464-8636	510-253-3841
(Upstate)		474 Thurston Road			
OHIO	Englewood	Daytech Sales	45322	513-836-8633	
		477 East Wenger Road			
WASHINGTON	Seattle	James J. Backer	98119	206-285-1300	910-444-1646
OREGON		221 West Galer			
<u>INTERNATIONAL</u>					
CANADA	LaSalle	Electrodesign	H8R 3H9	514-363-5120	Telex 01-26241
	(Quebec)	840 La Fleur Avenue			
FRANCE	Asnieres	ASSINEL	92600	790-8028	Telex PRODEF 204226F
		99 Rue Gilbert Rousset			
GERMANY	D-605 Offenbach	Neutron GmbH		0611-85 36 38	Telex 841-4185414
	AM MAIN	Postfach 124			
ISRAEL	Tel Aviv	STG International Ltd.		922-032229	
		52 Nachlat Benyamin Street Post Office Box 1276			

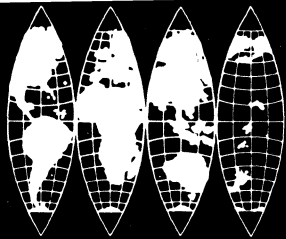


Manufacturers' Local Offices

STC – SILICON TRANSISTOR CORPORATION (Cont'd)

		Zip Code	Telephone No.	TWX	
(Includes the KSC Semiconductor Subsidiary)					
Katrina Road, Chelmsford, Massachusetts		01824	617-256-3321	710-343-0576	
FIELD REPRESENTATIVES (Cont'd)					
FLORIDA	Ft. Lauderdale	Perrott Associates	33318	305-792-2211	510-955-9831
		Post Office Box 15067			
	Largo	Perrott Associates	33540	813-585-3327	810-866-0328
		511 Rosery Road, N.E.			
	Orlando	Perrott Associates	32807	305-275-1132	810-850-0103
		1607 Forsyth Road			
ILLINOIS	Des Plaines	Coombs Associates	60018	312-298-4830	910-233-5980
		1001 East Touhy			
KANSAS	Overland Park	Advanced Technical Sales	66214	913-492-4333	
		9290 Bond			
MARYLAND	Ellicott City	Marketing Technology, Inc.	21043	301-465-5944	
		3600 St. John's Lane			
MASSACHUSETTS	Lexington	John E. Boeing Company	02173	617-862-2500	710-326-1774
		Post Office Box 5			
MICHIGAN	Novi	A. P. Associates	48050	313-476-2300	
		39550 Grand River			
MINNESOTA	St. Paul	Cahill Associates	55104	612-646-7217	910-563-3737
		315 North Pierce			
MISSOURI	Earth City	Advanced Technical Sales	63045	314-739-4048	
		4354 Riverline Drive			
NEW JERSEY	Clifton	Compar New York, Inc.	07011	201-546-3660	710-989-7239
		404 Clifton Avenue			
NEW YORK	North Syracuse	Advanced Components Corporation.....	13212	315-699-2671	710-541-0439
		Post Office Box 276			
OHIO	Richfield	Bear Marketing, Inc.	44286	216-659-3131	810-427-9100
		3623 Bricksville Road			

SEE OUR AD OUTSIDE BACK COVER



Manufacturers' Local Offices

STI – SEMICONDUCTOR TECHNOLOGY, INC.

124-14 22nd Avenue, College Point, New York	Zip Code	Telephone No.	TWX
	11356	212-445-4466	710-582-2571

INTERNATIONAL

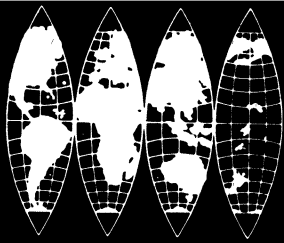
ENGLAND	Kent	Diran Semicon Limited	BR7 6SE	Orpington 25105
		Post Office Box 87		
		Chislehurst		

SWT – SWAMPSCOTT ELECTRONICS COMPANY

41 Spinal Road, Swampscott, Massachusetts	Zip Code	Telephone No.
(Custom and selected devices available)	01907	617-598-4116

TAGS – TAG SEMICONDUCTORS LTD.

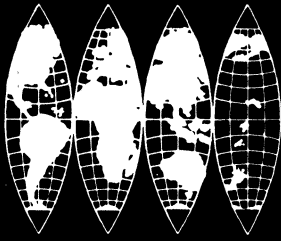
Hohlstrasse 610, Zurich, Switzerland	Zip Code	Telephone No.	Telex
	8048	62 5611	53809



Manufacturers' Local Offices

THCF — THOMSON - CSF (Cont'd)

		Zip Code	Telephone No.	Telex
DIVISION SEMICONDUCTEURS SESCOSEM 50 Rue Jean Pierre Timbaud, BP 120, Courbevoie, France		F-92403	788-50-01	SESCOM 61560F
GERMANY	Munchen 25 Thomson-CSF GmbH Fallstrasse 42	D-8000	89 76 751	522 916
ITALY	Milano Sescosem Italiana Via Melchiorre Gioia, 72	I-20125	68 84 141	36301 Ducati
MOROCCO	Casablanca SFRM 40 Blvd. de la Resistance Palais Mirabeau		279100-279123	21924
NORWAY	Oslo 6 Feiring AS Post Office Box 101 Bryn		(2) 686360	16 435
PORTUGAL	Lisbon Sd. Com Rualdo Rua S. Jose 15		P.P.C. 33725	16447 Rualdo Lisbonne
SPAIN	San Juan Despi Componentes Electronicos S.A. (Barcelona) Poligono Industrial, Font Santa Calle, H.S./N		319.46.50	53077
SWEDEN	Solna 3 Elektrholm AB Dalvagen 12	S-17 103	82.02.80	19.389
SWITZERLAND	Berne 9 Modulator S. A. Fischerweg 11.13	CH3000	23 21 42	32.431
U. S. A.	California Nucleonic Products Company, Inc. 6660 Variel Avenue Canoga Park	91303	(213) 887-1010	651.479



Manufacturers' Local Offices

UPI – UPI SEMICONDUCTOR (Cont'd)

	Zip Code	Telephone No.	TWX
DIVISION UNITED-PAGE, INC. 481 Getty Avenue, Paterson, New Jersey	07053	NJ 201-279-7500 NY 212-736-9351	710-988-5917 Cable UNIPAGE
NEW JERSEY Westwood R. C. Associates (Northern) 387 Colonial Blvd.	07675	201-664-1241	
NEW JERSEY Glenside Raymond F. Koebert & Associates (Southern) Post Office Box 61	19038	215-887-2310	
DELAWARE MARYLAND PENNSYLVANIA (Eastern) WASHINGTON D.C.			
OHIO Cleveland KRW Sales (Northern) 3906 Theota Avenue	44134	216-741-4711	
MICHIGAN (Southern)			
Dayton KRW Sales 310 Marsha Jeanne Way	45459	513-885-3330	
PENNSYLVANIA Oakmont KRW Sales 227 Allegheny Avenue	15139	412-243-2284	

WESY – WESTINGHOUSE ELECTRIC CORPORATION

	Zip Code	Telephone No.	TWX
SEMICONDUCTOR DIVISION Youngwood, Pennsylvania	15697	412-925-7272	510-468-2840
<u>INTERNATIONAL</u>			
FRANCE Le Mans CDS Westinghouse (European Avenue G. Durand Headquarters)	72003	(43) 84.33.40	Telex 842-720040

SECTION 17 MANUFACTURERS CODES, NAMES & ADDRESSES



(Manufacturers in order of D.A.T.A. code letters)

- 53763 – **IDC** – International Diode Corp., 229 Cleveland Ave., Harrison, NJ 07029
- 53763 – **IDI** * – International Devices, Inc., 3370 Livonia Ave., Los Angeles, CA 90034
- 32293 – **IMTM** # – Industria Mexicana Toshiba, S.A., Calzada de Guadalupe 303, Cuautitlan, Edo. de Mexico, Mexico
- 32293 – **INL** * – Intersil, Inc., 10900 North Tantau Ave., Cupertino, CA 95014
- 17884 – **INR** * – International Rectifier, Semiconductor Div., 233 Kansas St., El Segundo, CA 90245
- 17884 – **INTG** – Intermetall, Halbleiterwerk der Deutsche ITT Ind. GmbH, 78 Freiburg im Breisgau, Hans-Bunte-Strasse 19, Germany
- CIT – 15238 – **ITT** – ITT Semiconductors, 74 Commerce Way, Woburn, MA 01801
- ITT – **ITTB** – ITT Semiconductors, Maidstone Rd., Footscray, Sidcup, Kent, England
- KER** – Kertron, Inc., 7516 Central Ind. Dr., Riviera Beach, FL 33404
- LTE** * – Lansdale Transistor & Electronics, Inc., 3600 W. Osborn Rd., Phoenix, AZ 85019
- 18822 – **LTTF** – S. A. L. T. T., 78702 Conflans Ste. Honorine, France
- LUCB** – Lucas Electrical Co., Ltd., E & S Div., Mere Green Rd., Sutton Coldfield, West Midlands, B75 5BN, England
- MAL** – Mallory Distributor Products, P.O. Box 1284, Indianapolis, IN 46206
- 01619 – **MATJ** * – Matsushita Electronics Corp., Kotari Yakemachi 1, Nagaokakyo City, Kyoto, Japan
- MEHK** * – Micro Electronics Ltd., 38 Hung To Rd., Kwun Tong, Kowloon, Hong Kong
- MIC** ★ – Microwave Associates, Inc., Semiconductor Products, Burlington, MA 01803
- MISI** * – SESCOSEM Italiana, Via Melchiorre Gioia, 72, 20125 Milano, Italy
- 90144 – **MITJ** – Mitsubishi Electric Corp., Kita-Itami Works, 4-1 Mizuhara, Itami-shi, Hyogo-ken, Post Code 664, Japan
- CGG – 04713 – **MOTA** * – Motorola Semiconductor Products, 5005 E. McDowell Rd., HO500, Phoenix, AZ 85008
- CCWV – 92726 – **MULB** * – Mullard Ltd., Mullard House, Torrington Place, London WC1E 7HD, England (also under PHIN, Sec. 16)
- MWS** * – Microwave Semiconductor Corp., 100 Schoolhouse Rd., Somerset, NJ 08873
- NASB** * – North American Semiconductor Co., Inc., 3072 Scott Blvd., Santa Clara, CA 95050
- 94091 – **NECJ** * – Nippon Electric Co., Ltd., 1753 Shimonumabe, Nakahara Ku, Kawasaki City, Japan
- NJS** * – New Jersey Semiconductor Products Co., Inc., 20 Commerce St., Springfield, NJ 07081
- 08257 – **NPC** * – Nucleonic Products Co., Inc., 6660 Variel Ave., Canoga Park, CA 91303
- CCXP – 27014 – **NSC** * – National Semiconductor Corp., 2900 Semiconductor Dr., Santa Clara, CA 95051
- NTLB** * – Newmarket Transistor, Ltd., Exning Rd., Newmarket, Cambridge, England
- NTR** * – National Transistor Corp., 1033 No. Fair Oaks Ave., Sunnyvale, CA 94086
- PHIB** * – Philco Radio Television Ltda., Rua Sta. Virginia, 299, Tatuape, Sao Paulo, Cx. Postal 4753, Brasil
- 36204 – **PHIC** * – Philips Electronics Ltd., Electron Devices Div., 601 Milner Ave., Scarborough, Ontario, Canada

★ **New Manufacturers**

* See Section 18 for
Manufacturers Logos

CODE CHANGES THIS EDITION

Old: DETM – Delsa-Toshiba, S.A.
New: IMTM – Industria Mexicana Toshiba, S.A.

Manufacturers shown in bold print have local offices which are included in SECTION 16

SECTION 17 MANUFACTURERS CODES, NAMES & ADDRESSES

QPL
MFR.
DESIG.

FSCM
No.

DATA
MFRS.
CODE



	11911 – SSE	– Solid State Electronics Co., 15321 Rayen St., Sepulveda, CA 91343
CDVL – 30043 –	SSI	* – Solid State Devices, Inc., 14830 Valley View Ave., La Mirada, CA 90638
	SSS	* – Solid State Scientific, Inc., Montgomeryville Industrial Center, Montgomeryville, PA 18936
	SST	* – Solid State, Inc., 46 Farrand St., Bloomfield, NJ 07003
CCSX – 07256 –	STC	* – Silicon Transistor Corp., Katrina Rd., Chelmsford, MA 01824
	STI	* – Semiconductor Technology, Inc., 124-14 22nd Ave., College Point, NY 11356
	STL	– Stow Laboratories, Inc., Kane Industrial Dr., Hudson, MA 01749
	STR	* – Syntar Industries, Inc., 20 Jerusalem Ave., Hicksville, NY 11801
	SWT	– Swampscott Electronics Co., 41 Spinale Rd., Swampscott, MA 01907
	TADI	– Tadiran, Israel Electronics Industries, Ltd., 3 Derech Hashalom (P.O. Box 648), Tel-Aviv 61000, Israel
	TAGS	* – TAG Semiconductors Ltd., Hohlstrasse 608/610, CH-8048, Zurich, Switzerland
	TCY	– Teledyne Crystalonics, Inc., 147 Sherman St., Cambridge, MA 02140
CCAB – 03877 –	TEC	– Transitron Electronic Corp., 168 Albion St., Wakefield, MA 01880
	THCF	– Thomson CSF, Div. Semiconducteurs, SESCOSEM, 50, rue Jean Pierre Timbaud, BP120, 92403 Courbevoie, France
	TIC	* – Transistor International Corp., 1406 Watertower Rd., P.O. B. 12685, Lake Park, FL 33403
CGO – 01295 –	TII	* – Texas Instruments, Inc., Semicon. Group, Mail Station 84, P.O. Box 5012, Dallas, TX 75222
CGO – 01295 –	TIIB	– Texas Instruments, Ltd., Manton Lane, Bedford, England
	TIIC	– Texas Instruments, Inc., 280 Center St., E. Richmond Hill, Ontario, Canada
	TIID	– Texas Instruments Deutschland GmbH, 8050 Freising, Haggertystrasse 1, Germany
	TIIF	– Texas Instruments France, S.A., 06 Villeneuve-Loubet, A.M., France
	18657 – TOSJ	– Tokyo Shibaura Electric Co., Ltd., 72 Horikawa-cho, Saiwai-ku, Kawasaki-shi, Kanagawa-ken, Japan
CCNL – 01281 –	TRW	– TRW Semiconductors, Inc., 14520 Aviation Blvd., Lawndale, CA 90260
	TSAJ	* – Tokyo Sanyo Electric Co., Ltd., Semiconductor Div., Oizumimachi, Oragun, Gumma, Japan
CDAQ – 15818 –	TSC	* – Teledyne Semeconductor, 1300 Terra Bella Ave., Mountain View, CA 94043
	54485 – TSI #	* – Transistor Specialties, Inc., 484 Lowell St., Peabody, MA 01960
	UNI	* – Unitorde Corp., 580 Pleasant St., Watertown, MA 02172
	33428 – UPI	* – UPI Semiconductor, Div. of United-Page, Inc., 481 Getty Ave., Paterson, NJ 07503
	USSR	– V/O Electronzagrannostavka, 24/2 Usievicha, Moscow 125315, U.S.S.R.
	UTS	* – Uni-Tran Semiconductor Corp., R.D. 2, Lake Ariel, PA 18436
	17895 – VALG	– Valvo GmbH, P.O. Box 993, D2000, Hamburg 1, Germany (under PHIN, Sec. 16)
	WAB	* – Walbern Devices, Inc., 1818 E. Elizabeth Ave., Linden, NJ 07036
CAY – 05277 –	WESY	* – Westinghouse Electric Corp., Semiconductor Dept., Youngwood, PA 15697

★ New Manufacturers

* See Section 18 for
Manufacturers Logos


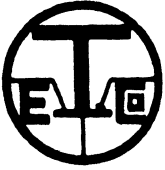





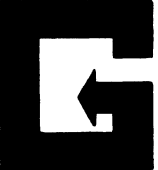
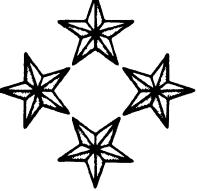

CODE CHANGES THIS EDITION

Old: TRS – Transistor Specialties, Inc.
New: TSI – Same

Manufacturers shown in bold print have their local
offices which are included in SECTION 16

18. MANUFACTURERS LOGOS

IN MFR.
CODE ORDER

 <p>ESE – Elm State Electronics Inc.</p>	 <p>ETC – Electronic Transistors Corp.</p>	 <p>FCAJ – Fujitsu Ltd.</p>
 <p>FERB – Ferranti Ltd.</p>	 <p>FSC – Fairchild Semiconductor</p>	 <p>GESY – General Electric Co.</p>
 <p>GIC – General Instrument Corp.</p>	 <p>GPD – Germanium Power Devices Corp.</p>	 <p>GSE – General Semiconductor Industries Inc.</p>
	 <p>GTC – General Transistor Corp.</p>	

18. MANUFACTURERS LOGOS

IN MFR.
CODE ORDER



MULB – Mullard Ltd.



MWS – Microwave
Semiconductor Corp.



NASB – North American
Semiconductor Co.



NECJ – Nippon Electric Co., Ltd.



NJS – New Jersey Semiconductor
Products Co., Inc.



THOMSON - CSF



ELECTRONICS

NPC – Nucleonic Products Co., Inc.



NSC – National Semiconductor Corp.



NTLB – Newmarket Transistor Ltd.



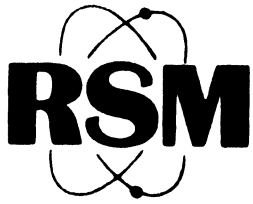
NTR – National Transistor Corp.



PHIB – Philco Radio Television Ltda.

18. MANUFACTURERS LOGOG

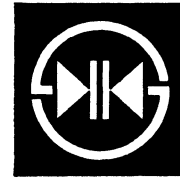
IN MFR.
CODE ORDER



SEN – Sensitron Semiconductors



SGAI – SGS-ATES Componenti
Elettronici



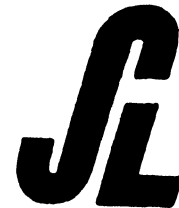
SHEJ – Shindengen
Electric Mfg. Co., Ltd.

SIEMENS

SIEG – Siemens AG



SIX – Siliconix Inc.



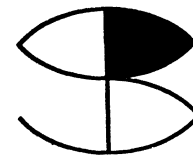
SLCB – Semitron Ltd.



SOD – Solitron Devices Inc.

SONY[®]

SONY – Sony Corporation



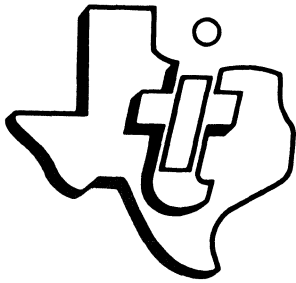
SPC – Solid Power Corp.



SPE – Space Power Electronics Inc.

18. MANUFACTURERS LOGOS

IN MFR.
CODE ORDER



TII – Texas Instruments Inc.

SANYO

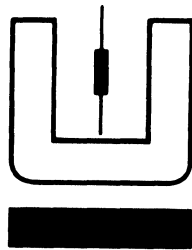
TSAJ – Tokyo Sanyo Electric Co.



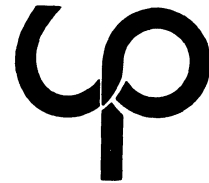
TSC – Teledyne Semiconductor

tsi

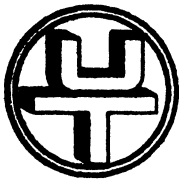
TSI – Transistor Specialtys Inc.



UNI – Unitrode Corp.



UPI – UPI Semiconductor



UTS – Uni-Tran Semiconductor Corp.



WAB – Walbern Devices Inc.



WESY – Westinghouse Electric Corp.

INTERPRETER
SYMBOLS & CODES EXPLAINED

6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL
7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX DEVICE DISS @ 25°C (W)		MAX Vp & Vds (V)		ABS MAX RATINGS @ 25°C (V)		MAX RATINGS @ 25°C (A)		MAX Idss @ Vgs=0 & Vds>Vp (A)		MAX Igss @ Vgs>Vp & Vds=0 (A)		TEST COND Vgs Vds		COMMON SOURCE gfs (mhos)		r(DS) on (Ω)	MAX. Cis (F)	DERATE IN FREE AIR MAX TEMP (°C)		STRUC-TURE	DWG # Y200 s/a TO200 Ser.	# C O A D E	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			17	18				19
2																									

2 ▼ - Matched type, also listed in Section 14, Category 6
◆ - Phototransistor
NOTE: For dual gate devices, Gate 1 specifications apply.

3 Δ - With infinite heat sink
† - Above 25°C; for additional information, consult manufacturer.

4 † - VGS (Cut Off)
Δ - VGST (Threshold)
% - Typical
- Minimum

5 Δ - Depletion Mode, Type A
§ - Depletion-Enhancement Mode, Type B
* - Enhancement Mode, Type C

6 Δ - BVDSO
† - BVDSX

7 Δ - BV DGO

10 Δ - Idss @ VGS = 0 and VDS ≈ Vp
∅ - VGS > 0
- Minimum
* - Typical
% - Pulsed

11 Δ - IGDO

12 ∅ - ID in mA

13 Δ - VGD
† - VGD

14 Δ - Typical
† - Pulsed
15 % - High frequency (Vfs)
∅ - YFS
§ - gfg

16 Δ - Yis
§ - Yog
† - Not at given test conditions
% - Maximum
* - Pulsed

17 % - Maximum
Δ - Not given at test conditions
† - RDS (on) at VDS = 0

18 # - Ciss (Output Shorted)
Δ - Cdgs
% - Not given at test conditions
* - Typical
∅ - Cdss
∅ - Cdgo
§ - Cigs
§ - Crss
† - Cgss

20 A - Ambient
C - Case
J - Junction
S - Storage

21 STRUCTURE
D - Diffused
E - Epitaxial
Ge - Germanium
PE - Planar Epitaxial
PL - Planar
H - Hometaxial
- Junction type
* - Insulated gate (MOS type)
§ - Matched pair
Δ - Switching, other uses
∅ - Chopper, other uses
∅ - Noise figure 8db or below
† - Plastic package
§ - Tetrode
% - Insulated gate (MNOS type)
◆ - Diode protected gates

• SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION

▲ SEE TYPE No. SYMBOLS & CODES AT TOP OF 1st CARD

**INTERPRETER
SYMBOLS & CODES EXPLAINED**

SYMBOLS & CODES COMMON TO MORE THAN ONE TECHNICAL SECTION

TYPE NO.
 † – Switching type, also listed in Section 12
 ∅ – Chopper, also listed in Section 14, Category 10
 * – These types also included elsewhere with other characteristics. See Type No. Cross Index for alternate line number.
 § – Radiation resistant devices, also listed in Section 14, Category 13.

**ENGLISH-RUSSIAN ALPHABET
TRANSLITERATION FOR USSR TYPES**

ENGLISH	RUSSIAN	ENGLISH	RUSSIAN
A	А	L	Л
B	Б	M	М
V	В	N	Н
G	Г	O	О
D	Д	P	П
E	Е	R	Р
SZ	Ж	S	С
I	И	T	Т
K	К	U	У

**STRUCTURE
(All Sections except 6 & 7)**

A – Alloy
 AN – Amular
 D – Diffused or Drift
 DM – Diffused Mesa
 E – Epitaxial
 EA – Epitaxial Amular
 EM – Epitaxial Mesa
 F – Fused
 G – Grown
 GA – Gallium Arsenide
 H – Hometaxial
 MA – Micro Alloy
 MD – Micro alloy Diffused

ME – Mesa
MOS – Metal Oxide Silicon
PA – Precision Alloy
PC – Point Contact
PD – Precision alloy Diffused
PE – Planar Epitaxial
PL – Planar
S – Surface barrier
 * – Matched pair
 △ – Switching, other uses
 ∅ – Chopper, other uses
 ⊗ – Noise figure 8db or below
 † – Plastic package
 % – Overlay
 # – Radiation resistant device
 \$ – Tetrode

LINE NO.
 ▼ – New Type
 ◆ – Revised Specifications
 # – Non-JEDEC type manufactured outside U.S.A.

LEAD CODE
 See Lead Code Identification Guide at end of Section 15.

THESE TYPES ALSO INCLUDED ELSEWHERE WITH OTHER CHARACTERISTICS
 SEE TYPE NO. CROSS INDEX FOR ADDITIONAL PAGE & LINE NO.

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS		hFE	MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/a T0200 Ser.	L C O A D E	
								Vcb (V)	Ic (A)										
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

3 † – f_{ce}
 § – Gain Bandwidth product (f_T)
 * – Maximum frequency of oscillation
 ∅ – Figure of merit (frequency for unity power gain)
 # – Rated operating frequency
 △ – Minimum
 ⊗ – Maximum

4 \$ – Charge storage time constant
5 ▼ – Stored base charge – picocoulomb
 ◆ – Total switching time
 ∅ – $T_{on} = t_r + t_d$
 † – Typical value

6 ∅ – $T_{off} = t_s + t_f$
7 † – Typical value
 * – $T_{on} + T_{off} = t_d + t_r + t_f + t_s$

8 ∅ – With infinite heat sink
 The following symbols indicate temperature at which derating starts:
 † – 40°C § – 70°C
 * – 45°C ◆ – 80°C
 # – 50°C \$ – 100°C or greater
 ⊗ – 60°C △ – Pulsed

9 ∅ – V_{CE}

10 ∅ – I_c
 △ – I_B

11 † – h_{fe}
 # – Pulsed
 △ – Minimum
 ⊗ – Maximum
 * – Available to selected range narrower than indicated
 § – Y_{fs} in millimho (FETs only). Bias values are V_{DS} and I_D .

12 § – R_{on} (FETs only)
 # – Pulsed
 ▼ – Typical value

13 ⊗ – Maximum
 \$ – C_{cb}
 § – C_{iss} (FETs only)

14 † – r'_{bb}

15 N – NPN or "N" channel
 P – PNP or "P" channel
 § – Field effect transistor

16 Ge – Germanium
 Si – Silicon

17 A – Ambient
 C – Case
 J – Junction
 S – Storage

• SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION
 ▲ SEE TYPE No. SYMBOLS & CODES AT TOP OF 1st CARD

TECHNICAL TERM DEFINITIONS

B — Illumination intensity.

BV_{CBO}
V_{(BR)CBO} — Breakdown voltage, collector-to-base; emitter open-circuit.

BV_{CEO}
V_{(BR)CEO} — Breakdown voltage, collector-to-emitter, base open-circuit

BV_{CER}
V_{(BR)CER} — Breakdown voltage, collector-to-emitter; with specified base-to-emitter resistance.

BV_{CES}
V_{(BR)CES} — Breakdown voltage, collector-to-emitter; with base short-circuit to emitter.

BV_{CEX}
V_{(BR)CEX} — Breakdown voltage, collector-to-emitter; with specified circuit between base and emitter.

BV_{DGO}
V_{(BR)DGO} — Breakdown voltage, drain-to-gate; source open circuit (FET).

BV_{DSX}
V_{(BR)DSX} — Breakdown voltage, drain-to-source; with specified circuit between gate and source (FET).

BV_{EBO}
V_{(BR)EBO} — Breakdown voltage, emitter-to-base; collector open-circuit.

BV_{GD}
V_{(BR)GD} — Breakdown voltage, gate-to-drain (FET).

BV_{GDS}
V_{(BR)GDS} — Breakdown voltage, gate-to-drain; with source short-circuit to drain (FET).

BV_{GSS}
V_{(BR)GSS} — Breakdown voltage, gate-to-source, with drain short-circuit to source (FET).

C_{ob} — Output capacitance with input AC open-circuit, common base.

C_{iss} — Small-signal, short-circuit input capacitance, common source (FET).

C_{rss} — Magnitude of small-signal, short-circuit reverse transfer capacitance, common source (FET).

f_{αb}
f_{hfb} — Small-signal short-circuit forward current transfer ratio cut off frequency, common base (alpha cut off frequency).

f_{αe}
f_{hfe} — Small-signal short-circuit forward current transfer ratio cut off frequency, common emitter (beta cut off frequency)

f_t — Extrapolated unity gain frequency (gain bandwidth product). Product of the common-emitter current transfer ratio and the frequency of measurement at a frequency where the current gain is decreasing at the rate of 6 db per octave. This frequency is also known as the Transition Frequency.

g_{fs} — Common source forward transconductance (FET).

h_{FE} — DC forward current transfer ratio, common emitter.

h_{fe} — Small signal forward current transfer ratio, common emitter.

h_{ib} — Small signal value of the short-circuit input impedance, common base.

h_{ie} — Small signal value of the short-circuit input impedance, common emitter.

CHOPPERS

V_(off) — Emitter offset voltage.

I_(off) — Emitter offset current.

h_{FE(inv)} — DC current gain, inverted connection.

R_d — Inverted dynamic saturation resistance.

r_{s(on)} — "On" series resistance.

DOUBLE COLLECTOR DEVICES

V_{C1C2} — Collector one-collector two voltage.

h_{ob} — Small signal value of the open-circuit output admittance, common base.

h_{oe} — Small signal value of the open-circuit output admittance, common emitter.

h_{rb} — Small signal value of the open-circuit reverse voltage transfer ratio, common base.

h_{re} — Small signal value of the open-circuit reverse voltage transfer ratio, common emitter.

I_B — Base current, DC.

I_{B(Sat)} — Base saturation current.

I_{B2(mod)} — Interbase modulated current (UJT).

I_C — Collector current, DC.

I_{C(Sat)} — Collector saturation current.

I_{CBO} — Collector cutoff current, DC, emitter open-circuit.

I_{CES} — Collector cutoff current, DC, with base shorted to emitter.

I_{CEX} — Collector cutoff current, DC, with specified circuit between base and emitter.

I_D — Drain Current, DC (FET).

I_{D(on)} — "On" drain current (FET).

I_{DSS} — Drain current at zero gate voltage (FET).

I_E — Emitter current, DC

I_{EB20} — Emitter reverse current, base-one open-circuit, DC (UJT).

I_{CEO} — Collector cutoff current with base open-circuit

I_{CER} — Collector cutoff current with external base-to-emitter resistance

I_G — Gate current, DC (FET).

I_{GSS} — Gate source reverse current at zero drain-to-source voltage (FET).

I_{off} — Offset current, DC (FET)

I_p — Peak point emitter current (UJT)

I_{p(3)} — Third order intercept point

I_v — Valley point emitter current (UJT).

n — Intrinsic standoff ratio (UJT).

NF — Noise factor or noise figure.

λ_s — Wave length of maximum sensitivity.

P_c — Collector power dissipation

P_d — Power dissipation.

P_o — Power output.

P_{o1db} — Power output at 1.0 db compression point.

P_T — Total power dissipation.

FOR DOUBLE EMITTER CHOPPER DEVICES

V_{E1BO} or **V_{E2BO}** — Emitter-to-base voltage, DC, collector open.

V_{E1CO} or **V_{E2CO}** — Emitter-to-Collector voltage, DC, base open.

V_{E1E2} or **V_{E2E1}** — Emitter one-emitter two offset voltage.

I_{E1E20} — Emitter cutoff current.

R_{BBO} — Interbase resistance, with emitter open circuit.

r_{ds(on)} — Drain-to-source bulk resistance (FET).

t_d — Delay time.

t_f — Fall Time

t_{off} — Turn-off time = t_s + t_f.

t_{on} — Turn-on time = t_d + t_r

t_r — Rise time.

t_s — Storage time.

S_{RCE} — Collector-emitter radiation sensitivity.

S_{ICE} — Collector-emitter illumination sensitivity

V_{BE} — Base-to-emitter voltage, DC.

V_{B2E} — Base-two-to-emitter voltage, DC (UJT).

V_{B2B1} — Interbase voltage, DC (UJT).

V_{BE(Sat)} — Base-to-emitter saturation voltage.

V_{CB} — Collector-to-base voltage, DC.

V_{CBO} — Collector-to-base voltage, DC, emitter open

V_{cc} — Supply Voltage

V_{CE} — Collector-to-emitter voltage, DC.

V_{CE(sat)} — Collector-to-emitter saturation voltage

V_{CEO} — Collector-to-emitter voltage, DC, base open.

V_{DS} — Drain-to-source voltage (FET).

V_{EB1} — Emitter-to-base one voltage, DC (UJT).

V_{EBO} — Emitter-to-base voltage, DC, collector open.

V_{EB1(Sat)} — Emitter saturation voltage (UJT)

V_{GS} — Gate-to-source voltage, DC (FET).

V_{GS(off)} — Gate-to-source cutoff voltage (FET).

V_{GS(th)} — Gate-to-source threshold voltage (FET).

V_{OB1} — Base-one peak pulse voltage (UJT).

V_{off} — Offset voltage.

V_p — Peak point emitter voltage (UJT).

V_p — Drain-to-source pinch-off voltage (FET).

V_v — Valley point emitter voltage (UJT).

Y_{FE} — DC forward transmittance with output short-circuit

Y_{fs} — Magnitude of small signal, short-circuit forward transadmittance, common source (FET).

Y_{FS} — DC Forward transadmittance (FETS)

Y_{os} — Magnitude of small signal, short-circuit output admittance, common source (FET).

NOTE:

- a. For all matching parameter ratios one (1) is always the smaller of the two (2) value of the parameter.
- b. For differential values, if one (1) is always the smaller of the two (2) value, the differential is a negative number.

h_{FE1}/h_{FE2} — DC current gain ratio.

V_{BE1} - V_{BE2} — Base-emitter differential voltage.

ΔV_{BE1} - V_{BE2}/ΔT — Base-emitter differential voltage change due to a change in temperature.

I_{DSS1}/I_{DSS2} — Zero gate voltage-drain current ratio.

g_{m1}/g_{m2} — Transconductance ratio.

|V_{GS1} - V_{GS2}| — Gate-source differential voltage.

ΔV_{GS1} - V_{GS2}/ΔT — Gate-source differential voltage change due to a change in temperature.

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JAN-2N3440	/368A	JAN-2N6251	/510
JAN-2N3584	/384B	JAN-2N6306	/498
JAN-2N3585	/384B	JAN-2N6308	/498
JAN-2N6249	/510		

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