

"THE MATERIAL HEREIN IS FOR INFORMATION PURPOSES ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE. DIGITAL EQUIPMENT CORPORATION ASSUMES NO RESPONSIBILITY FOR ANY ERRORS WHICH MAY APPEAR HEREIN."

FIELD MAINTENANCE PRINT SET

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978, DIGITAL EQUIPMENT CORPORATION."

3
①
OF 35

TABLE OF CONTENTS

B-TC-MS11-L-1	FIELD MAINTENANCE PRINT SET
B-DD-MS11-L	DRAWING DIRECTORY (MS11-L)
A-PL-MS11-L-Ø	PARTS LIST (MS11-L)
D-BD-MS11-L-4	MS11-L BLOCK DIAGRAM
D-FD-MS11-L-5	MS11-L FLOW DIAGRAM
D-ID-MS11-L-6	MS11-L TIMING DIAGRAM
B-DD-M7891-Ø	DRAWING DIRECTORY (M7891)
K-PL-M7891-DC-Ø	PARTS LIST (M7891) (SEE NOTE 1)
D-UA-M7891-Ø-Ø	UNIT ASSEMBLY (M7891) (SHTS 2,6,9,12, ONLY)
D-CS-M7891-Ø-1	CIRCUIT SCHEMATIC (M7891)
MPØØ672	MS11-L FIELD MAINTENANCE PRINT SET

UNIT VARIATIONS COVERED BY THIS PRINT SET
MS11-LA
MS11-LB
MS11-LC
MS11-LD

MS11-L
Field Maintenance
Print Set

Digital Equipment
Corporation

MPØØ672

NOTE 1: THIS PARTS LIST IS A SAMPLE ONLY, FOR THE PARTS LIST OF A PARTICULAR VARIATION SEE B-DD-M7891-Ø.

REVISIONS			USED ON OPTION/MODEL	DRN.	DATE	TITLE:					
REV.	CHG. NO.	DATE				SIZE	CODE	NUMBER	REV.		
						B	TC	MS11-L-1	*		
			PDP 11/ØØ1	E. DEVRIES		MS11-L (128K X 1Ø) MOS MEMORY SYSTEM					
				CHK'D R.V. Mamon	9/20/78						
				PROJ. ENG. R. Given	9-28-78	DIST.					
				FIELD SERV. R. W. Richard	9/28/78						
			SHEET 1 OF 1	digital							

FR
EN-01124-16-NØ78-(1327)

"THE MATERIAL HEREIN IS FOR INFORMATION PURPOSES ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE. DIGITAL EQUIPMENT CORPORATION ASSUMES NO RESPONSIBILITY FOR ANY ERRORS WHICH MAY APPEAR HEREIN."

DRAWING DIRECTORY

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION."

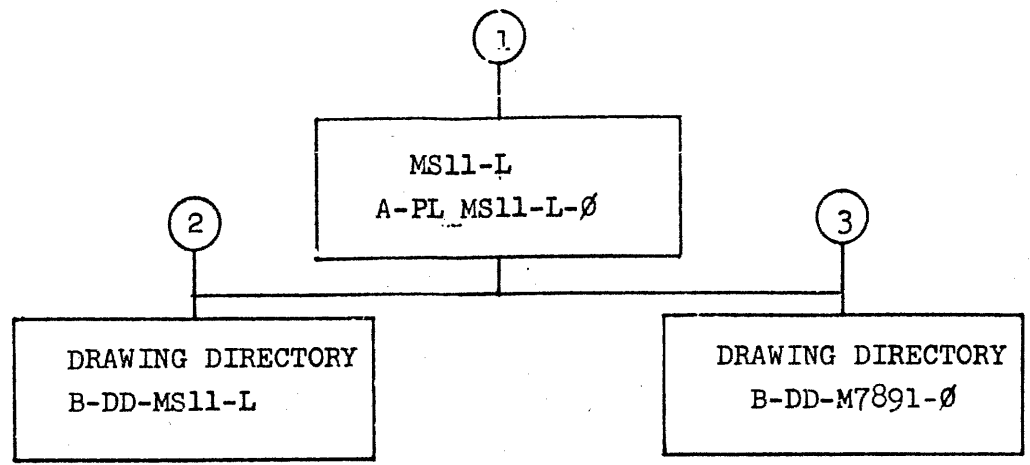
NOTE: FOR FIELD MAINTENANCE PRINT SET
SEE B-TC-MS11-L-1

UNIT VARIATIONS	
VAR	TITLE
MS11-LA	32K X 18 MOS MEMORY SYSTEM
MS11-LB	64K X 18 MOS MEMORY SYSTEM
MS11-IC	96K X 18 MOS MEMORY SYSTEM
MS11-LD	128K X 18 MOS MEMORY SYSTEM

REVISIONS	REV.		USED ON OPTION/MODEL PDP 11/34	DRN.	E.DEVRIES	DATE		TITLE DRAWING DIRECTORY MS11 (128K X 18) MOS MEMORY SYSTEM								
	CHANGE NO.			CHK'D.	R. Manis	DATE	9/26/78									
	CHK			PROJ. ENG.	R. Given	DATE	9-28-78	SIZE	CODE	NUMBER	REV					
			PROD.	Bob Dehoy	DATE	9/21/78	B	DD	MS11-L	*	DIST.					
			SHEET 1 OF 3													

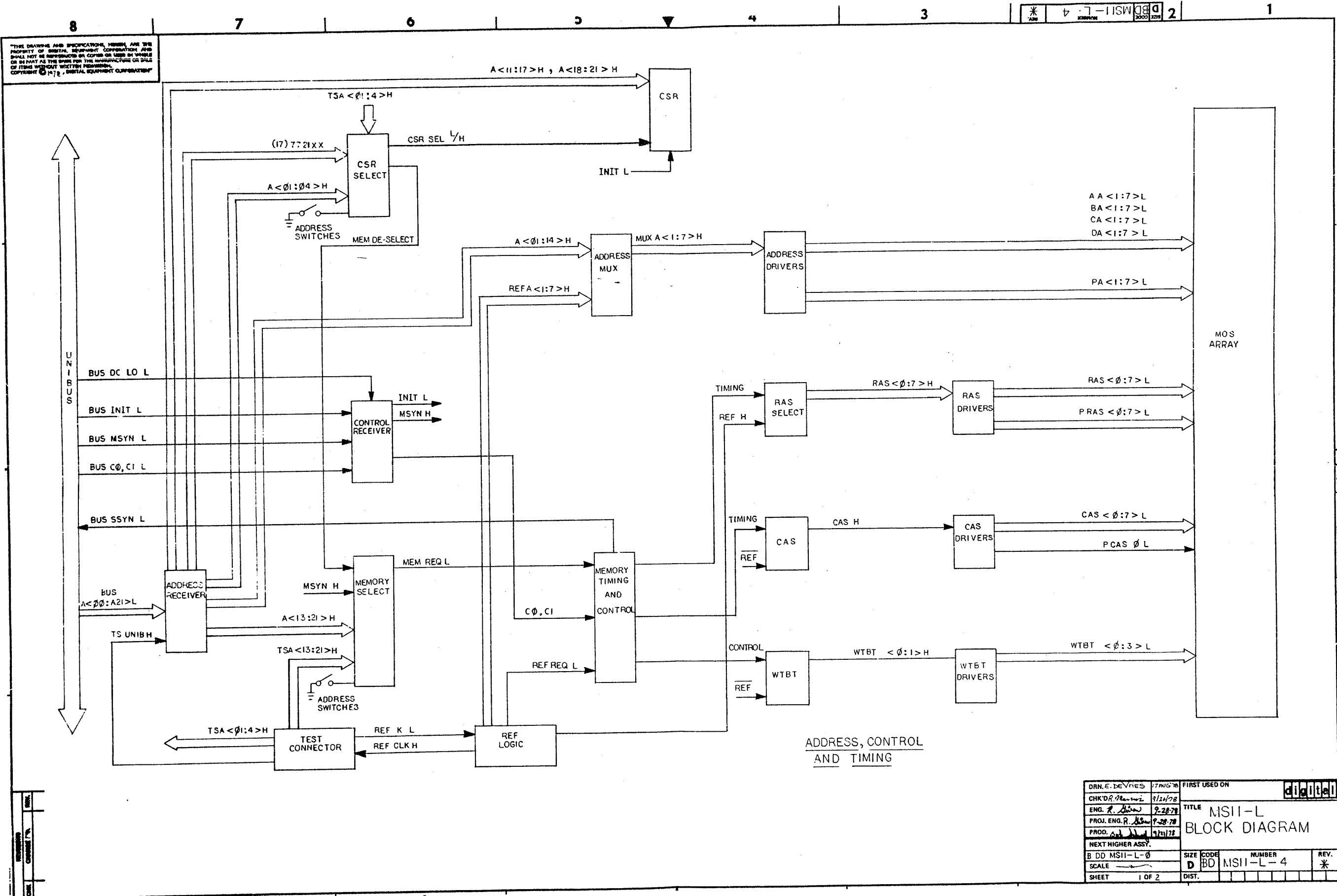
REV.	MS11-L	DD	B
	NUMBER	CODE	SIZE

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. 1978 DIGITAL EQUIPMENT CORPORATION"



TITLE	DRAWING DIRECTORY MS11 (128K X 18) MOS MEMORY SYSTEM	SHEET 2 OF 3	SIZE CODE B DD	NUMBER MS11-L	REV *
-------	------------------------------------------------------------	--------------	--------------------------	------------------	----------

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST			QUANTITY VARIATION																		
MADE BY <i>E. DEVRIES</i>		CHECKED <i>R. Manion</i>		SECTION 1		MS11-L															
DATE		DATE <i>9/26/78</i>																			
ENG <i>R. Givon</i>		PROD <i>Bob Schaab</i>		ISSUED SECT. 1																	
DATE <i>9-28-78</i>		DATE <i>9/28/78</i>																			
ITEM NO.	DWG NO./PART NO.	DESCRIPTION																			
1	D-UA-M7891-0-0	MS11-L (128Kx18) MOS MEMORY SYSTEM		1																	
2	D-BD-MS11-L-4	MS11-L BLOCK DIAGRAM		REF																	
3	D-FD-MS11-L-5	MS11-L FLOW DIAGRAM		REF																	
4	A-SP-MS11-L-3	MS11-L SYSTEM SPECIFICATION		REF																	
5	D-TD-MS11-L-6	MS11-L TIMING DIAGRAM		REF																	
6	A-PL-MS11-L-7	MS11-L SHIPPING LIST		REF																	
TITLE		ASSY NO.		SIZE	CODE	NUMBER				REV	ECO NO.										
MS11-L (128K X 18) MOS MEMORY SYSTEM		B-DD-MS11-L		A	PL	MS11-L-0				*											
SHEET 1 OF 1				DIST																	

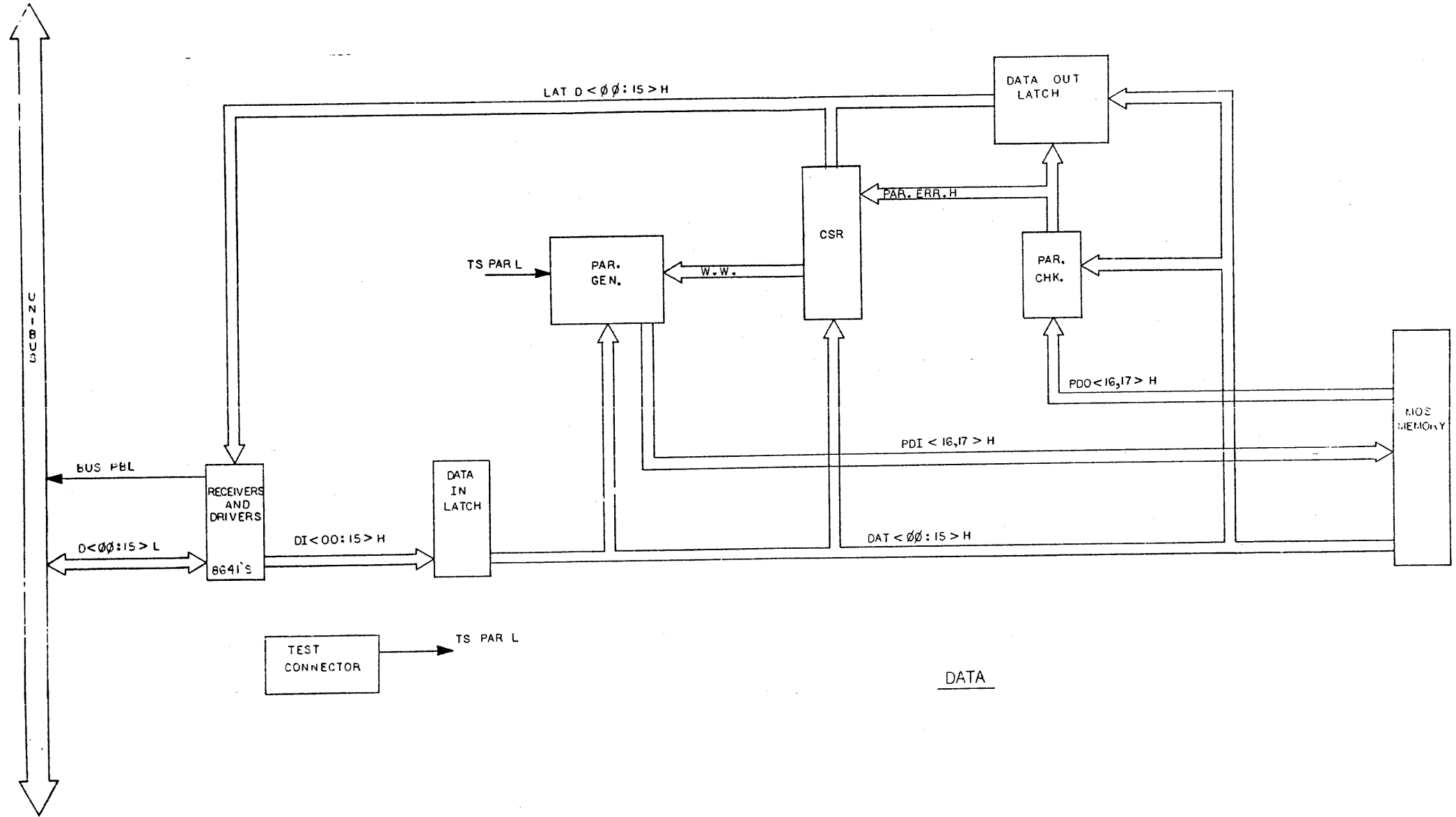


THE DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978, DIGITAL EQUIPMENT CORPORATION

ADDRESS, CONTROL AND TIMING

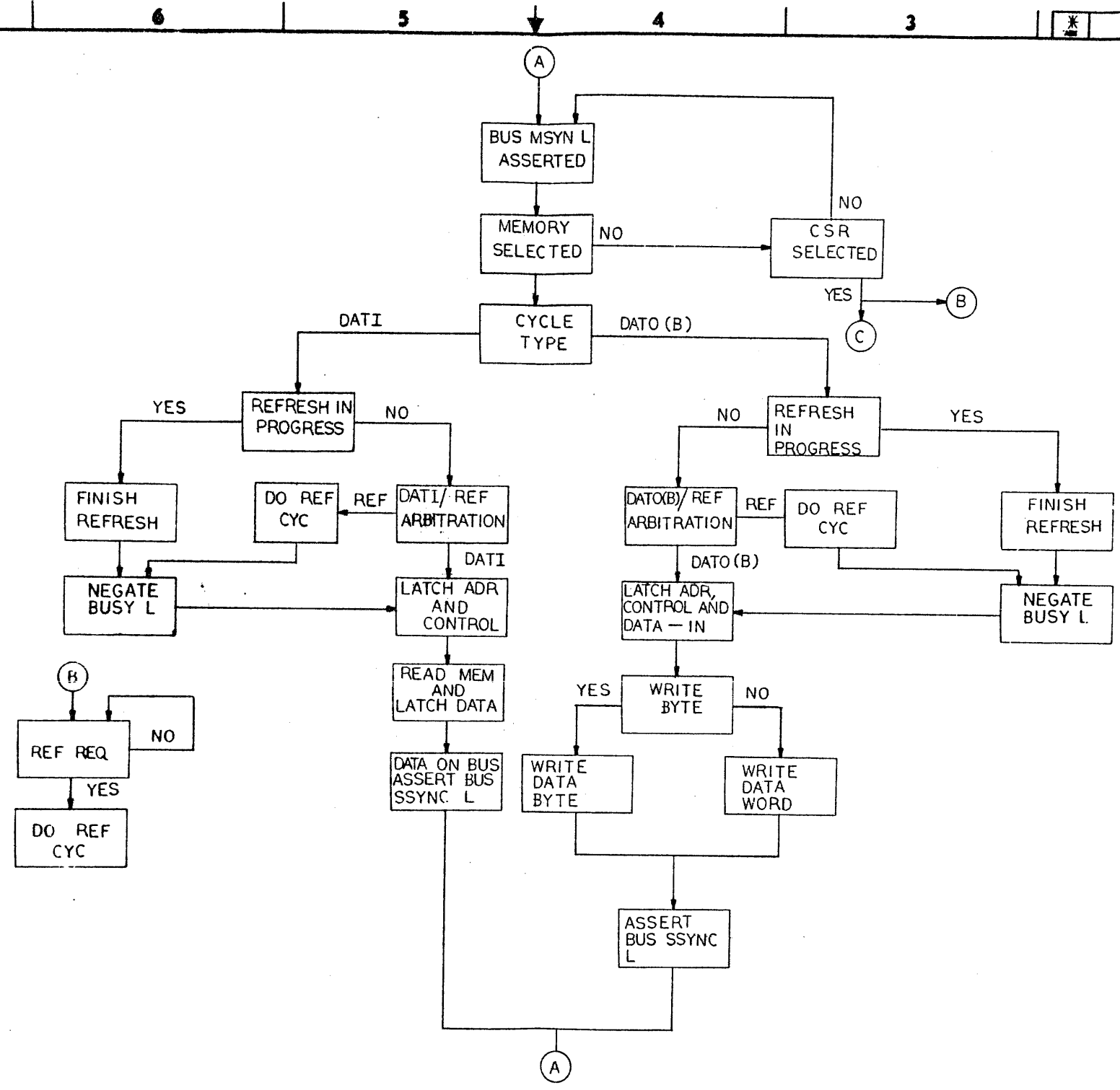
DRN. E. DeVries	1/18/78	FIRST USED ON	digital		
CHK'D R. M. ...	9/28/78	TITLE			
ENG. R. ...	9-28-78	MS11-L			
PROJ. ENG. R. ...	9-28-78	BLOCK DIAGRAM			
PROD. ...	9/28/78				
NEXT HIGHER ASSY.		SIZE	CODE	NUMBER	REV.
B DD MS11-L-0		D	BD	MS11-L-4	*
SCALE					
SHEET 1 OF 2		DIST.			

THE DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1971 DIGITAL EQUIPMENT CORPORATION



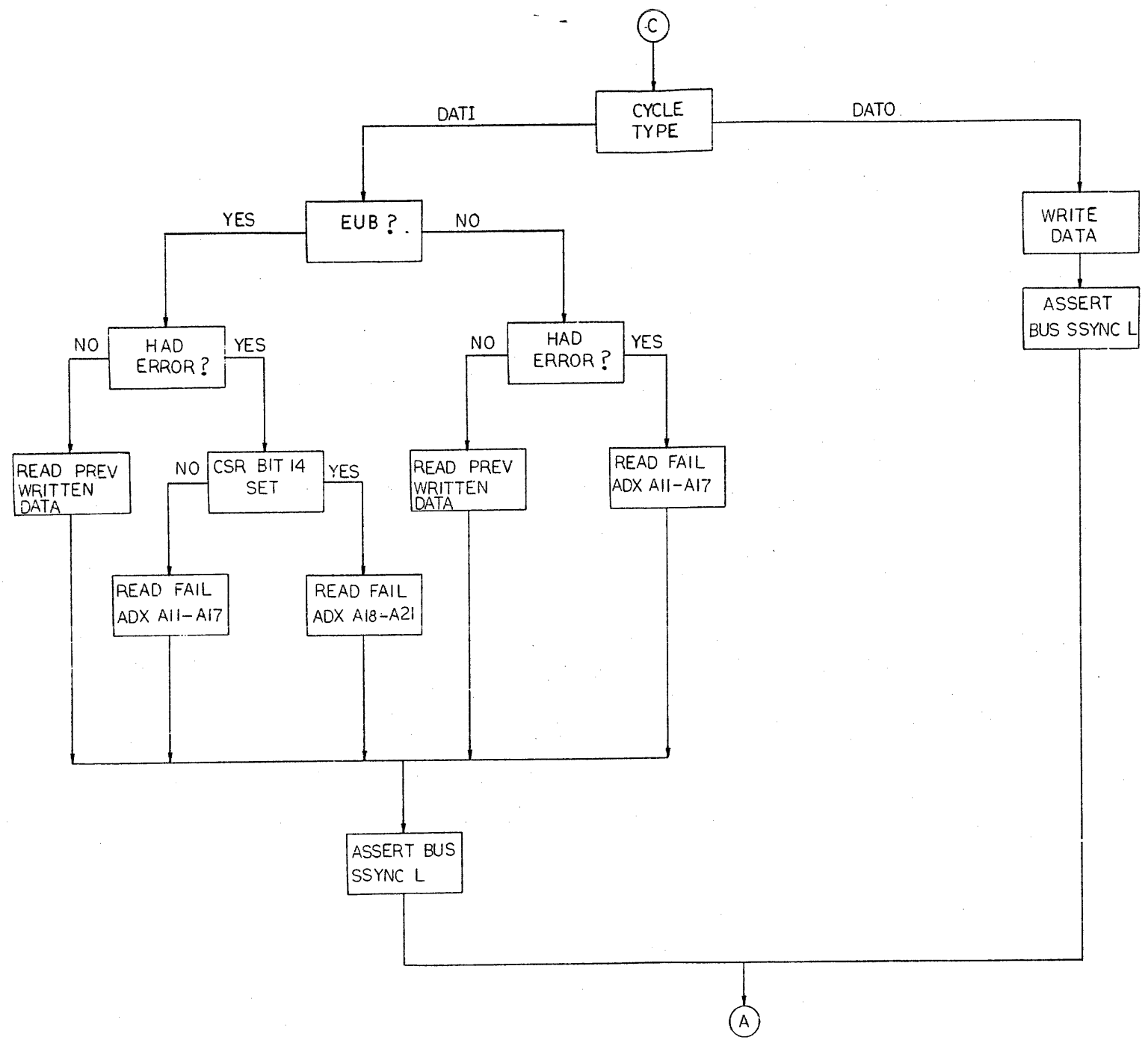
REVISIONS		
CHK	CHANGE NO.	REV.

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978, DIGITAL EQUIPMENT CORPORATION



DNW. E. DeNero	23-6-78	FIRST LATCH ON	
CHK'D R. Manna	7/26/78		
ENR. P. ...	7-28-78	TITLE	MS11-L (DATI/DATO)
PROD. ENG. P. ...	8-28-78		FLOW DIAGRAM
NEXT INHERIT ASST.			
B-DD-MS11-L	SIZE 0000	NUMBER	REV. *
SCALE	D	FD	MS11-L-5
SHEET	1 OF 2		

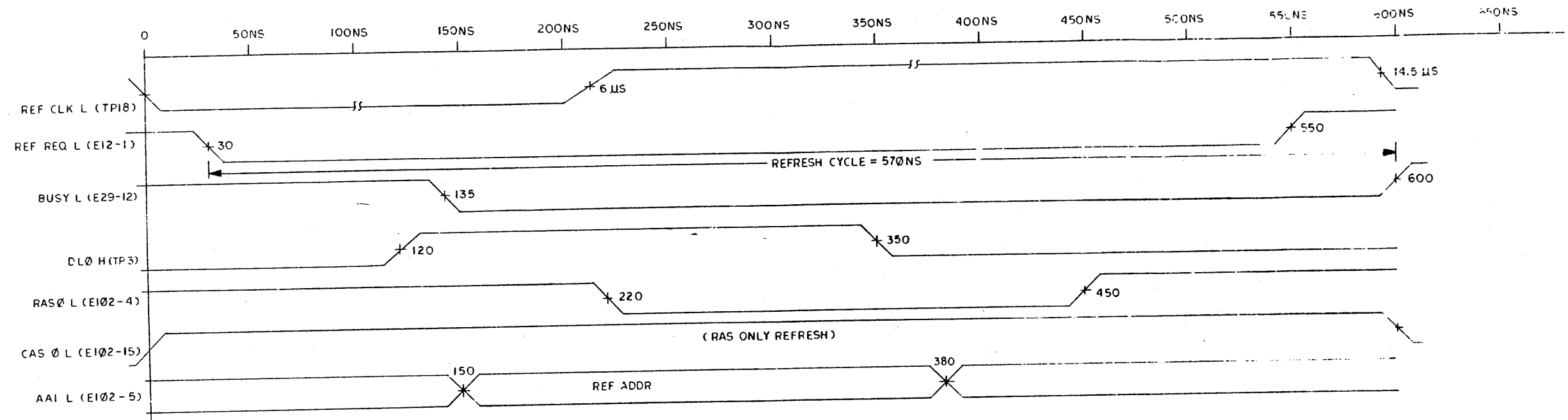
THE DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION



REVISIONS		
CHK	CHANGE NO.	REV.

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION"

REFRESH CYCLE



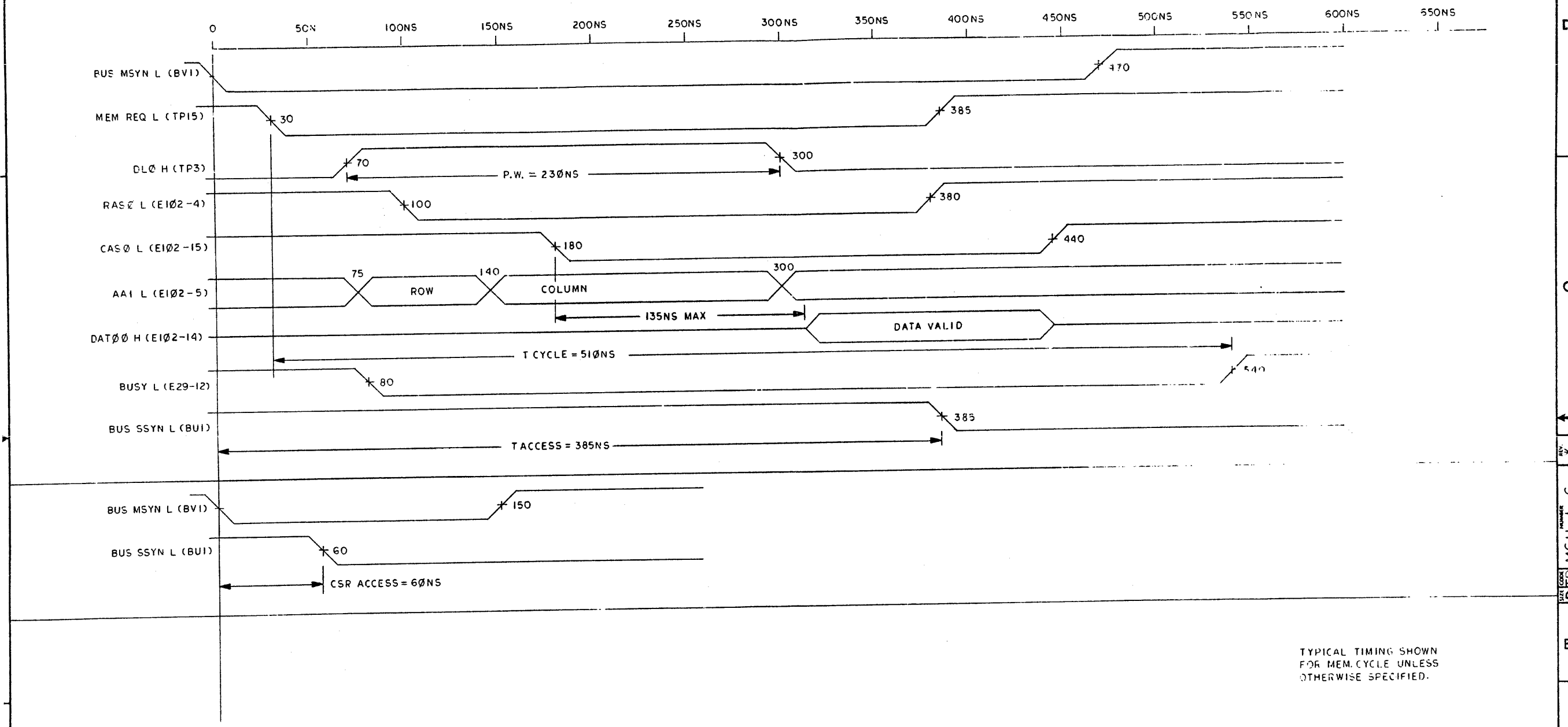
TYPICAL TIMING SHOWN FOR REFRESH CYCLE.

REV.	
CHG.	
CHK.	
REVISEMENTS	
CHANGE NO.	

DRN. J. Vincent	6-30-78	FIRST USED ON	
CHK'D. J. Vincent	8-21-78	TITLE	MS11-L
ENG. R. Brown	9-28-78		TIMING DIAGRAM
PROJ. ENG. R. Brown	9-28-78		
PROD. B. J. [unclear]	11/11/78		
NEXT HIGHER ASSY.			
B-DD-MS11-L	SIZE CODE	NUMBER	REV.
SCALE	D TD	MS11-L-6	K
SHEET 1 OF 3	DIST.		

"THIS DRAWING AND SPECIFICATIONS HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1972 DIGITAL EQUIPMENT CORPORATION"

DATA CYCLE



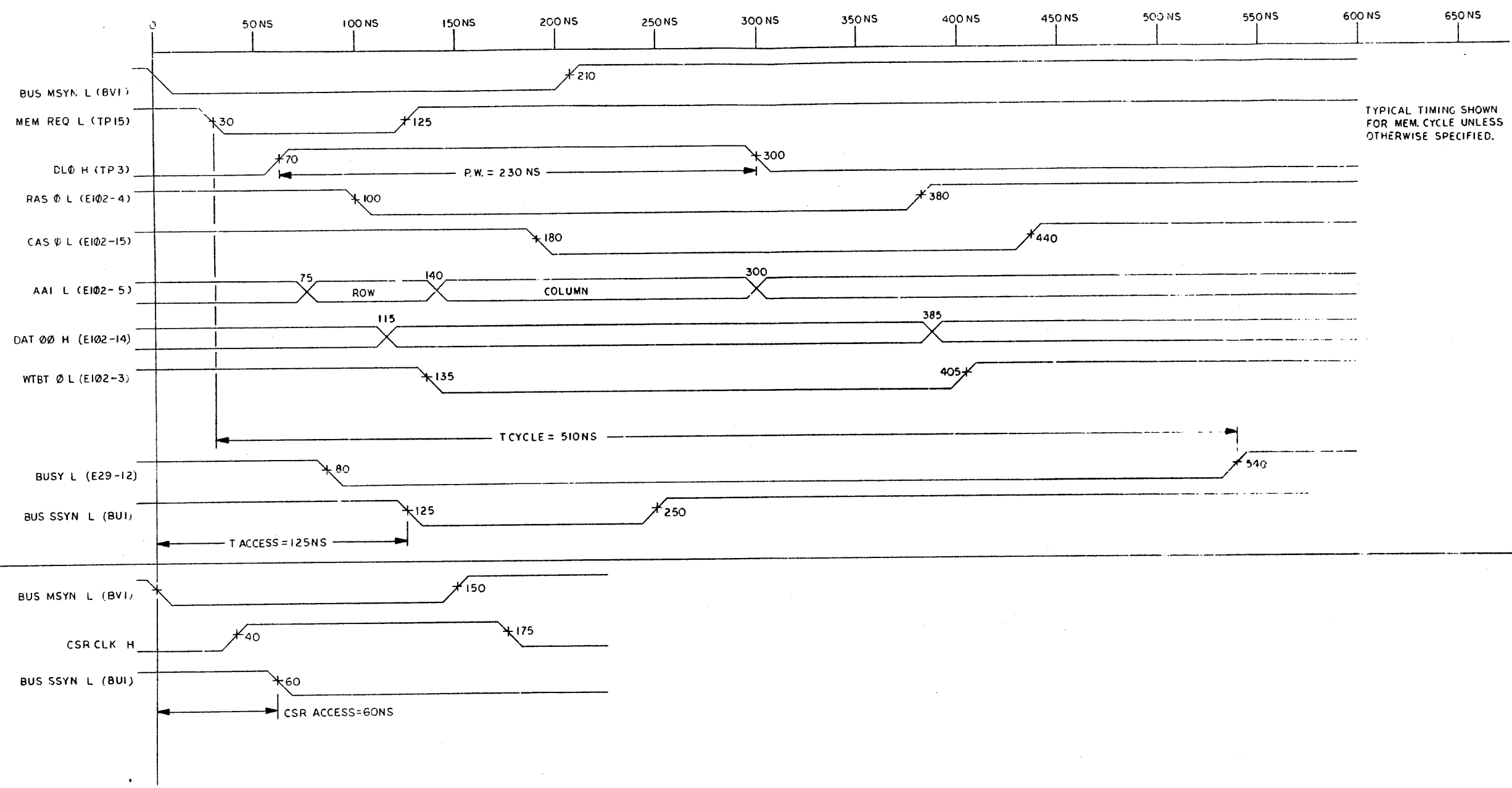
TYPICAL TIMING SHOWN FOR MEM. CYCLE UNLESS OTHERWISE SPECIFIED.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	MS11-L TIMING DIAGRAM	SIZE CODE	D TD	NUMBER	MS11-L-6	REV.	*
SCALE	1/1	SHEET	2 OF 3	DIST.			

"THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION"

DATO CYCLE



TYPICAL TIMING SHOWN FOR MEM. CYCLE UNLESS OTHERWISE SPECIFIED.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	MS11-L TIMING DIAGRAM	SIZE CODE	D TD	NUMBER	MS11-L-6	REV.	X
SCALE		SHEET	3 OF 3	DIST.			

* REV.	0-1682W NUMBER	DD CODE	B SIZE
-----------	-------------------	------------	-----------

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS																
B-DD-M7891-C	2		128K X 18 MOS MEMORY	*																
D-UA-M7891-0-0	12		128K X 18 MOS MEMORY	A																
D-CS-M7891-0-1	14		128K X 18 MOS MEMORY	A																
D-MD-5013399-0-0	4		DRILL AND ETCH DRAWING	A																
		5013399	ETCHED BOARD	B																
K-PC-M7891-0-DBC	-		P.C. DESIGN DATA BASE (M9891)	A																
K-PL-M7891-0-DBP	-		PARTS LIST DATA BASE (M7891)	A																

NOTES:

REVISIONS		DATE	CHG NO.	REV.

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION.
 COPYRIGHT© 1978 DIGITAL EQUIPMENT CORPORATION



USED ON OPTION/MODEL 11/34	DRN. E. DEVRIES	14AUG78	TITLE 128K X 18 MOS MEMORY	
	CHK'D <i>R. Manon</i>	9/20/78	SIZE B DD	CODE NUMBER
	ENG. <i>R. Green</i>	9-28-78	M7891-0	REV. *
	PROD. <i>Bob Johnson</i>	9/21/78	SHEET 1 OF 2	

AUTOMATED BY PRTLST 2E(3)

PARTS LIST

SHEET 1 OF 3

LINE	ITFM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
1	1	D-C3-M7891-0-1		CIRCUIT SCHEMATIC		REF
2	2	D-UA-M7891-0-0		UNIT ASSEMBLY		REF
3	3	D-DD-M7891-0-0		DRAWING DIRECTORY		REF
4	4	D-MD-5013399-0-0		DRILL AND ETCH DRAWING		REF
5	5	SEE NOTES BELOW.	5013399-00	128K X 18 MOS. MEM	1	
6	6		1001610-00	.01 MFD 50V 250 309CER/8000PF MIN	49	C1,C2,C141=C182,C264,C266, C268,C270,C272
7	7		1010279-01	.47 MFD 25V 20% 2C023 CER.	90	C6,C8,C184=C263,C267,C269, C271,C273,C265,C278-C280
8	8		1012084-01	8 MFD 25V G% 30D AL EL (10-12	4	C10=C12,C276
9	9		1012121-00	220.0 MMF 100V 10200PPM DM155	2	C4,C5
10	10		1012219-00	47. MFD 30V G% 600D AL EL	5	C3,C9,C274,C275,C277
11	11		1109988-00	***** THIS ITEM IS NOT USED *****	-	
12	12		1110324-00	LED 1MCD010MA 1MVS054-10HP4882	1	D3
13	13		1114384-00	LED 105MW 35MA GREEN	1	D2
14	14		1209941-00	HEADER,100 20POS RT ANGLE	1	J1
15	15		1210711-02	HANDLE,HEX MODULE,10-1/2	1	
16	16		1211751-00	FUSE, SUB-MINI, 2.000A, 125V, AXIAL LEAD	1	F1
17	17		1211164-00	SW,DIP 1P 1A 4POS	1	E47
18	18		1211164-05	SW,DIP 1P 1A 9POS	1	E61
19	19		1300271-00	220 1/4W 5% CC (13-00	3	R29,R32,R33
20	20		1300295-00	330 1/4W 5% CC (13-00	1	R3
21	21		1315679-00	R NETWORK 3-39 OHM RESISTORS 5% SIP	5	R36-R40
22	22		1300316-00	470 1/4W 5% CC (13-00	4	R11,R14,R19,R23
23	23		1300365-00	1 K 1/4W 5% CC (13-00	4	R13,R16-R18
24	24		1301874-00	5.6 K 1/4W 5% CC (13-00	4	R12,R15,R28,R30
25	25		1302377-00	39 1/4W 5% CC (13-00	2	R8,R35
26	26		1302411-00	511 1/4W 1% RN55D-F 100PPM (13-00	1	R6
27	27		1302874-00	147 1/4W 1% RN55D-F 100PPM (13-00	2	R7,R21
28	28		1302957-00	121 1/4W 1% RN55D-F 100PPM (13-00	1	R2

REVISION HISTORY			VARIATIONS FOR THIS ASSY.		DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK	ECO NO	REV	DC,DD,DF,CC,CD,CF,AC AD,AF,BC,BD,BF	FIRST USED ON: 11/34	MADE BY: H. WEINBRENNER	DATE: 13-SEP-78
---	INIT	A			CHECKED: R.V. MANION	DATE: 13-SEP-78
					DSN, ENG.: R. GIVEN	DATE: 13-SEP-78
					PROD.: B. SCHAFF	DATE: 13-SEP-78
					RESP. ENG.: R. GIVEN	DATE: 13-SEP-78
						TITLE: PARTS LIST
						MS11-LD 128K X 18 MOS MEMORY
					SIZE: CODE: DOCUMENT NUMBER	REV
					K PL M7891-DC-DBP	A
					ASSY. NO.: D-UA-M7891-0-0	EDITS: 6

"THIS DRAWING AND SPECIFICATIONS HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT 1978, DIGITAL EQUIPMENT CORPORATION"

LINE	ITEM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
29	29		1303110-00	19.6 1/4W 1% RN55D-F 100PPM (13-00)	1	R10
30	30		1303156-00	34.0 K 1/4W 1% RN55D-F 100PPM (13-00)	1	R5
31	31		1305123-00	215 1/4W 1% RN55D-F 100PPM (13-00)	1	R20
32	32		1305322-00	7.5 K 1/4W 1% RN55D-F 100PPM (13-00)	1	R4
33	33		1312466-00	10 1W 1% NW (13-00)	1	R1
34	34		1315670-00	R NETWORK 3-10 OHM RESISTORS 5% SIP	16	R41-R56
35	35		1315339-00	R NETWORK 4-5K RESISTORS 5% SIP	7	R9,R22,R24-R27,R31
36	36		1613120-00	DELAY= 200NS,10TAPS	1	E18
37	37		1910532-00	74800 NAND GATE-QUAD 2INS	3	E16,E46,E53
38	38		1910533-00	74803 NAND GATE-QUAD 2IN,OPN COLLECT	1	E7
39	39		1910536-00	74810 NAND GATE-TRIPLE 3IN	2	E28,E19
40	40		1910537-00	74811 AND GATE-TRIPLE 3INPUT	2	E29,E44
41	41		1910539-00	74820 NAND GATE-DUAL 4INPUT	1	E59
42	42		1910544-00	74874 FF-D DUAL,EDGE TRIGGER	2	E33,E34
43	43		1910544-01	74874-60GG-D DUAL,EDGE TRIGGER,SYNCHR	1	E6
44	44		1910549-00	748150 MUX 1 OF 2 (QUAD)	2	E58,E65
45	45		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,UNIBUS,Q-BU	6	E40,E62,E25,E31,E37,E41
46	46		1911573-00	748200 PARITY GEN/CHKR,9BIT ODD/EVEN	4	E42,E49,E56,E63
47	47		1911579-00	8641 TRANSCIEVER,BUS,QUAD,UNIBUS	6	E1,E3,E8,E13,E19,E55
48	48		1911675-00	748130 DECODER-THREE INPUT	1	E51
49	49		1911944-00	555CN TIMER,FUNCT,BLOCK	1	E5
50	50		1911903-00	748133 NAND GATE-POSITIVE 13IN	1	E45
51	51	SEE LINE #03.	1912048-02	DEC 7812-02 VOLT.REG.FIX T12V 1.5A T	1	Q2
52	52		1912300-00	74802 NOR GATE-QUAD 2IN,POS	1	E30
53	53		1912389-00	74800 AND GATE-QUAD 2IN,POS	2	E22,E23
54	54		1912541-00	VOLT.REG.FIX -5V .02A	14	Q1
55	55		1912746-00	DEC 74837 NAND GATE-QUAD 2IN	1	E12
56	56		1912807-00	LS10 NAND GATE-TRIPLE 3IN	2	E11,E40
57	57		1912828-00	LS85 COMPARATOR,4BIT MAGNITUDE	1	E54
58	58		1912853-00	LS175 FF-D QUAD	2	E10,E15
59	59		1912867-00	LS290 MUX 1 OF 4,2IN W/STORAGE	2	E21,E27
60	60		1913340-00	74832 OR GATE-QUAD 2IN	2	E35,E36
61	61		1913462-00	748240 OCTAL BUFFER,INVERTING TRI-STA	1	E52
62	62		1913670-00	748373 LATCH 8BIT TRASP TRISTATE	3	E50,E57,E64
63	63		1913777-00	LS240 DRIVER,LINE,OCTAL,TRI-ST	9	E24,E68,E69,E86,E119,E136, CONT E109,E106,E203
64	64		1914086-00	74830 NAND GATE-POS 0IN	1	E60
65	65		1914451-00	74LS393 COUNTER,BINARY,4BIT	1	E43
66	66		1915193-00	LS244 DRIVER,LINE,OCTAL,TRI-ST	1	E17
67	67		1915219-00	LS373 FF-D OCTAL-TRANSPARENT	8	E2,E4,E9,E14,E20,E26,E32,E38
68	68		23249F1-00	F1-01 PROM, 1	1	E67
69	69		23468A2-00	A2-05 PROM, 1	1	E66
70	70		7414765-00	HEATSINK	1	
71	71		9000024-01	EYELET, ROLLED FLANGE, .121 OD X .196 LG	12	
72	72		9010092-00	SCREW,PAN,PHIL, 4-40X 5/16 SS	1	
73	73		9007201-00	TRANSIPADS #10253	1	
74	74		9009149-00	PIN, STAKING, P.C. BOARD, .025 X .025	5	
75	75		9009105-00	JUMPER, WIRE, INSULATED, BLACK BAND	11	W2,W7,W10-W16,W20,W21

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		TITLE	SIZE	CODE	DOCUMENT NUMBER	REV
		PARTS LIST	K	PL	M7891-DC-DBP	A
		M811-LD 128K X 10 MOS MEMORY				

AUTOMATED BY PRTLST 2E(3)

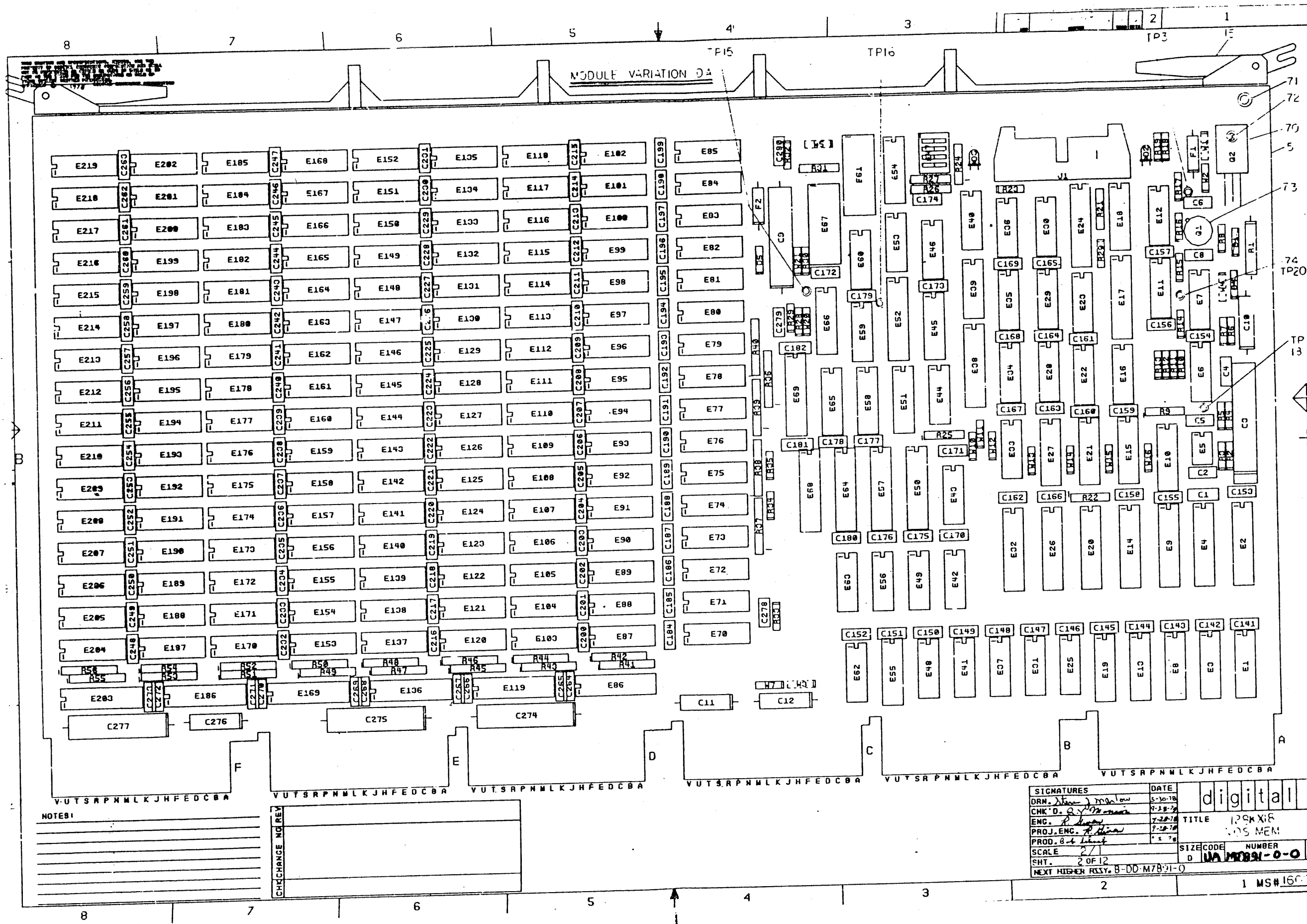
PARTS LIST

SHEET 3 OF 3

LINE	ITEM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
76	76		1109991-00	1N 754A VZ= 6.8 5% .40W	1	D5
77	77		1105275-00	***** THIS ITEM IS NOT USED *****	-	
78	78		1210929-04	FUSE, SUB-MINI .250A, 125V, AXIAL LEAD	1	F2
79	79		2114408-01	16K MOS RAM 200NS 16PIN DYNA	144	E70-E85, E120-E135, E170-E185, CONT E87-E118, E137-E168, E187-E202, CONT E204-E219
80	80		1301969-00	22 1/4W 5% CC (13-00)	1	R34

81 NOTE: M7891-DA IS A PRIMARY VARIATION OF THE 128K X 18 BIT SYSTEM (NOT A MODULE TYPE).
 82 NOTE: M7891-DC IS A MODULE TYPE USING FUJITSU 16K MOS DEVICES.
 83 NOTE: 1912048-03 MAY BE SUBSTITUTED FOR ITEM S1 PART #1912048-02.

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE PARTS LIST M511-LD 128K X 18 MOS MEMORY	SIZE K	CODE PL	DOCUMENT NUMBER M7891-DC-DBP	REV A
---------------------------------------------------------	-----------------------------------------------------	-----------	------------	---------------------------------	----------



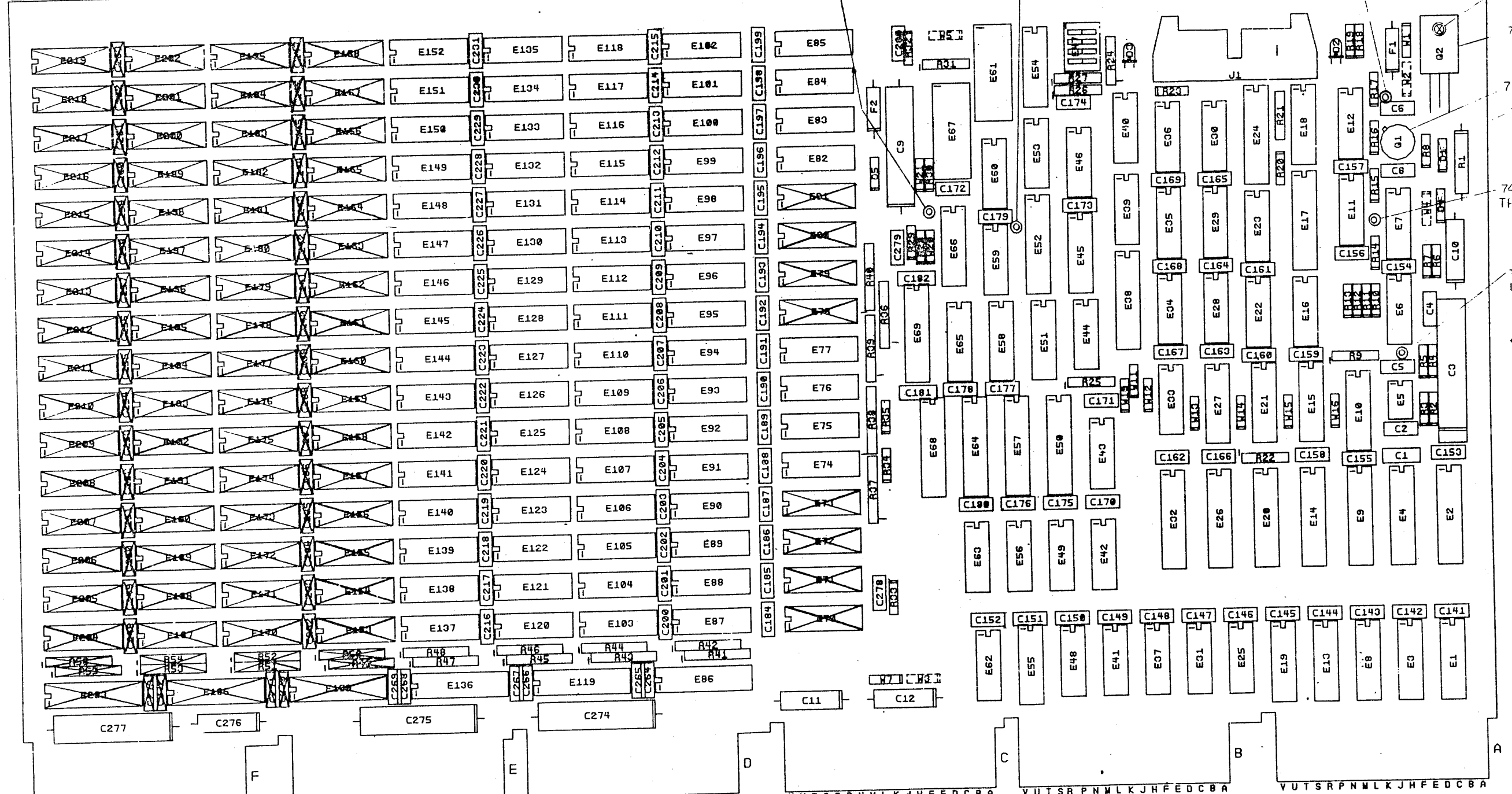
NOTES:

CHG	NO	REV

SIGNATURES		DATE	digital
DRN. <i>[Signature]</i>		5-30-78	
CHK'D. <i>[Signature]</i>		7-28-78	TITLE 129KX18 VDS MEM
ENC. <i>[Signature]</i>		7-28-78	
PROJ. ENG. <i>[Signature]</i>		8-18-78	SIZE CODE NUMBER REV D 100-0-0 A
PROJ. <i>[Signature]</i>		8-18-78	
SCALE 2/1		NEXT HIGHEN ASSY. B-DD-M78(1-0)	
SHT. 2 OF 12		1 MS#160013	

THIS DRAWING AND SPECIFICATIONS, HERETO, AND THE
PARTS LIST OR PARTS LIST SUPPLEMENT, SHALL BE
CONSIDERED AS PARTS OF THE CONTRACT AND SHALL
BE SUBJECT TO THE TERMS AND CONDITIONS OF THE
GENERAL CONDITIONS OF CONTRACT.

MODULE VARIATION BA



NOTES:

CHK	CHANGE NO	REV

SIGNATURES		DATE	digital
DRN. <i>[Signature]</i>		5-30-78	
CHK'D. <i>[Signature]</i>		7-18-78	
ENG. <i>[Signature]</i>		9-21-78	
PROJ. ENG. <i>[Signature]</i>		11/1/78	
SCALE	27		
SHT.	6 OF 12		
NEXT HIGHER ASSY. B-DD-M7891-0			

TITLE 128KX18
NOS MEM

SIZE CODE NUMBER REV
0 UA M7891-0-0 A

1 MS#16023

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN MILLIMETERS. THIS DRAWING IS THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT WRITTEN PERMISSION FROM DIGITAL EQUIPMENT CORPORATION. © 1978, DIGITAL EQUIPMENT CORPORATION.

12 / 13 MIL
M7891 5013399 B

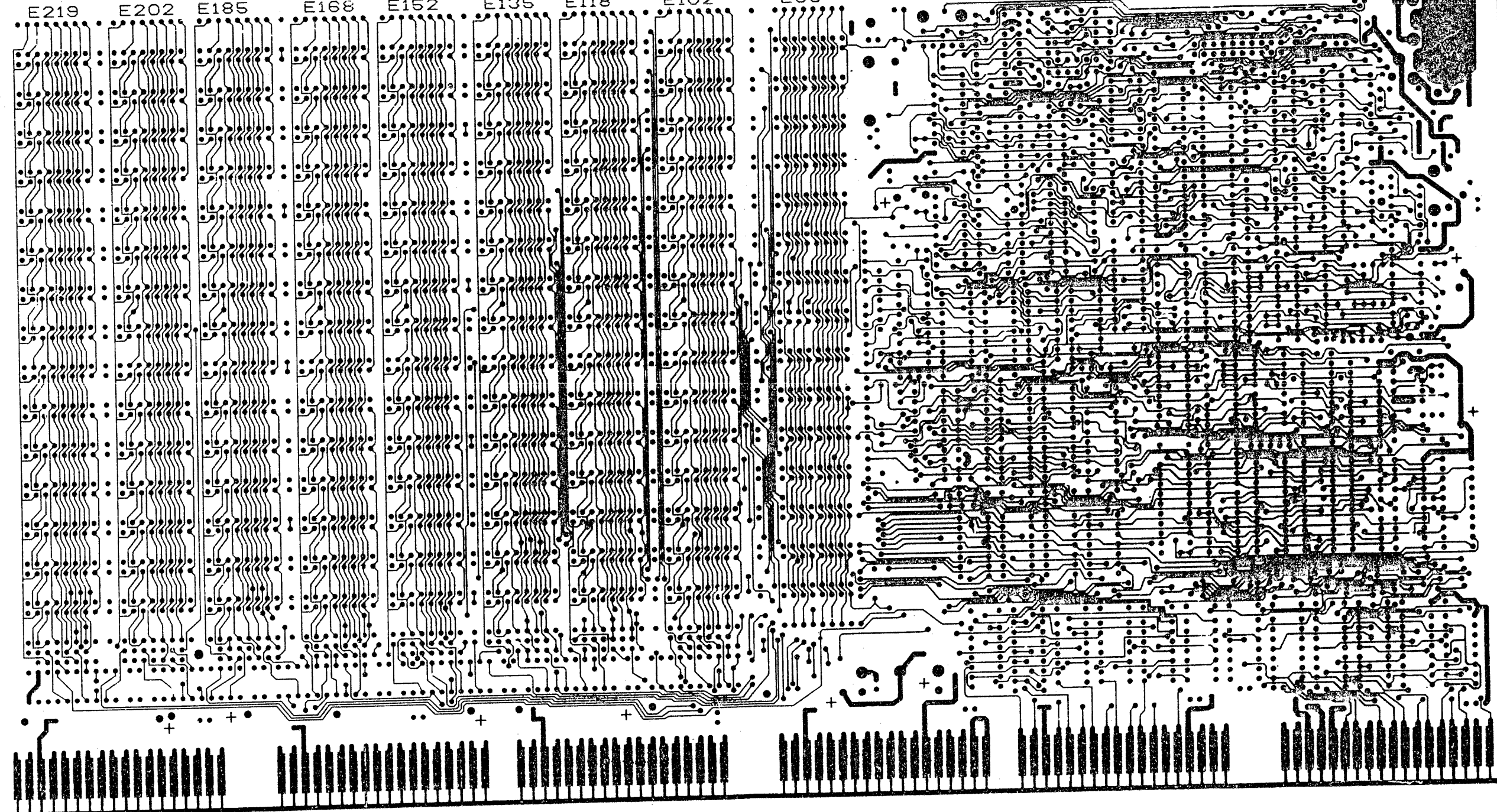
LAYER 1

L1

CSXABCDEFGHIJKLMNPRS
E219 E202 E185 E168 E152 E135 E118 E102

SIDE 1
E69 E67 E61 E54 E47 E40 E36 E30 E24 E18 E12

digital

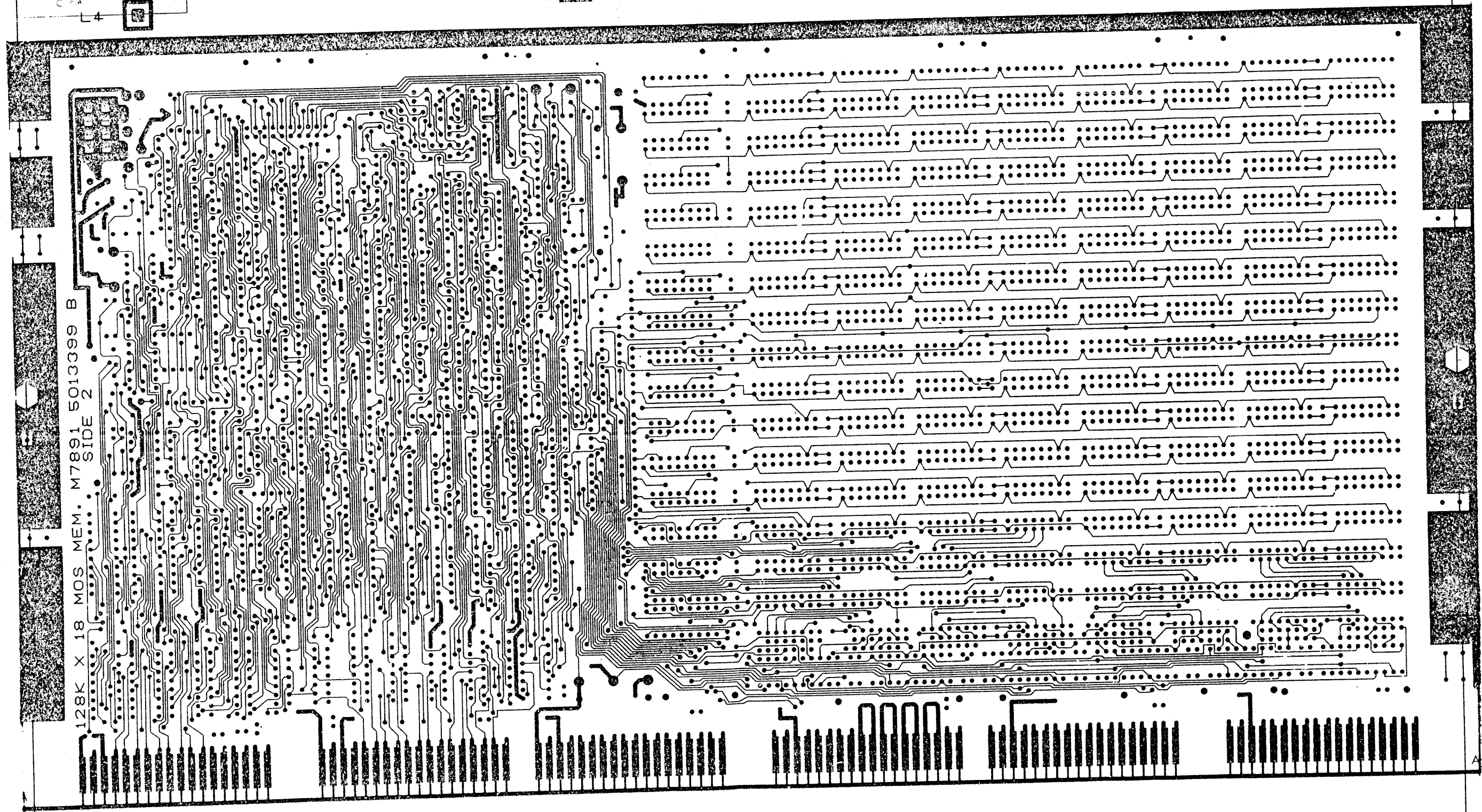


REV		NUMBER		SIZE CODE		TITLE	
A		M7891-C-0	DJA	128K X 18 MOS MEM	2/1	9 OF 12	
1							
2							
3							
4							
5							
6							
7							
8							

12 / 13 MIL

LAYER 4

128K X 18 MOS MEM. M7891 5013399 B
SIDE 2



TITLE		DUAL		M7891-C-0		A	
SCALE	2/1	SHEET	12 OF 12	DATE			

8

7

6

5

4

3

2

1

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION

NOTES:

DEC (K)	OCTAL	SWITCH SETTING (X = OFF)								
		S2-1	S2-2	S2-3	S2-4	S2-5	S2-6	S2-7	S2-8	S2-9
C	00000000									
4	00020000									X
8	00040000									X
12	00060000								X	X
16	00100000							X		
20	00120000							X	X	
24	00140000							X	X	
28	00160000							X	X	X
32	00200000						X			
36	00220000						X			X
40	00240000						X		X	
44	00260000						X		X	X
48	00300000						X	X		
52	00320000						X	X		X
56	00340000						X	X	X	
60	00360000						X	X	X	X
64	00400000						X			
68	00420000						X			X
72	00440000						X		X	
76	00460000						X		X	X
80	00500000						X	X		
84	00520000						X	X		X
88	00540000						X	X	X	
92	00560000						X	X	X	X
96	00600000						X	X		
100	00620000						X	X		X
104	00640000						X	X	X	
108	00660000						X	X	X	X
112	00700000						X	X	X	
116	00720000						X	X	X	X
120	00740000						X	X	X	X
124	00760000						X	X	X	X

EUB CSR ADDRESS OCTAL	MOD. UNIBUS CSR ADDRESS OCTAL	SWITCH SETTING (X = OFF)			
		SI-1	SI-2	SI-3	SI-4
17772100	772100				
17772102	772102				X
17772104	772104				X
17772106	772106			X	X
17772110	772110			X	
17772112	772112			X	X
17772114	772114			X	X
17772116	772116			X	X
17772120	772120			X	
17772122	772122			X	X
17772124	772124			X	X
17772126	772126			X	X
17772130	772130			X	X
17772132	772132			X	X
17772134	772134			X	X
17772136	772136			X	X

OPTION DESIGNATION	PRIMARY VARIATION	SYSTEM DESCRIPTION
MSII-LA	M7891-AA	32K X 18 BITS
MSII-LB	M7891-BA	64K X 18 BITS
MSII-LC	M7891-CA	96K X 18 BITS
MSII-LD	M7891-DA	128K X 18 BITS

BUS VOLTAGE	JUMPER	
	W1	W2
+12V	IN	OUT
+15V	OUT	IN

BUS VOLTAGE	JUMPER	
	W3	W7
+5V	IN	OUT
+5BBU	OUT	IN

PERIPHERAL PAGE SIZE	JUMPER	
	W5	W21
2K	IN	IN
4K	OUT	IN
8K	OUT	OUT

FUNCTION	JUMPER		
	W10	W11	W12
NORMAL	IN	IN	IN
ROW ADDR DISABLE	IN	IN	OUT
COL ADDR DISABLE	IN	OUT	IN
REF ADDR DISABLE	OUT	IN	IN

FUNCTION	JUMPER			
	W13	W14	W15	W16
NORMAL	IN	IN	IN	IN
LAT DATA DISABLE	OUT	IN	IN	IN
CSR DATA DISABLE	IN	OUT	IN	IN
CSR DATA DISABLE	IN	IN	OUT	IN
X-ADDR DISABLE	IN	IN	IN	OUT

TYPE	JUMPER	
	W4	W20
MOD UNIBUS	OUT	
EUB	IN	

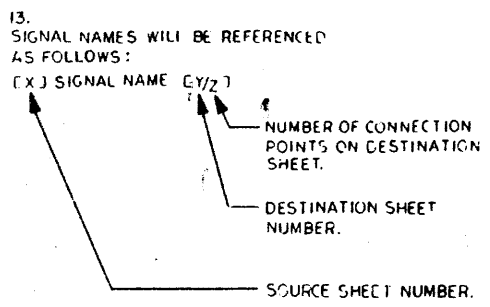
FUNCTION	JUMPER	
	W20	W21
NORMAL	IN	
SSYN DISABLE	OUT	

IC TYPE	+5V	GND	+12V	-5V
MOS	9	16	8	1
74S00	14	7		
74S10	14	7		
74S11	14	7		
74S20	14	7		
74S03	14	7		
74S74	14	7		
74S74-01	14	7		
74S158	16	8		
74LS175	16	8		
8640	8	1		
8641	16			
74S280	14	7		
74139	16	8		
555			8	
74S02	14	7		
74S08	14	7		
74S37	14	7		
74LS10	14	7		
74LS85	16	8		
74LS298	16	8		
74S32	14	7		
74S240	20	10		
74LS240	20	10		
74S373	20	10		
74S30	14	7		
74LS393	14	7		
74LS244	20	10		
74LS373	20	10		
74S133	16	8		
1K X 4 PROM	18	?		
256 X 4 PROM	16	8		

16 SOME .17 UFD AND .01 UFD ARE NOT USED ON THE AA, BA, CA PRIMARY VARIATIONS.

STARTING ADDRESS RANGE DEC (K)	OCTAL	SWITCH SETTING (X = OFF)								
		S2-1	S2-2	S2-3	S2-4	S2-5	S2-6	S2-7	S2-8	S2-9
128-252	01000000-01760000					X				
256-360	02000000-02760000				X					
364-508	03000000-03760000				X	X				
512-636	04000000-04760000		X							
640-764	05000000-05760000		X			X				
768-892	06000000-06760000		X	X						
896-1020	07000000-07760000		X	X	X					
1024-1148	10000000-10760000	X								
1152-1276	11000000-11760000	X					X			
1280-1404	12000000-12760000	X			X					
1408-1532	13000000-13760000	X			X	X				
1536-1660	14000000-14760000	X	X							
1664-1788	15000000-15760000	X	X	X			X			
1792-1916	16000000-16760000	X	X	X						
1920-2044	17000000-17760000	X	X	X	X					

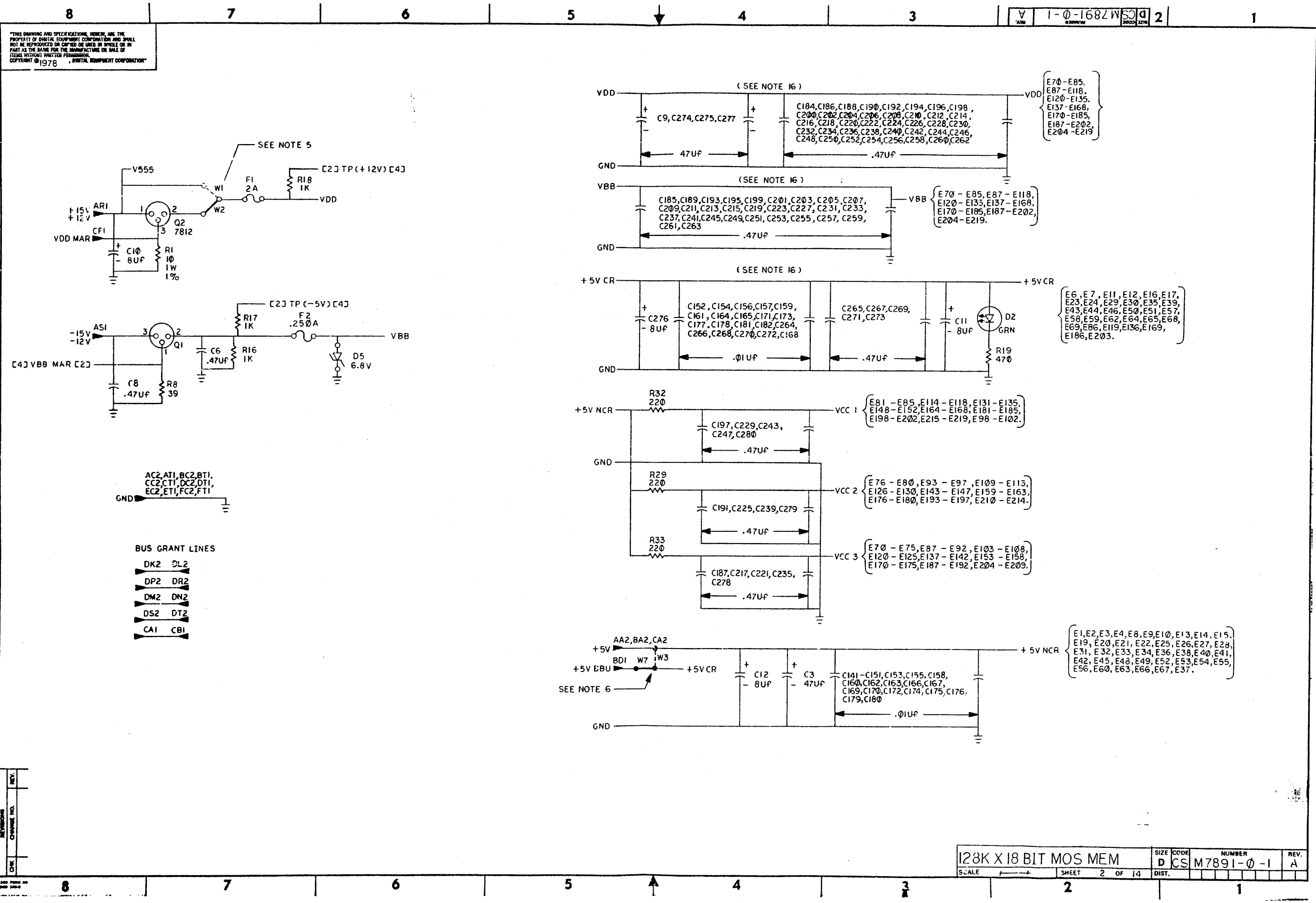
TO OBTAIN INCREMENTAL 4K BOUNDARIES WITHIN THE SPECIFIED RANGE, REPEAT SWITCH SETTINGS FROM THE 0-124 K TABLE. I.E. S.A. = 260 K S2-3 = X = OFF S2-9 = X = OFF



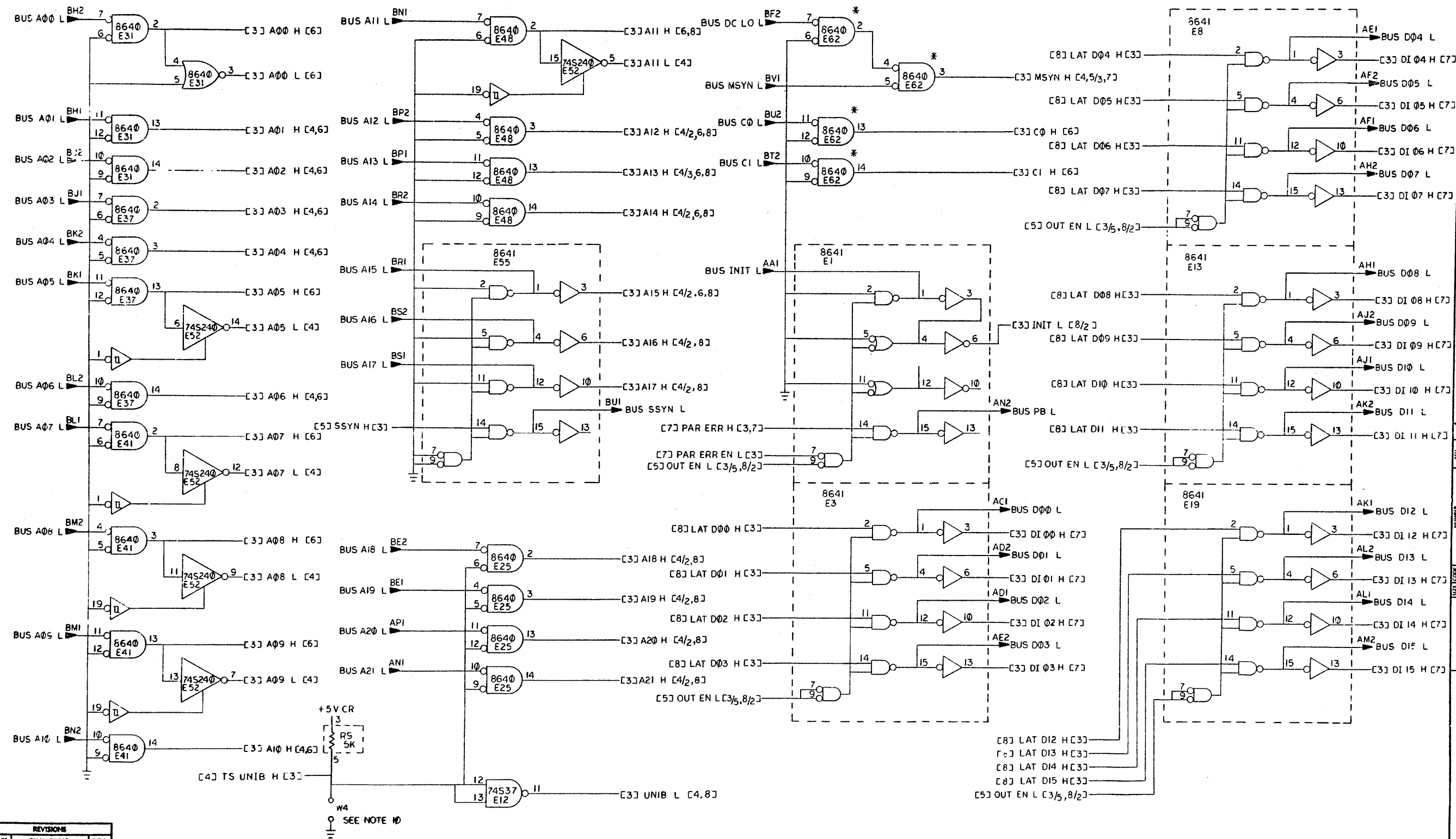
- 14. * INDICATES BATTERY BACK UP (+5V CR)
- INDICATES .125 PAD ON SIDES 1 AND 2.
- ⊙ INDICATES WIRE WRAP PINS AND TEST POINTS.
- 15. RESISTORS ARE 5% UNLESS OTHERWISE SPECIFIED.

REV.	
CHG.	

DRN. J. J. F. 6/30/78	FIRST USED ON	11/34
CHK'D? M. M. 1/20/79	TITLE	28K X 18 BIT MOS MEM
ENG. R. L. 9/28/78	SIZE CODE	D CS
PROJ. ENG. R. L. 9/28/78	NUMBER	M7891-0-1
PROD. G. J. 7/15/77	REV.	A
NEXT HIGHER ASSY.	SCALE	1 OF 14
B-DD-M7891-0	SHEET	1 OF 14
DIST.		



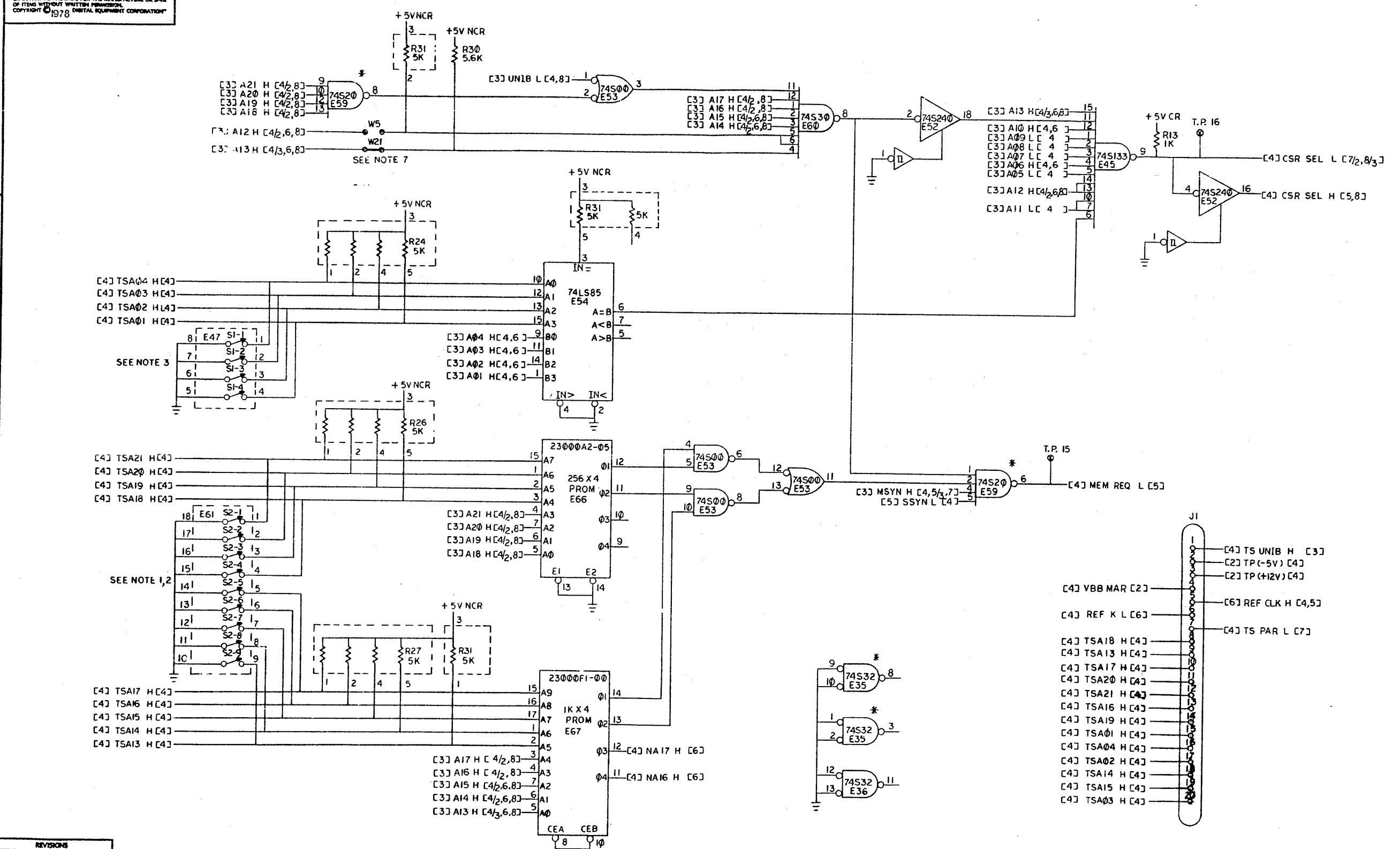
THIS DRAWING AND SPECIFICATIONS HEREON ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION



REVISIONS		
CHK	CHANGE NO.	REV.

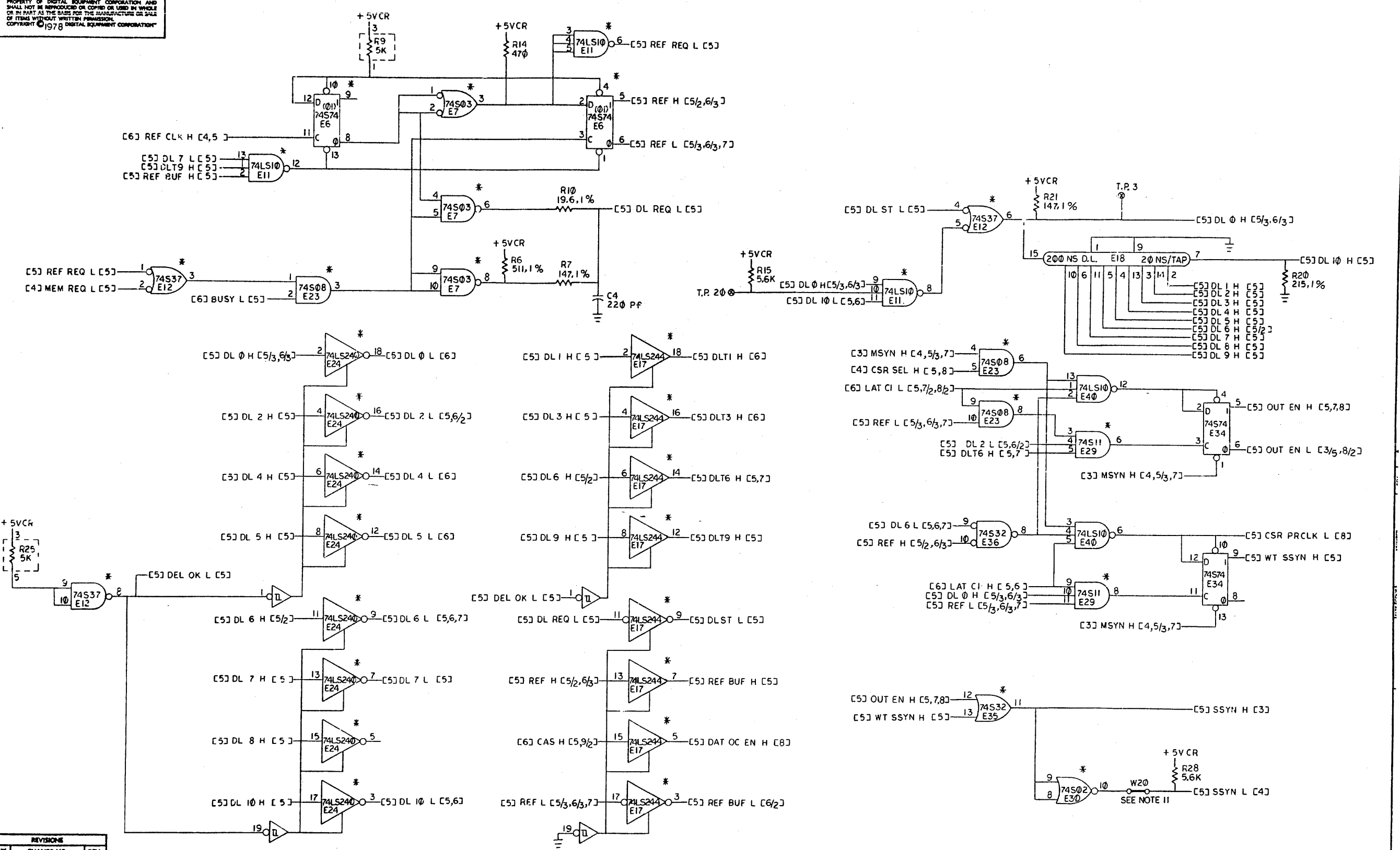
TITLE	128K X18 BIT MOS MEM	SIZE CODE	D CS	NUMBER	M7891-0-1	REV.	A
SCALE	+	SHEET	3	OF	14	DIST.	

"THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION"



REVISIONS		
CHK	CHANGE NO.	REV.

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION"

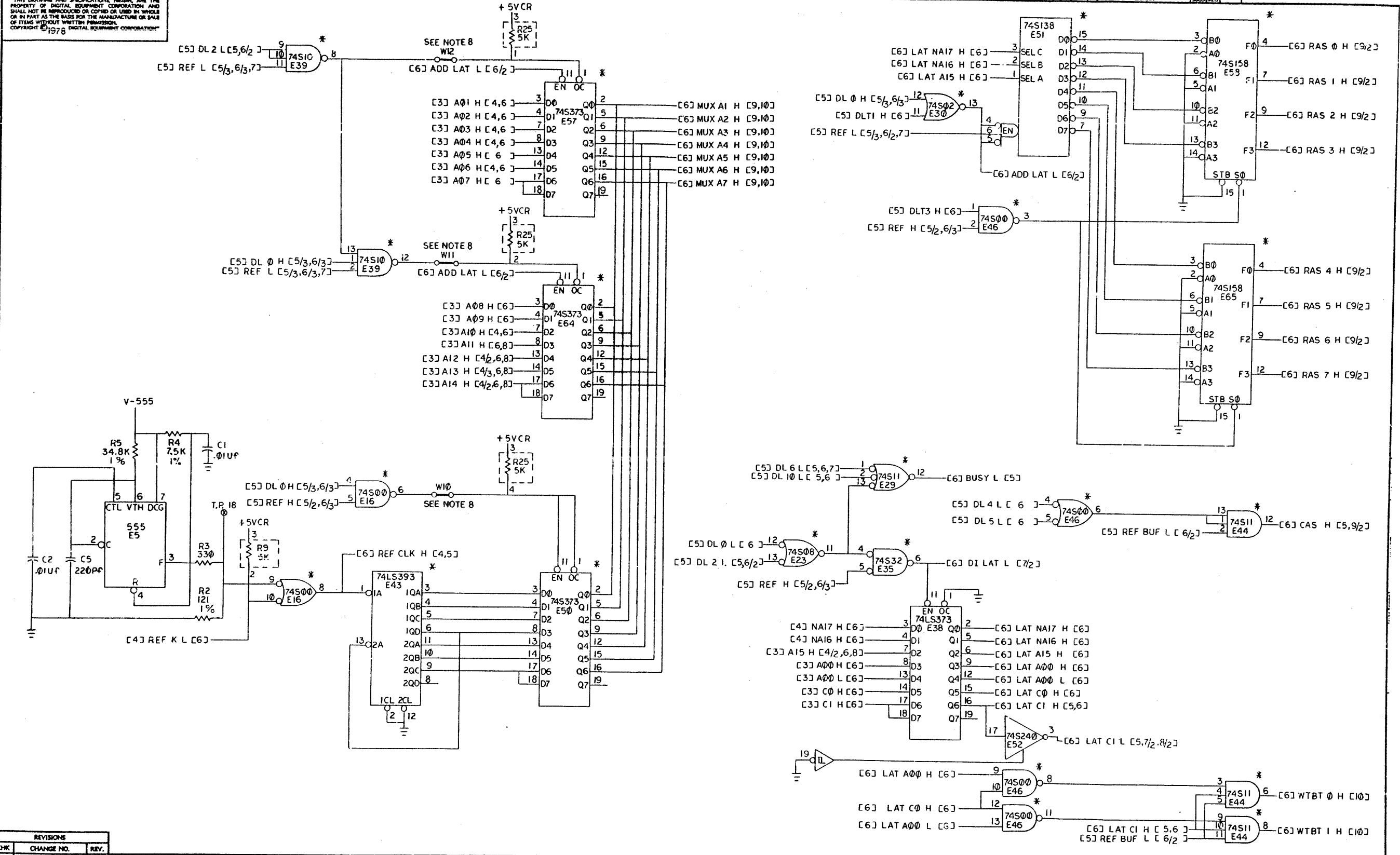


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	128K X 18 BIT MOS MEM	SIZE CODE	D CS	NUMBER	M 7891-0-1	REV.	A
SCALE	+	SHEET	5 OF 14	DIST.			

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION"

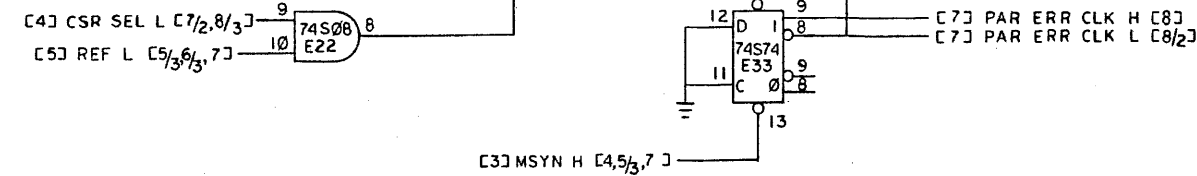
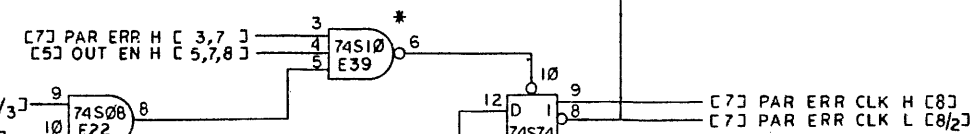
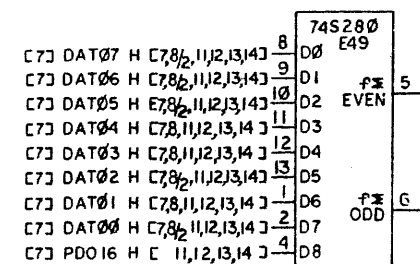
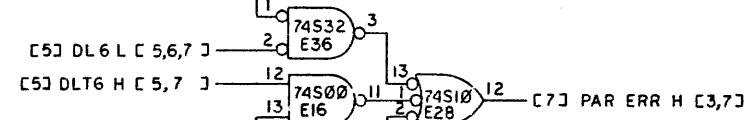
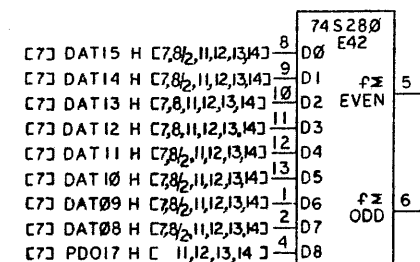
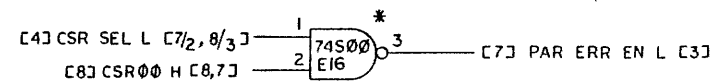
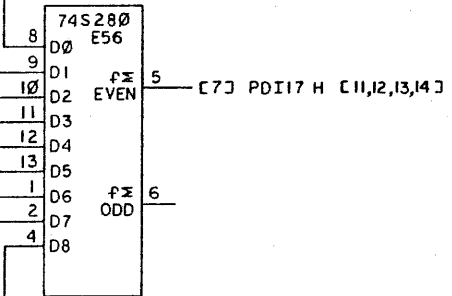
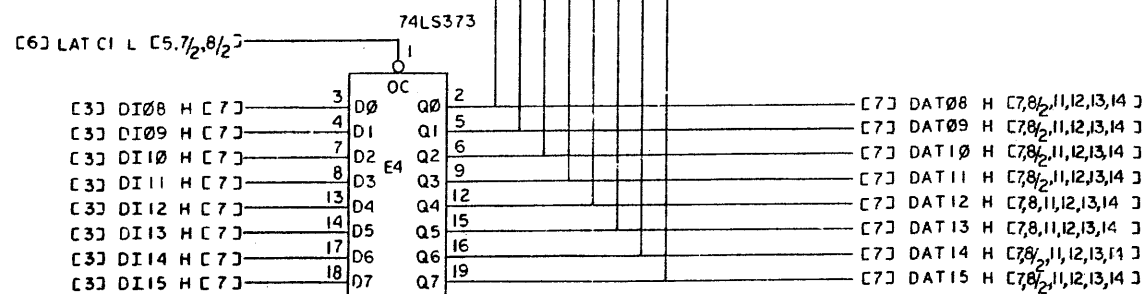
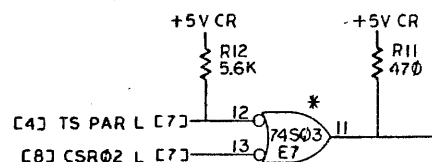
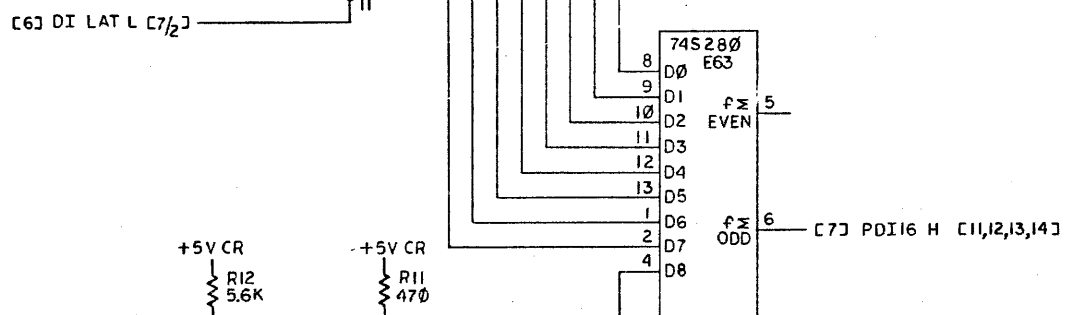
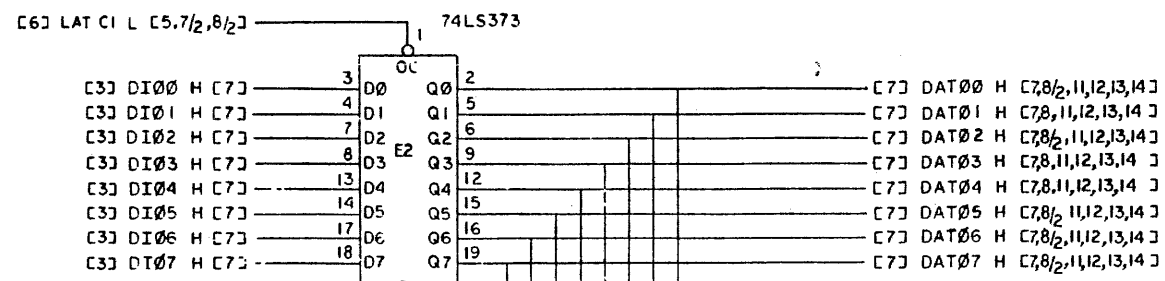
V 1-0-1687W SCD 2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE: 128K X 18 BIT MOS MEM
 SCALE: DIST. SHEET 6 OF 14
 NUMBER: M7891-0-1
 REV. A

"THIS DRAWING AND SPECIFICATIONS HEREBY ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION"

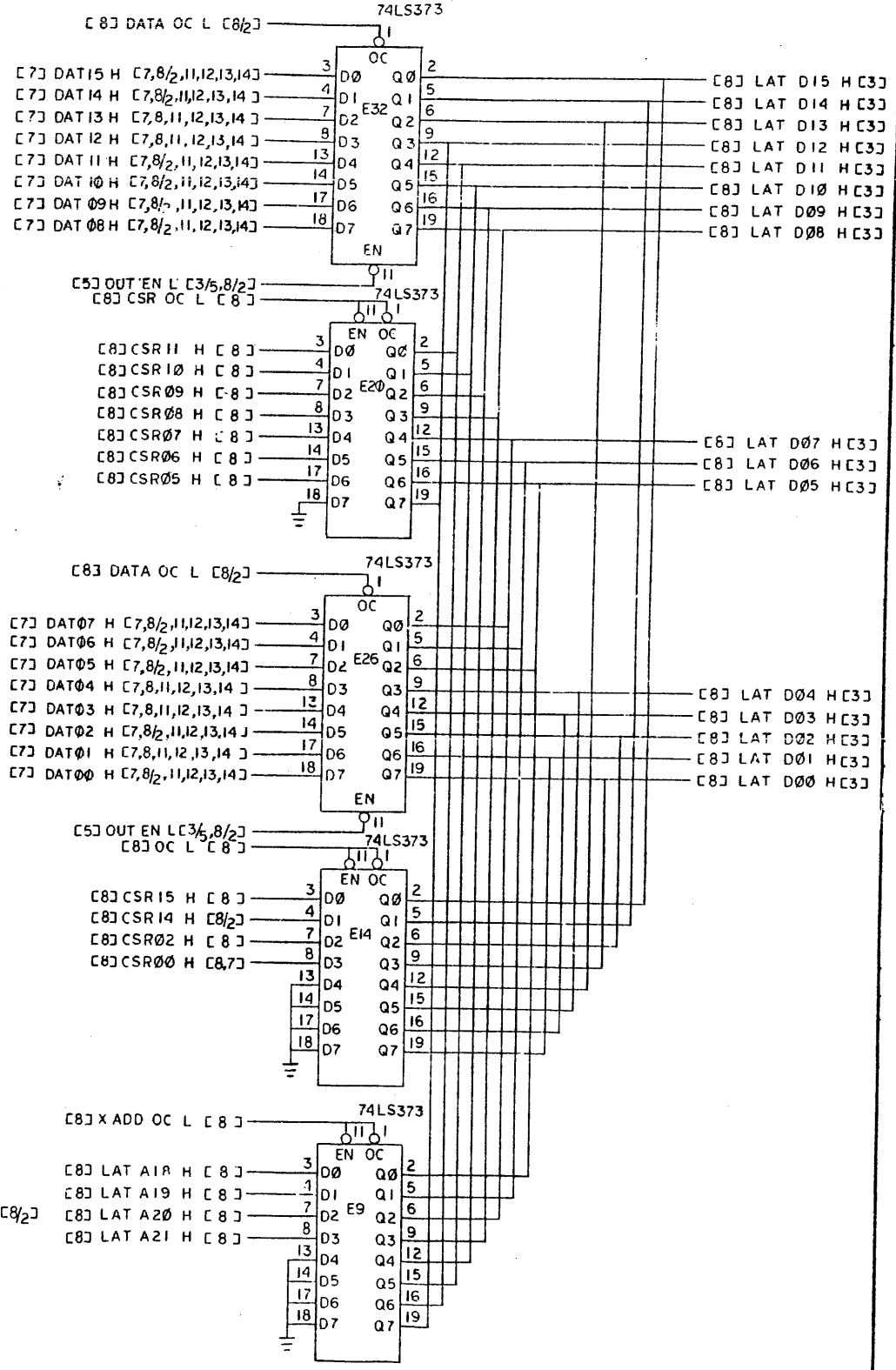
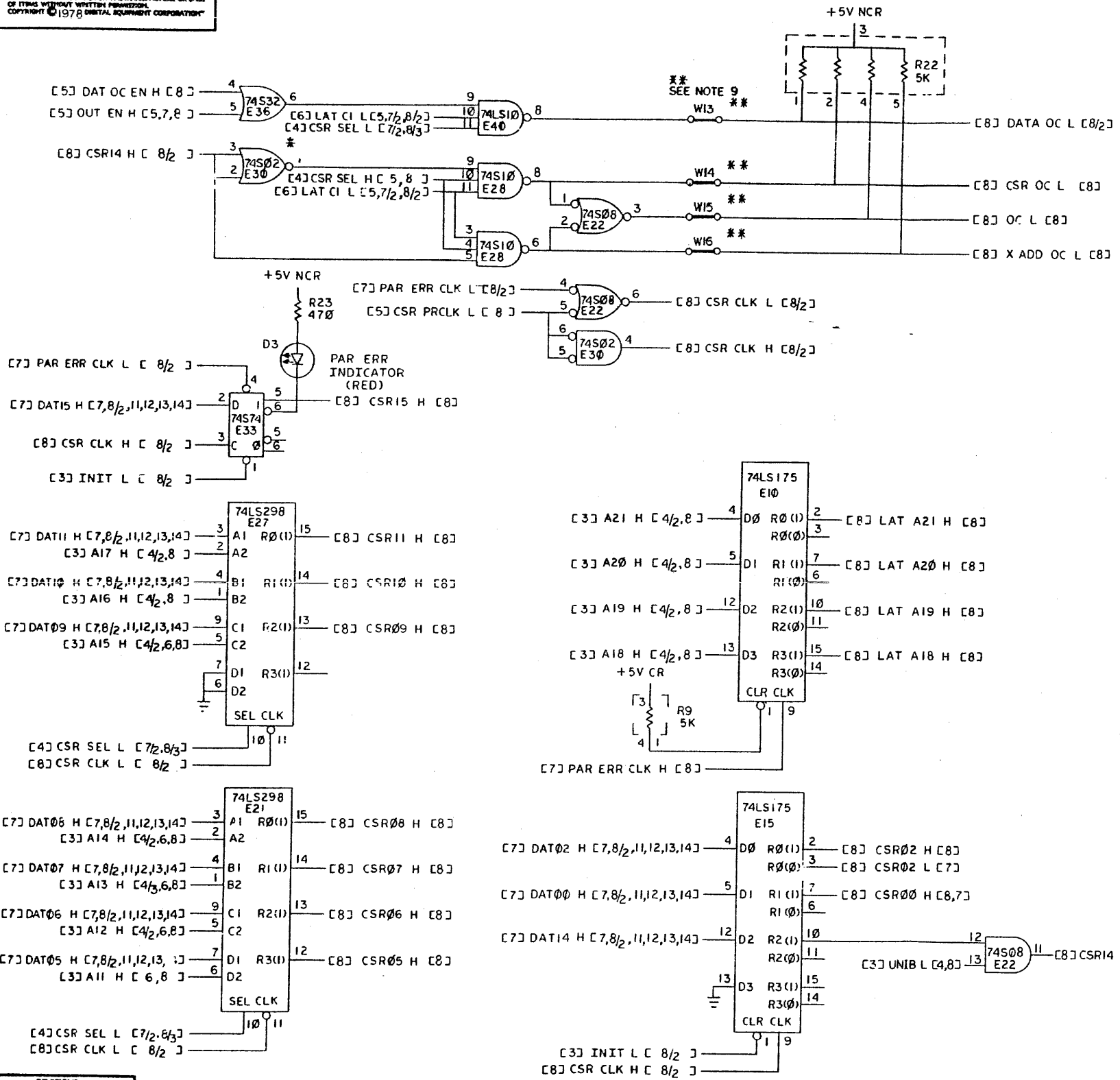


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	128K X 18BIT MOS MEM	SIZE/CODE	D CS	NUMBER	M7891-0-1	REV.	A
SCALE		SHEET	7 OF 14	DIST.			

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION

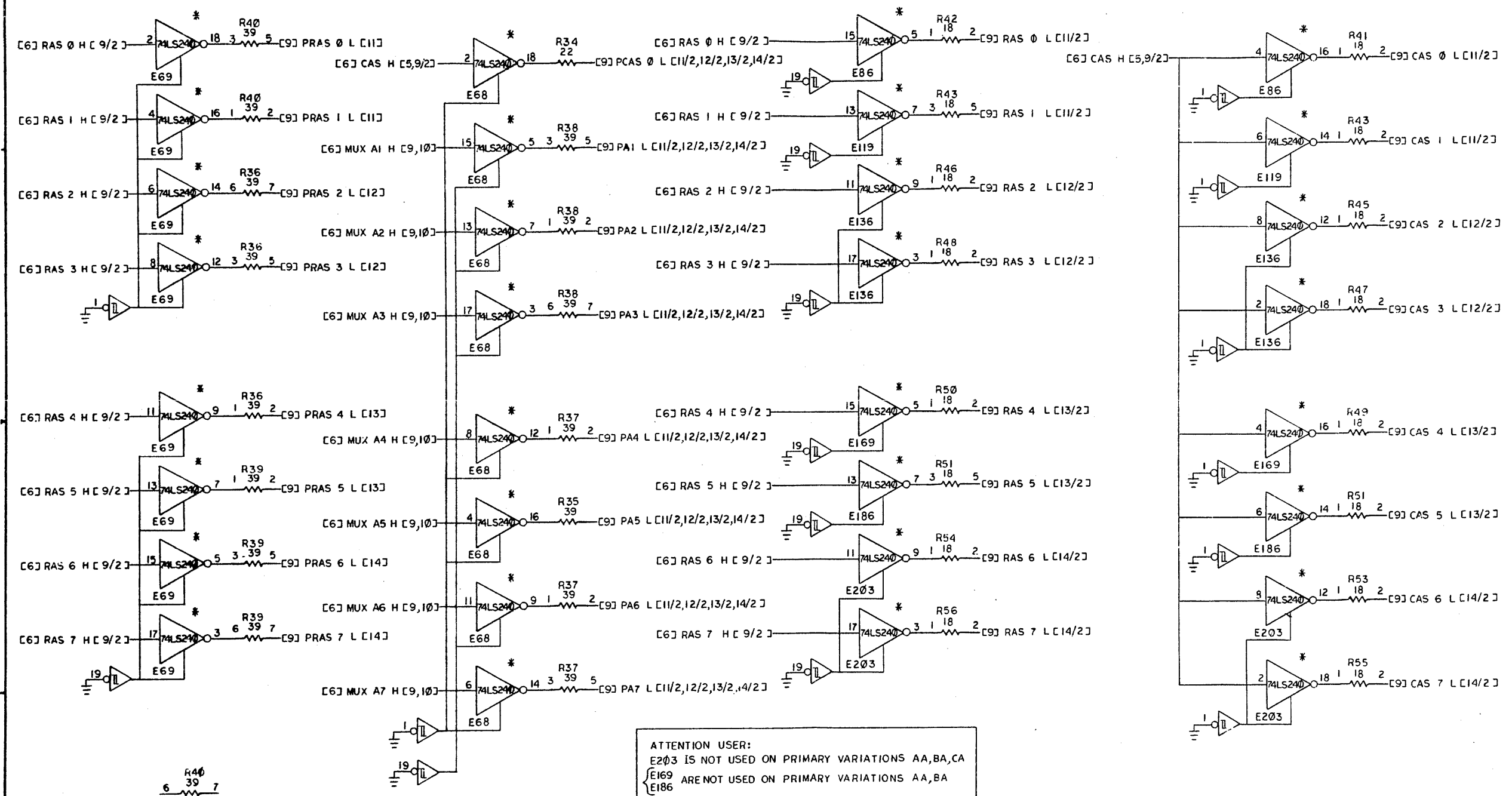
1-0-1682W SCD 2



REVISIONS		
CHK	CHANGE NO.	REV.

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1976 DIGITAL EQUIPMENT CORPORATION

NOTE:
R36 THRU R56 PIN 4 GOES TO +5V

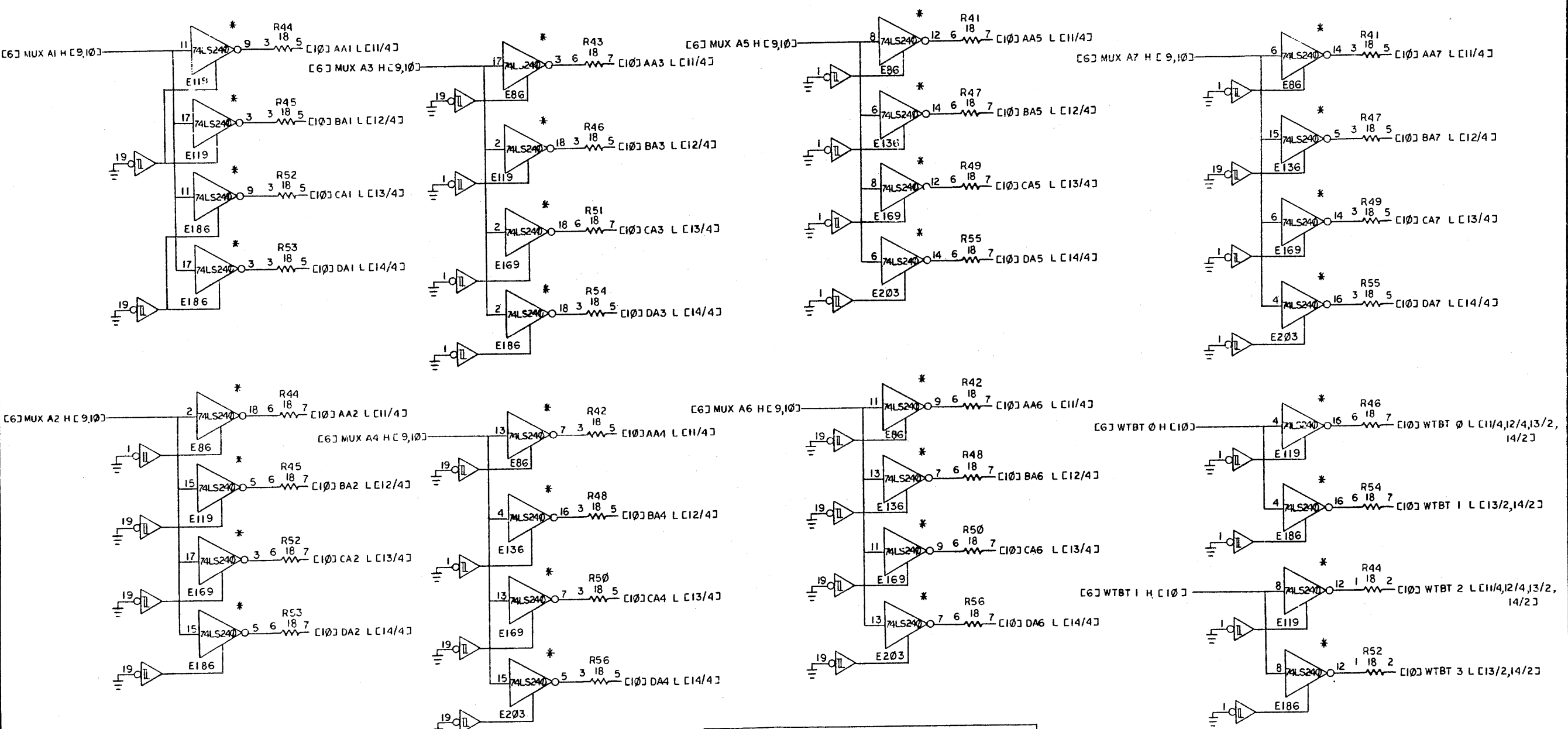


ATTENTION USER:
E203 IS NOT USED ON PRIMARY VARIATIONS AA,BA,CA
E169 ARE NOT USED ON PRIMARY VARIATIONS AA,BA
E186 IS NOT USED ON PRIMARY VARIATION AA

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	128K X 18 BIT MOS MEM	SIZE CODE	D CS	NUMBER	M7891-0-1	REV.	A
SCALE		SHEET	9 OF 14	DIST.			

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION

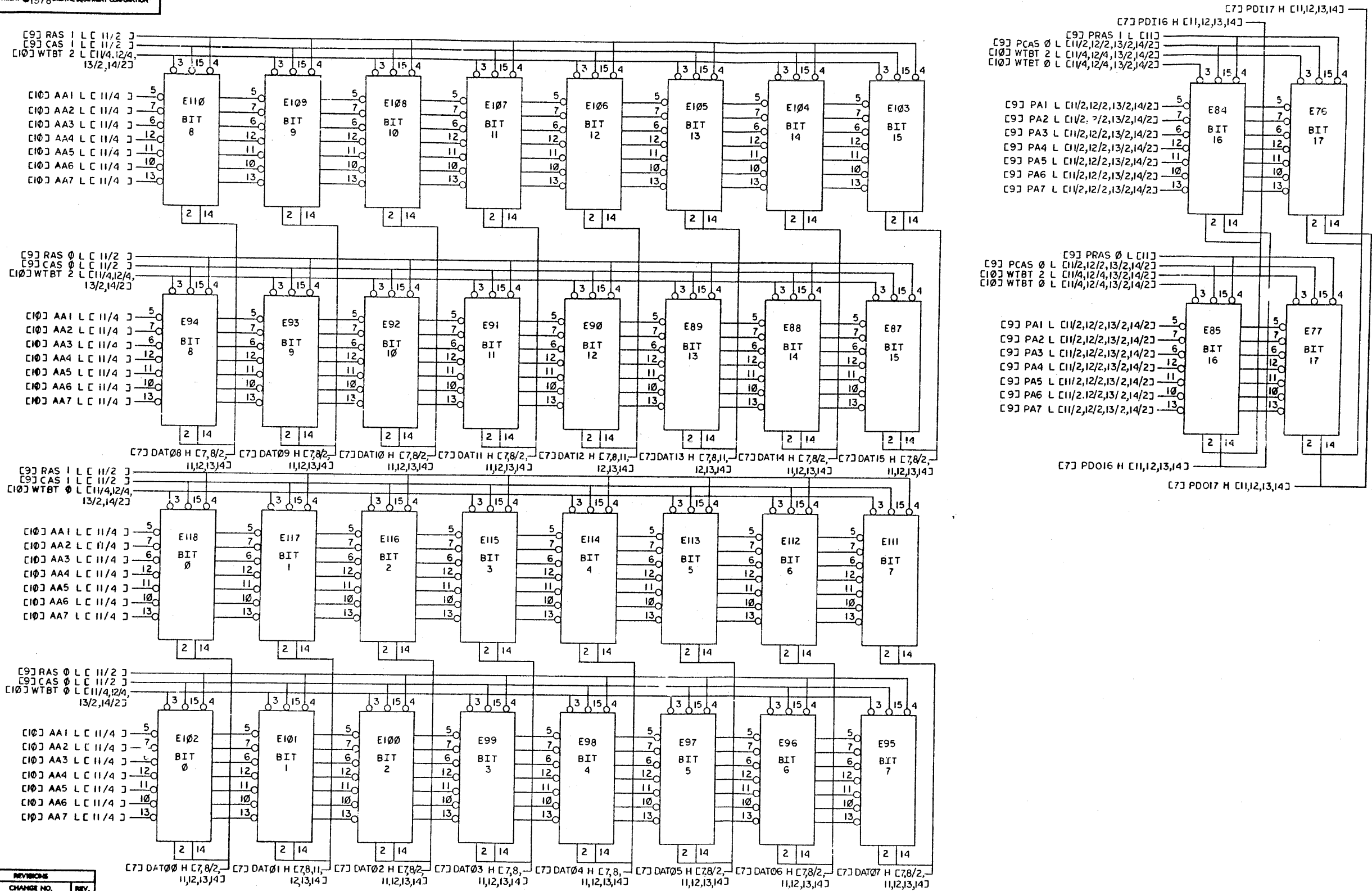


ATTENTION USER:
 E203 IS NOT USED ON PRIMARY VARIATIONS AA,BA,CA
 E169 ARE NOT USED ON PRIMARY VARIATIONS AA,BA
 E186 ARE NOT USED ON PRIMARY VARIATIONS AA,BA
 E136 IS NOT USED ON PRIMARY VARIATION AA

REVISIONS		
CHK	CHANGE NO.	REV.

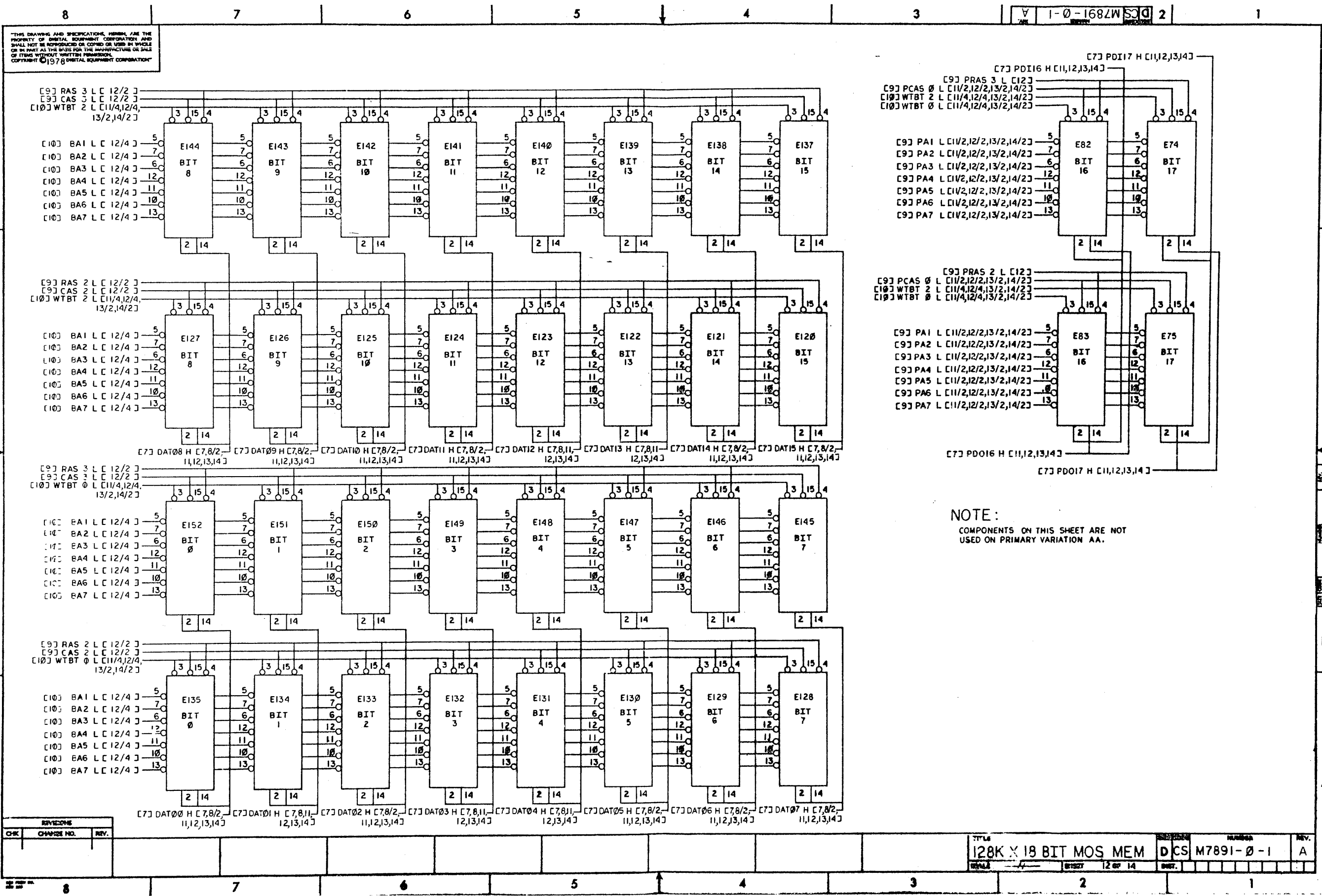
TITLE	SIZE CODE	NUMBER	REV.
128K X 18 BIT MOS MEM	DCS	M7891-0-1	A
SCALE	SHEET	DWT.	
	10 OF 14		

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION

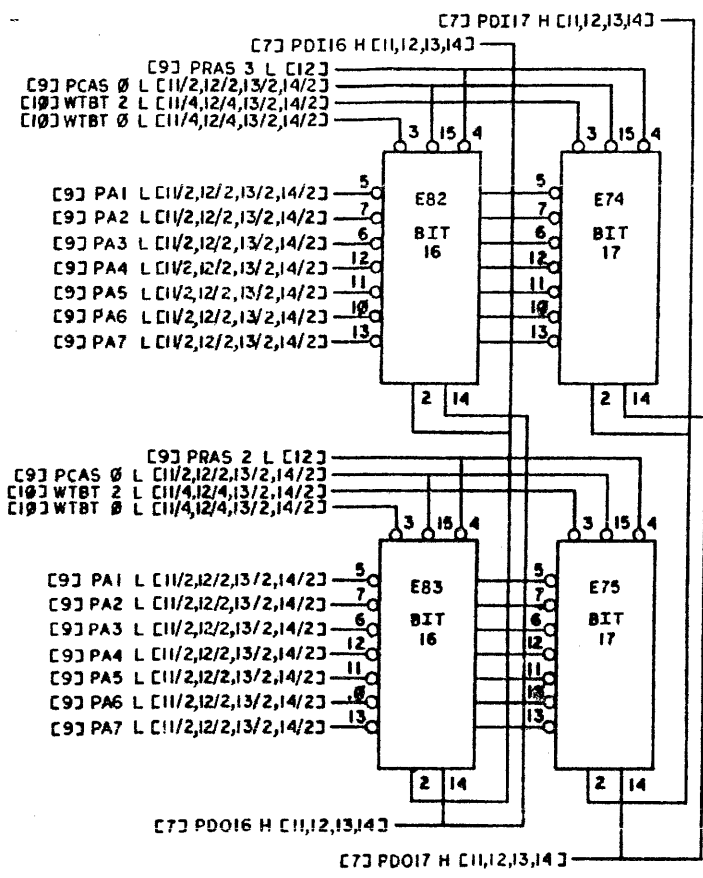


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE CODE	NUMBER	REV.
128K X 18 BIT MOS MEM	D CS	M7891-0-1	A
SCALE	SHEET	DIST.	
	11 OF 14		



THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION

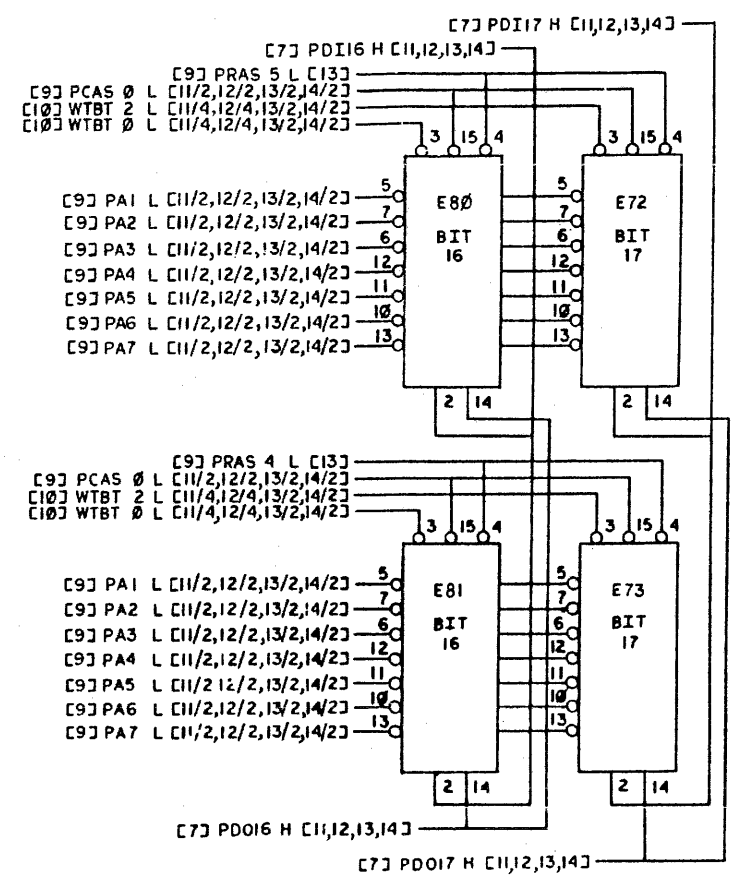
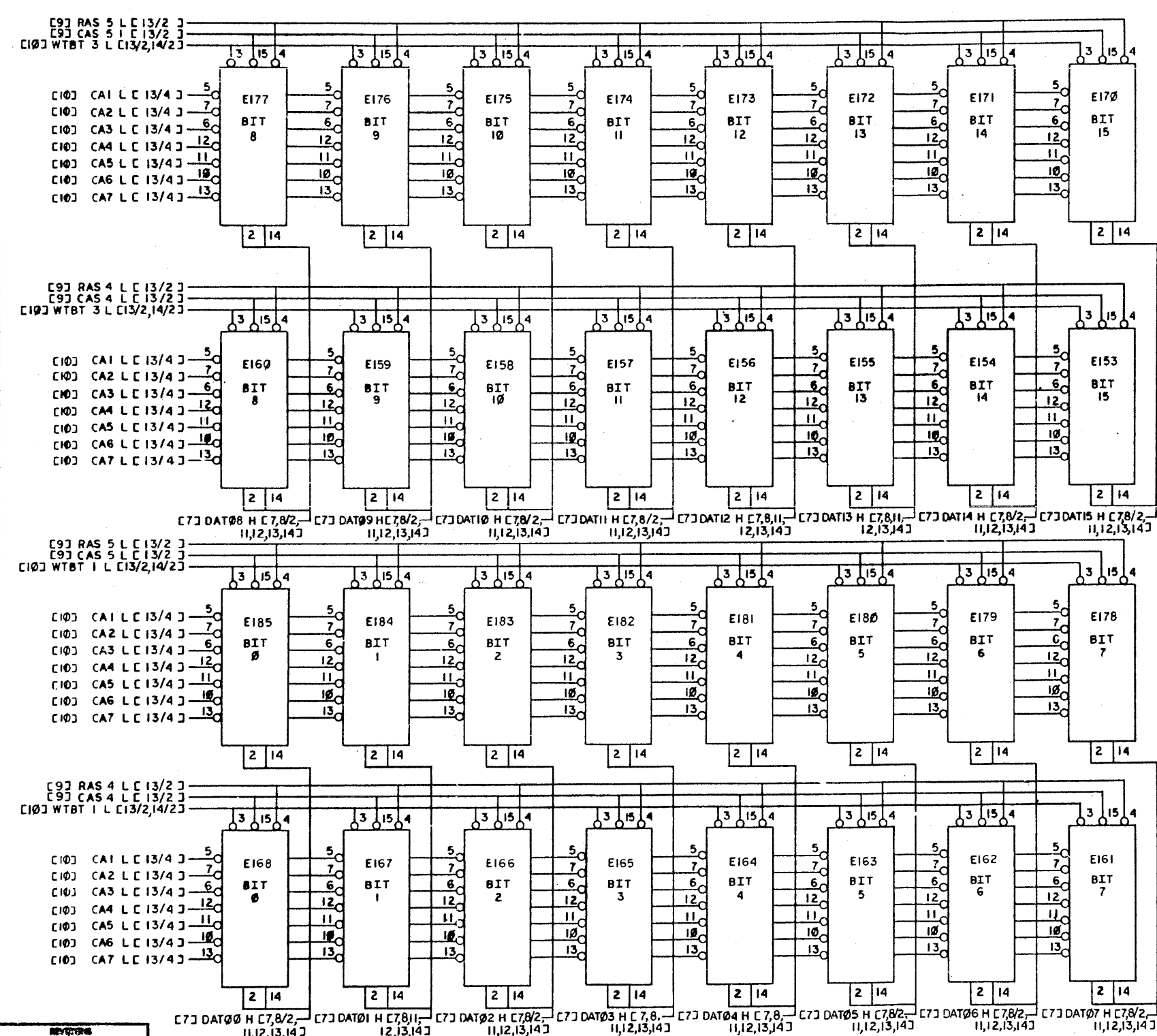


NOTE:
COMPONENTS ON THIS SHEET ARE NOT USED ON PRIMARY VARIATION AA.

REV.	CHG. NO.	REV.

TITLE	128K X 18 BIT MOS MEM	NUMBER	DCS M7891-0-1	REV.	A
DATE		BY		CHECKED	

THIS DRAWING AND ITS CONTENTS ARE THE PROPERTY OF DCS, INC. AND ARE TO BE USED ONLY FOR THE PROJECT AND IN THE MANNER SPECIFIED IN THE CONTRACT. ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF DCS, INC. IS STRICTLY PROHIBITED.

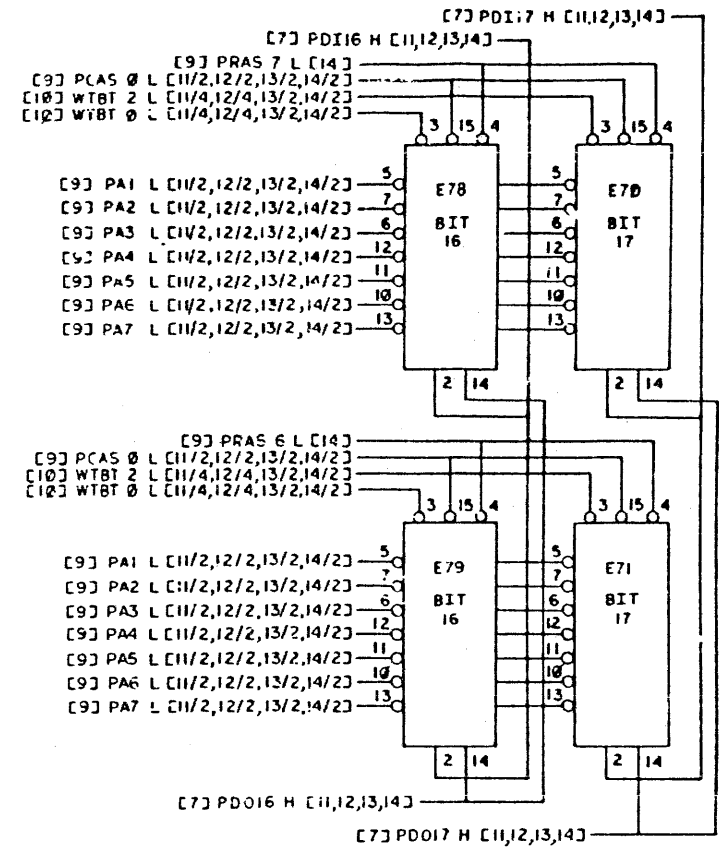
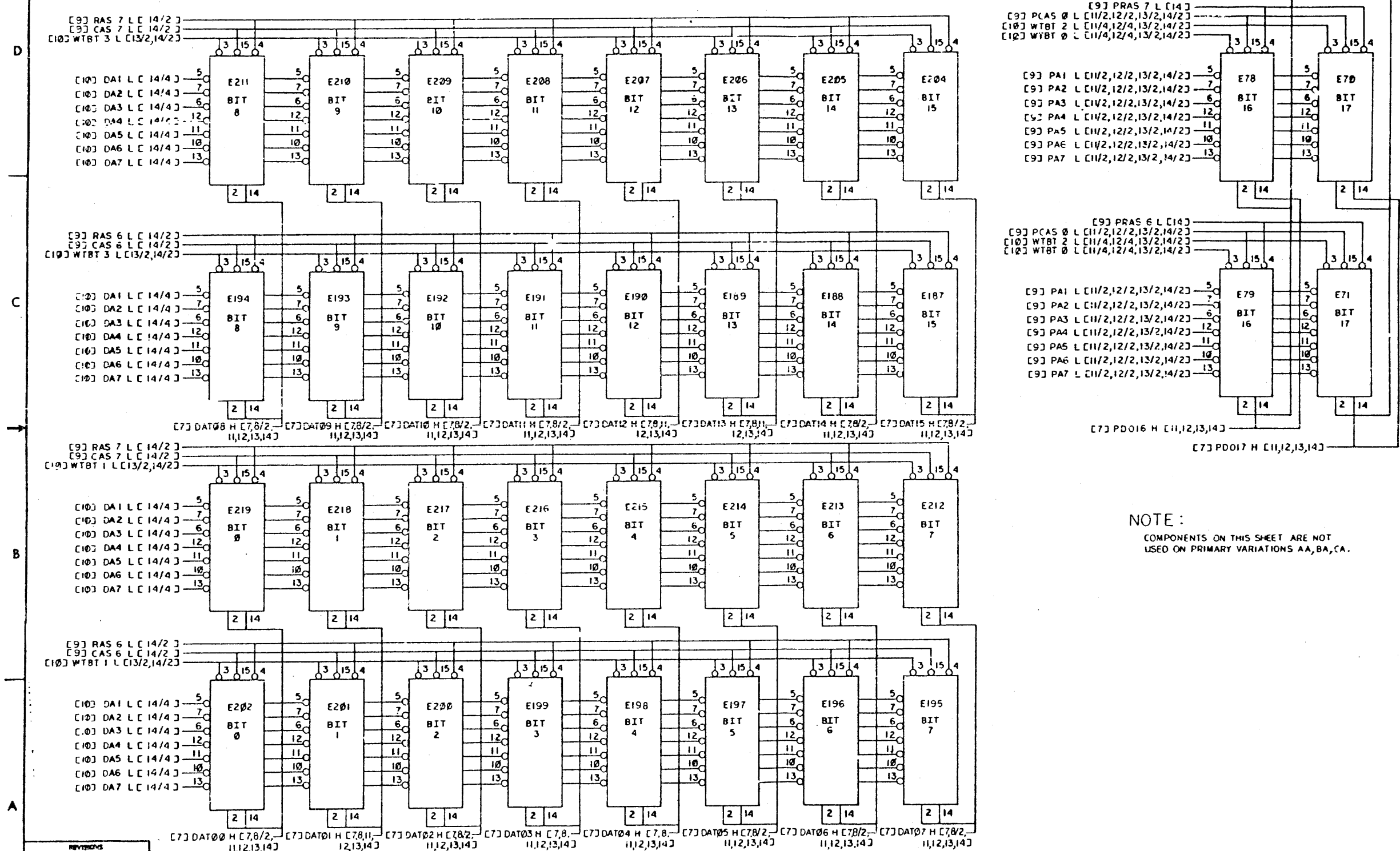


NOTE:
COMPONENTS ON THIS SHEET ARE NOT USED ON PRIMARY VARIATIONS AA, BA.

REV.	DATE	BY

TITLE	DESIGN	NUMBER	REV.
128K X 18 BIT MOS MEM	DCS	M7891-0-1	A

THIS DRAWING AND SPECIFICATIONS HEREAFTER ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1978 DIGITAL EQUIPMENT CORPORATION



NOTE:
COMPONENTS ON THIS SHEET ARE NOT USED ON PRIMARY VARIATIONS AA, BA, CA.

REV.	CHANGE NO.	REV.

TITLE	128K X 18 BIT MOS MEM	SIZE CODE	DCS	NUMBER	M7891-0-1	REV.	A
SCALE	1:1	SHEET	14 OF 14	DET.			

DCS M7891-0-1 A