FIELD MAINTENANCE PRINT SET
TABLE OF CONTENTS

UNIT VARIATIONS
COVERED BY THIS
PRINT SET

MCA25
MCA25-AA
MCA25-AB

MCA25
FIELD MAINTENANCE
PRINT SET

DIGITAL EQUIPMENT CORPORATION

PRINT SET ORDER NO.
MP01910-01

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN J. Looney | DATE 26-JUL-84 | ENG. C. A. JENS | DATE 26-JUL-84
CHK'D G. ALSTON | DATE 26-JUL-84 | BOARD LOCATION: N/A | SHEET 1 OF 4

DSK:MCATC.T2P[4,21] 26-JUL-84 15:41 | NEXT HIGHER ASSEMBLY: KL10-PW
FIRST USED ON OPTION/MODEL: MCA25

TITLE: MCA25 CACHE PAGER

SIZE	CODE	NUMBER	REV.
D	TC	MCA25-0-1	A

MR

DOCUMENT NUMBER	REV	DESCRIPTION
D-TC-MCA25-0-1	A	MCA25 FIELD MAINT. PRINT SET (TC)
D-MU-KL10-PW-CPU	A	MODULE UTILIZATION
D-SP-KL10-PW-2	A	OPTION/SERIAL NUMBER CHART

OPTION MODULES (C.S.)

DOCUMENT NUMBER	REV	DESCRIPTION
D-DD-M852-0	A	CACHE DIRECTORY
E-UA-M852-0-0	A	CACHE DIRECTORY
D-CS-M852-0-CHA1	A	CACHE DIRECTORY
D-CS-M852-0-CHA2	A	CACHE DIRECTORY
D-CS-M852-0-CHA3	A	CACHE DIRECTORY
D-CS-M852-0-RES	A	CACHE DIRECTORY
D-DD-M853-0	A	CACHE EXTENSION
D-UA-M853-0-0	A	CACHE EXTENSION
D-CS-M853-CHX1	A	CACHE EXTENSION
D-CS-M853-CHX2	A	CACHE EXTENSION
D-CS-M853-CHX3	A	CACHE EXTENSION
D-CS-M853-CHX4	A	CACHE EXTENSION
D-CS-M853-CHX5	A	CACHE EXTENSION
D-CS-M853-RES	A	CACHE EXTENSION
D-DD-M854-0	A	PHYSICAL MEM ADR
D-UA-M854-0-0	A	PHYSICAL MEM ADR
D-CS-M854-0-PMA1	A	PHYSICAL MEM ADR
D-CS-M854-0-PMA2	A	PHYSICAL MEM ADR
D-CS-M854-0-PMA3	A	PHYSICAL MEM ADR
D-CS-M854-0-PMA4	A	PHYSICAL MEM ADR
D-CS-M854-0-PMA5	A	PHYSICAL MEM ADR
D-CS-M854-0-PMA6	A	PHYSICAL MEM ADR
D-CS-M854-0-RES	A	PHYSICAL MEM ADR

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. Toomby | DATE 26-JUL-84 | ENG. C. A. JENS | DATE 26-JUL-84

CHK'D. G. ALSTON | DATE 26-JUL-84 | BOARD LOCATION: N/A | SHEET 2 OF 4

DSK:MCATC.T2P[4,21] | 26-JUL-84 15:41 | NEXT HIGHER ASSEMBLY:

FIRST USED ON OPTION/MODEL: MCA25 | KL10-PW

TITLE: MCA25 CACHE PAGER

SIZE	CODE	NUMBER	REV.
D	TC	MCA25-0-1	A

OPTION MODULES (C.S.) CONTINUED

DOCUMENT NUMBER	REV	DESCRIPTION
D-DD-M855-0	A	PAGING BOARD SHEET 1
E-UA-M855-0-0	A1	PAGING BOARD (MULTIWIRE)
D-CS-M855-0-PAG1	A1	PAGING BOARD
D-CS-M855-0-PAG2	A1	PAGING BOARD
D-CS-M855-0-PAG3	A1	PAGING BOARD
D-CS-M855-0-PAG4	A1	PAGING BOARD
D-CS-M855-0-PAG5	A1	PAGING BOARD
D-CS-M855-0-PAG6	A1	PAGING BOARD
D-CS-M855-0-PAG7	A1	PAGING BOARD
D-CS-M855-0-PAG8	A1	PAGING BOARD
D-CS-M855-0-PAG9	A1	PAGING BOARD
D-CS-M855-0-PAGA	A1	PAGING BOARD
D-CS-M855-0-PAGB	A1	PAGING BOARD
D-CS-M855-0-RES	A1	PAGING BOARD
D-DD-M855-0	A	PAGING BOARD SHEET 2
D-UA-M855-0-0	B	PAGING BOARD (ETCH)
D-CS-M855-0-PAG1	B	PAGING BOARD
D-CS-M855-0-PAG2	B	PAGING BOARD
D-CS-M855-0-PAG3	B	PAGING BOARD
D-CS-M855-0-PAG4	B	PAGING BOARD
D-CS-M855-0-PAG5	B	PAGING BOARD
D-CS-M855-0-PAG6	B	PAGING BOARD
D-CS-M855-0-PAG7	B	PAGING BOARD
D-CS-M855-0-PAG8	B	PAGING BOARD
D-CS-M855-0-PAG9	B	PAGING BOARD
D-CS-M855-0-PAGA	B	PAGING BOARD
D-CS-M855-0-PAGB	B	PAGING BOARD
D-CS-M855-0-RES	B	PAGING BOARD
D-DD-M856-0	A	CACHE DATA
D-UA-M856-0-0	A	CACHE DATA
D-CS-M856-0-CHD1	A	CACHE DATA
D-CS-M856-0-CHD2	A	CACHE DATA
D-CS-M856-0-CHD3	A	CACHE DATA
D-CS-M856-0-CHD4	A	CACHE DATA
D-CS-M856-0-CHD5	A	CACHE DATA
D-CS-M856-0-CHD6	A	CACHE DATA
D-CS-M856-0-CHD7	A	CACHE DATA
D-CS-M856-0-CHD8	A	CACHE DATA
D-CS-M856-0-RES	A	CACHE DATA

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Toomey 26-JUL-84 | ENG. C. A. JENS 26-JUL-84
CHK'D. G. ALSTON 26-JUL-84 | BOARD LOCATION: N/A
DSK:MCATC.T2P[4,21] 26-JUL-84 15:42 | SHEET 3 OF 4
FIRST USED ON OPTION/MODEL: MCA25 | NEXT HIGHER ASSEMBLY: KL10-PW

TITLE: MCA25 CACHE PAGER

SIZE	CODE	NUMBER	REV.
D	TC	MCA25-0-1	A

MR

OPTION MODULES (C.S) CONTINUED

DOCUMENT NUMBER	REV	DESCRIPTION
D-DD-M857-0	A	MBC MBOX CONTROL
D-UA-M857-0-0	A	MBC MBOX CONTROL
D-CS-M857-0-MBC1	A	MBC MBOX CONTROL
D-CS-M857-0-MBC2	A	MBC MBOX CONTROL
D-CS-M857-0-MBC3	A	MBC MBOX CONTROL
D-CS-M857-0-MBC4	A	MBC MBOX CONTROL
D-CS-M857-0-MBC5	A	MBC MBOX CONTROL
D-CS-M857-0-MBC6	A	MBC MBOX CONTROL
D-CS-M857-0-RES	A	MBC MBOX CONTROL

REVISIONS		
CHK	CHANGE NO.	REV

digital

DSK:MCATC.MEP[4,21] 26-JUL-84 15:42

FIRST USED ON OPTION/MODEL: MCA25

DRN. J. Feeney | DATE 26-JUL-84 | ENG. C. A. JENS | DATE 26-JUL-84

CHK D. G. ALSTON | DATE 26-JUL-84 | BOARD LOCATION: N/A | SHEET 4 OF 4

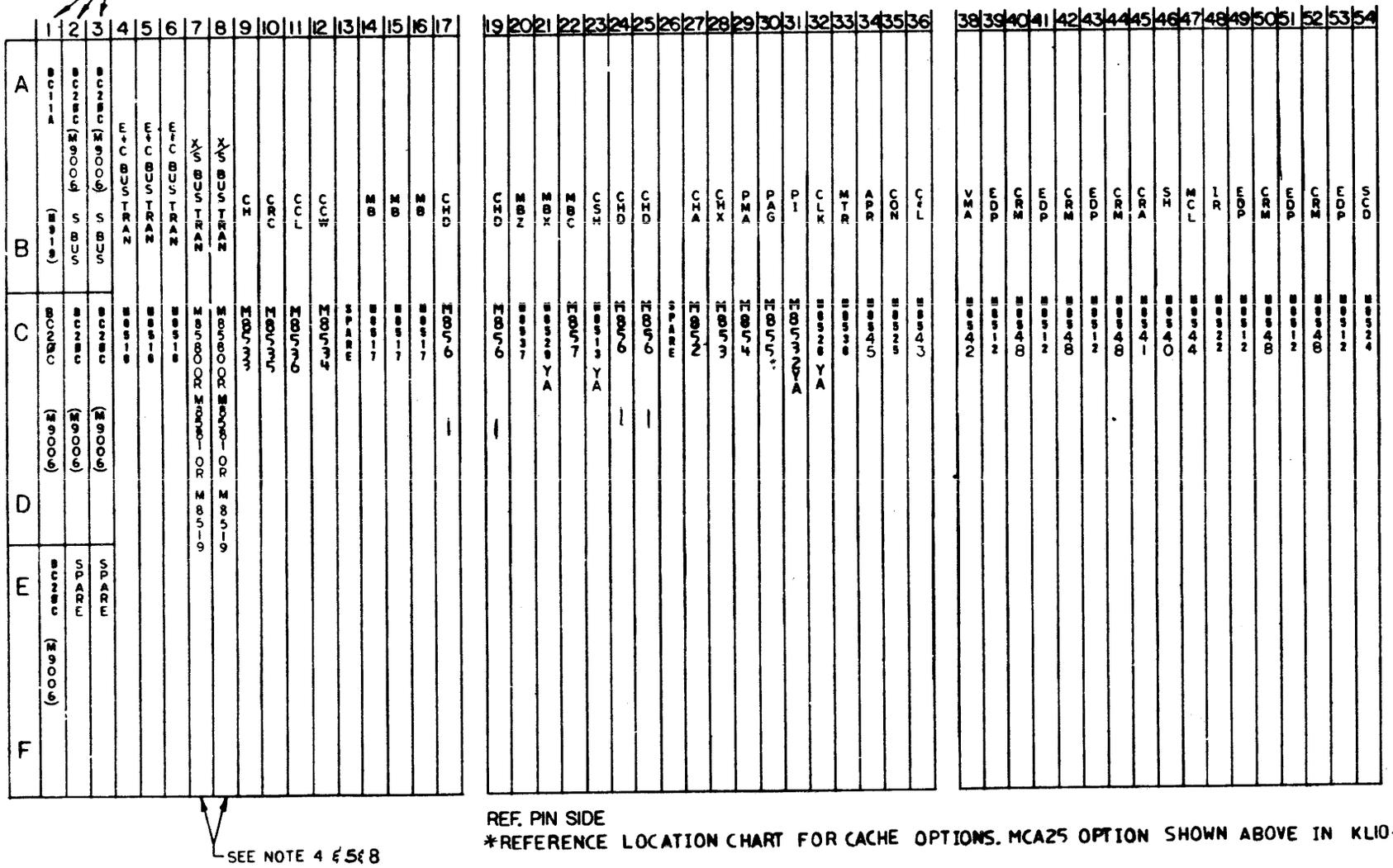
NEXT HIGHER ASSEMBLY: KL10-PW

TITLE: MCA25 CACHE PAGER

SIZE	CODE	NUMBER	REV.
D	TC	MCA25-0-1	A

MR

SEE NOTES 1 & 2 & 3 & 6 & 7 & 9



*REFERENCE LOCATION CHART FOR CACHE OPTIONS. MCA25 OPTION SHOWN ABOVE IN KL10-PW

CACHE OPTION LOCATION CHART		
SLOT	KL10PV W/MCA20	KL10PW W/ MCA25
17	M8521	M856
19	M8521	M856
22	M8531-YA	M857
24	M8521	M856
25	M8521	M856
27	M8514	M852
28	M8515	M853
29	M8518 YA	M854
30	M8520 YA	M855
	(KL10-PV REF)	(KL10-PW REF)

NOTES:

1. SLOT 2 & 3 (SBUS) BC26C CABLES FROM INTERNAL MEMORY, OR DMA26 OR EMPTY
2. SLOT 1 (E AND C BUS) BC11A & BC26C CABLES FROM BTE
3. X BUS CABLE BOARD (ITEM *54 OF MF20 UNIT ASSY) IS PLUGGED INTO SLOT 2 OF KL10-PW LOGIC ASSY.
4. INSTALL 2 M8580 MODULES (ITEM *41 OF MF20 UNIT ASSY) INTO SLOTS 7 AND 8 OF KL10-PW LOGIC ASSY. IF SLOTS ARE PRESENTLY USED BY M8519 MODULES, REMOVE THEM AND INSTALL M8580 MODULE (ITEM *41 OF MF20 UNIT ASSY) FOR MF20 LA, LB, LP/LR, LS/LT ONLY.
5. INSTALL 2 M8581 (MODULES ITEM *62 OF MF20 UNIT ASSY) INTO SLOTS 7 AND 8 OF KL10-PW LOGIC ASSY. IF SLOTS ARE PRESENTLY USED BY M8580 MODULES, REMOVE THEM AND INSTALL 2 M8581 MODULES (ITEM *62 OF MF20 UNIT ASSY) FOR MF20-LH, LJ, LM, LN, LU/LV ONLY.
6. X BUS CABLE BOARD (ITEM *63 OF MF20 UNIT ASSY) IS PLUGGED INTO SLOT 3 OF KL10 PW LOGIC ASSY. FOR MF20-LH, LJ, LM, LN ONLY. OR SLOT 2 FOR MF20-LP/LR, LS/LT.
7. IF AN MF20-LP/LR, LS/LT ALREADY EXISTS IN THE SYSTEM, THE X BUS CABLE BOARD (ITEM *63) MUST BE MOVED FROM SLOT 2 TO SLOT 3 SO AN MF20-LU/LV CAN BE INSTALLED.

FOR MG20-LA/LB INSTALLATIONS:

8. INSTALL (2) M8580 IN PLACE OF (2) M8519 MODULES IN SLOTS 7 AND 8.
9. INSTALL X BUS CABLE BOARD (M8572) INTO SLOT 2.

RELEASED A

FIRST USED ON	KL10-PW
TITLE	MODULE UTILIZATION (CPU)
SIZE	D
CODE	MJ
NUMBER	KL10-PW-CPU
REV.	A
PRINT NUMBER ASSY.	E-UA-KL10-PW-0
SCALE	
SHEET	1 OF 1

FOR EACH OPTION OR SERIAL NUMBER WIRE THE SOURCE LISTED ABOVE THE OPTION OR SERIAL NUMBER BIT TO THE SOURCE TO MAKE THE BIT TRUE.

OPTIONS:		SERIAL NO.'S		SERIAL NO.'S	
SOURCE:	4D44E1	SOURCE:	4D42E1	SOURCE:	4D40E1
OPTIONS: 50HZ	4E43M2	2048	4E41M2	32	4E39M2
CACHE AVAIL	4E43A1	1024	4E41A1	16	4E39A1
CHANNEL AVAIL	4E43E1	512	4E41E1	8	4E39E1
EXTENDED ADDRESSING CPU	4D43D2	256	4D41D2	4	4D39D2
MASTER OSCILLATOR	4D43E1	128	4D41E1	2	4D39E1
MCA25	4E43F2	64	4E41F2	1	4E39F2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)

DO NOT SCALE DRAWING

REMOVE BURRS AND BREAK SHARP CORNERS

DRN	Hans Alston, 6-18-84
CHK'D	Hans Alston, 6-29-84
DES. ENG.	Carol Jo…, 6-29-84
RESP. ENG.	Carol Jo…, 6-29-84
MFG. ENG.	A/B Warren, 29 JUN 84
TOP DOC. NO.	B-DD-KL10-PW
MATERIAL	-//-
FINISH	-//-

digital

TITLE: OPTION/SERIAL NUMBER CHART

DOCUMENT NUMBER: SIZE D, CODE SP, NUMBER KL10-PW-2, REV A

SCALE -//- SHEET 1 OF 1

MR

DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M852-00	MODULE REVISION	A1
E-UA-M852-0-0	1		CHA	A
K-PL-M852-0-DBP	1		PART LIST, M852	A
D-CS-M852-0-CHA1	1		CACHE DIR 0-3 BITS 14-25	A
D-CS-M852-0-CHA2	1		CACHE DIR PARITY & WR BITS	A
D-CS-M852-0-CHA3	1		CACHE DIR POWER, GND, CAP	A
D-CS-M852-0-RES	1		CACHE DIRECTORY TERMINATORS	A
K-PC-M852-0-DBM	-		MULTIWIRE DESIGN DATA BASE TAPE	A
D-DD-5016369-01-0	1		DRAWING DIRECTORY, 5016369-01	REF

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Toomey 27-JUN-84 | ENG. C. JENS 27-JUN-84 | CHK D. DELLORCO 27-JUN-84

BOARD LOCATION: N/A | SHEET 1 OF 1

DSK:M852A.T2PC[4,21] 27-JUN-84 13:25

NEXT HIGHER ASSEMBLY: MCA25

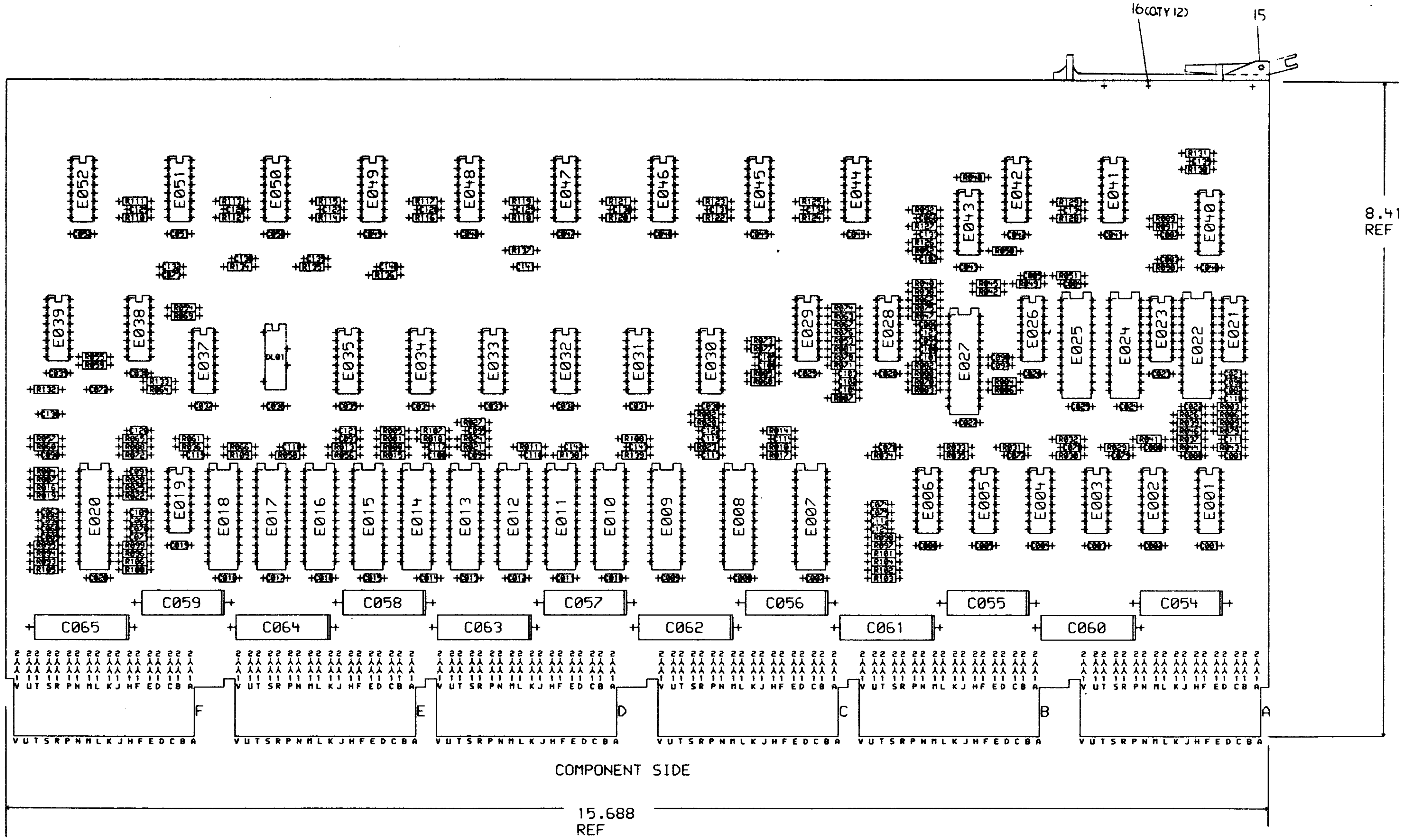
FIRST USED ON OPTION/MODEL: KL10-PW

TITLE: M852 DRAWING DIRECTORY

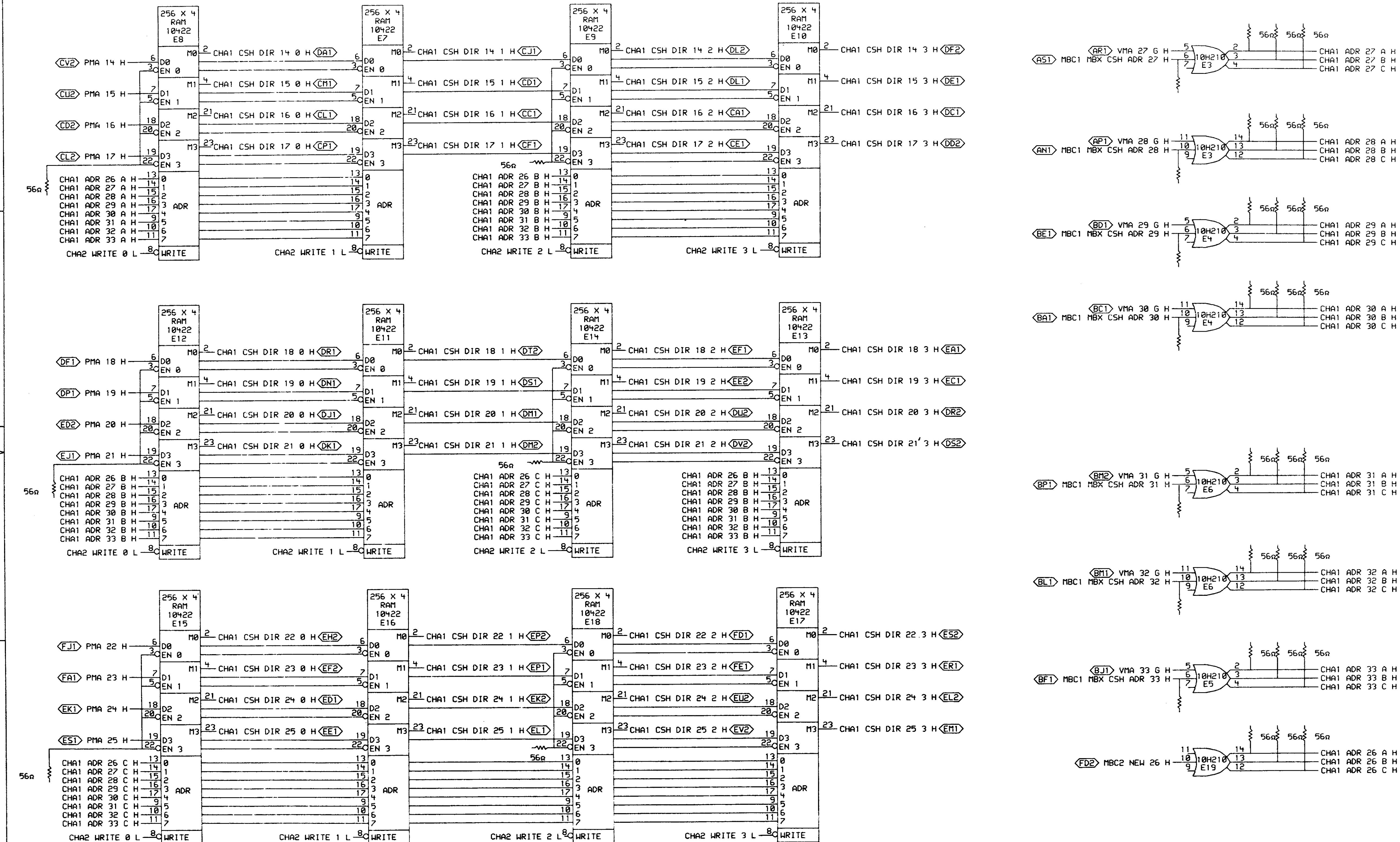
SIZE	CODE	NUMBER	REV.
D	DD	M852-0	A

MRO 1

NOTES: 1. THIS BOARD MUST MEET SAFETY REQ. FOR HPWR.
2. SPARE COMPONENT LOCATIONS ARE: E30-E35, E39, E41, E42, E44-E52.



DRN MARY JO BUTLER	DATE 13MAR84	TITLE CHA	digital
CHK D	DATE		
DES. ENG.	DATE		
RESP. ENG.	DATE		
MFG. ENG.	DATE 26 Jul 84	SIZE E / CODE UA / NUMBER M852-0-0	REV. A
NEXT HIGHER DOC. D-DD-M852-0		SCALE 2/1	SHEET 1 OF 1



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. S. Toomy — DATE 02-AUG-84 — ENG. C. A. JENS — DATE 02-AUG-84

CHK'D. D. DELLORCO — DATE 02-AUG-84 — BOARD LOCATION: 4AF27

SHEET 1 OF 1

XTRA:<MCA25.M8514>PCHAA.DRW 29-JUN-84 12:03 — NEXT HIGHER ASSEMBLY: D-DD-M852-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE DIR 0-3 BITS 14-25

SIZE	CODE	NUMBER	REV.
D	CS	M852-0-CHA1	A

1 MRO

FS2 PAG1 PT WRITEABLE H
FS1 CHA TERM 01\#400\
FR1 -PAG3 PT MATCH H
FF1 CHA TERM 03\#400\
BR2 CHA TERM 04\#400\
BP2 CHA TERM 05\#400\
FE2 CHA TERM 06\#400\
FJ2 CHA TERM 07\#400\
BS2 CHA TERM 08\#400\
BU2 CHA TERM 09\#400\
BV2 CHA TERM 10\#400\
BT2 CHA TERM 11 \#400\
FV2 PAG1 PT SOFTWARE H
FF2 PAG1 PT ACCESS H

NOTE: CHA TERMS ARE SPARE TERMINATORS

256 X 4 RAM 10422 E22 / E24 / E25 / E27

CHA2 CSH WR WR DATA A H
CHA2 CSH WR WD 0 SEL L
CHA2 CSH WR WR DATA B H
CHA2 CSH WR WD 1 SEL L
CHA2 CSH WR WR DATA C H
CHA2 CSH WR WD 2 SEL L
CHA2 CSH WR WR DATA D H
CHA2 CSH WR WD 3 SEL L
CHA1 ADR 26 A H
CHA1 ADR 27 A H
CHA1 ADR 28 A H
CHA1 ADR 29 A H
CHA1 ADR 30 A H
CHA1 ADR 31 A H
CHA1 ADR 32 A H
CHA1 ADR 33 A H
CHA2 CSH 0 WR WR L
CHA2 CSH 1 WR WR L
CHA2 CSH 2 WR WR L
CHA2 CSH 3 WR WR L

CHA2 CSH 0 WD 0 WR H
CHA2 CSH 0 WD 1 WR H
CHA2 CSH 0 WD 2 WR H
CHA2 CSH 0 WD 3 WR H
CHA2 CSH 1 WD 0 WR H
CHA2 CSH 1 WD 1 WR H
CHA2 CSH 1 WD 2 WR H
CHA2 CSH 1 WD 3 WR H
CHA2 CSH 2 WD 0 WR H
CHA2 CSH 2 WD 1 WR H
CHA2 CSH 2 WD 2 WR H
CHA2 CSH 2 WD 3 WR H
CHA2 CSH 3 WD 0 WR H
CHA2 CSH 3 WD 1 WR H
CHA2 CSH 3 WD 2 WR H
CHA2 CSH 3 WD 3 WR H

2X4 MIX 10174 E28 / E29

CHA2 CSH 0 WD 0 WR H
CHA2 CSH 1 WD 0 WR H
CHA2 CSH 2 WD 0 WR H
CHA2 CSH 3 WD 0 WR H
CSH WD 0 WR H AU2
CHA2 CSH 0 WD 1 WR H
CHA2 CSH 1 WD 1 WR H
CHA2 CSH 2 WD 1 WR H
CHA2 CSH 3 WD 1 WR H
CSH WD 1 WR H AM2
CHA2 CSH 0 WD 2 WR H
CHA2 CSH 1 WD 2 WR H
CHA2 CSH 2 WD 2 WR H
CHA2 CSH 3 WD 2 WR H
CSH WD 2 WR H BD2
CHA2 CSH 0 WD 3 WR H
CHA2 CSH 1 WD 3 WR H
CHA2 CSH 2 WD 3 WR H
CHA2 CSH 3 WD 3 WR H
CSH WD 3 WR H AV2
BS1 MBC1 CAM SEL 2 H
BR1 MBC1 CAM SEL 1 H
AR2 CSH WR OUT EN L

AL1 MBC5 CSH 0 WR EN L
BF2 MBC2 CSH WR WR PULSE L
CHA2 CSH 0 WR WR L
AM1 MBC5 CSH 1 WR EN L
CHA2 CSH 1 WR WR L
AJ1 MBC5 CSH 2 WR EN L
CHA2 CSH 2 WR WR L
AK2 MBC5 CSH 3 WR EN L
CHA2 CSH 3 WR WR L
10101 E2

CHA2 CSH 0 WD 0 WR H
CHA2 CSH 0 WD 1 WR H
CHA2 CSH 0 WD 2 WR H
CHA2 CSH 0 WD 3 WR H
10109 E23
CSH 0 ANY WR L AL2
CHA2 CSH 1 WD 0 WR H
CHA2 CSH 1 WD 1 WR H
CHA2 CSH 1 WD 2 WR H
CHA2 CSH 1 WD 3 WR H
CSH 1 ANY WR L AJ2
CHA2 CSH 2 WD 0 WR H
CHA2 CSH 2 WD 1 WR H
CHA2 CSH 2 WD 2 WR H
CHA2 CSH 2 WD 3 WR H
10109 E26
CSH 2 ANY WR L BL2
CHA2 CSH 3 WD 0 WR H
CHA2 CSH 3 WD 1 WR H
CHA2 CSH 3 WD 2 WR H
CHA2 CSH 3 WD 3 WR H
10109 E26
CSH 3 ANY WR L BE2

AD2 CON WR EVEN PAR DIR L
AE2 -PMA4 14-25 PAR L
10113 E40

AE1 CSH WR WD 0 EN H
CHA2 CSH WR WD 0 SEL L
AF1 CSH WR WD 1 EN H
CHA2 CSH WR WD 1 SEL L
AA1 CSH WR WD 2 EN H
CHA2 CSH WR WD 2 SEL L
AD1 CSH WR WD 3 EN H
CHA2 CSH WR WD 3 SEL L
AS2 MBC3 CSH WR SEL ALL H
10101 E1

AF2 MBC3 CSH WR WR DATA H
10H210 E21
CHA2 CSH WR WR DATA A H
CHA2 CSH WR WR DATA B H
CHA2 CSH WR WR DATA C H
CHA2 CSH WR WR DATA D H

AL1 MBC5 CSH 0 WR EN L
AM1 MBC5 CSH 1 WR EN L
AJ1 MBC5 CSH 2 WR EN L
AK2 MBC5 CSH 3 WR EN L
BJ2 MBC2 CSH ADR WR PULSE L
10101 E43
CHA2 WRITE 0 L
CHA2 WRITE 1 L
CHA2 WRITE 2 L
CHA2 WRITE 3 L
10101 E38

NOTE: DL1 IS IN POSITION E36
DL1 13 NS
R133 100Ω
10103 E37

256 X 4 RAM 10422 E20

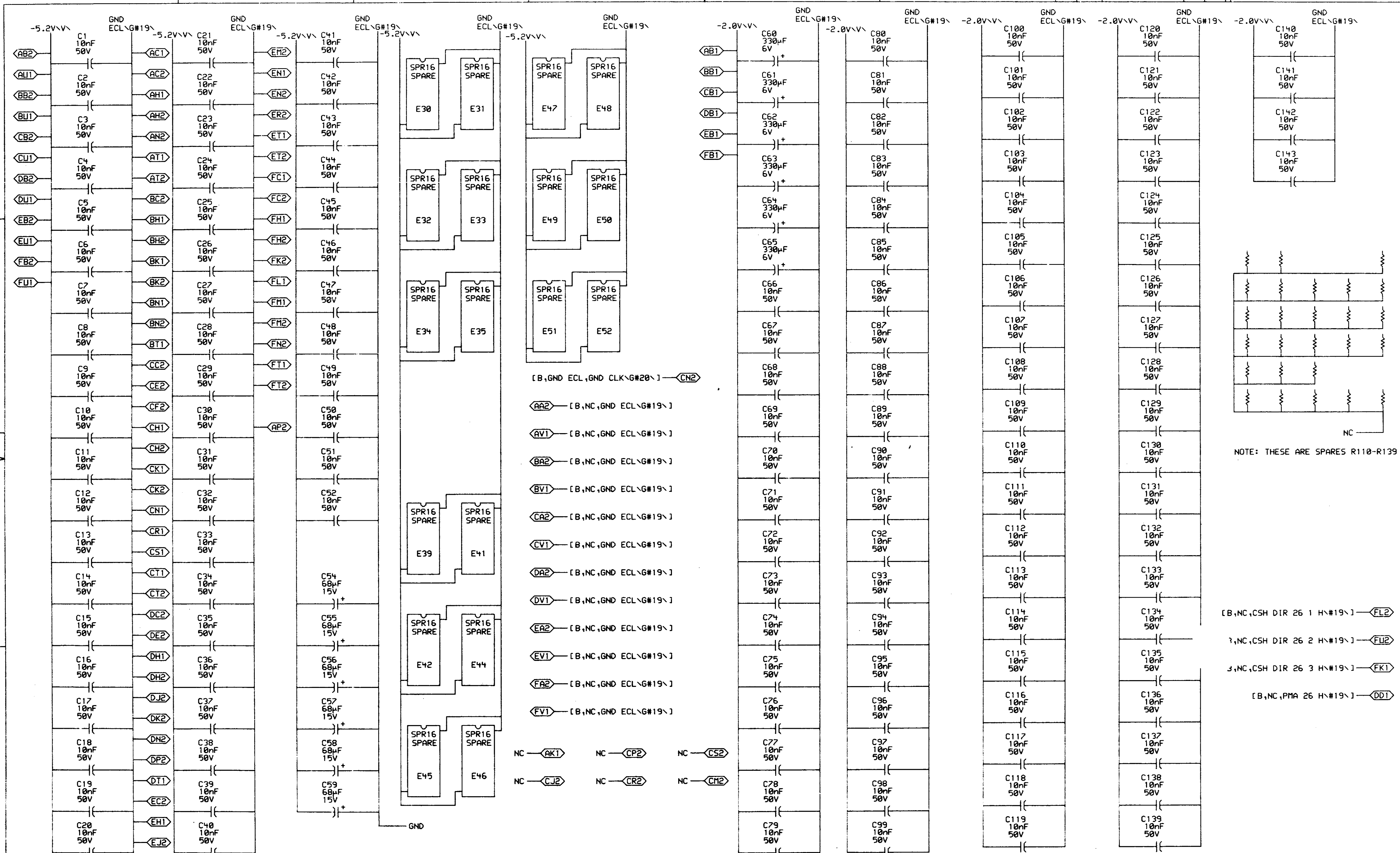
CHA2 CSH DIR PAR 0 H FR2
CHA2 CSH DIR PAR 1 H FP1
CHA2 CSH DIR PAR 2 H FN1
CHA2 CSH DIR PAR 3 H FP2
CHA1 ADR 26 C H
CHA1 ADR 27 C H
CHA1 ADR 28 C H
CHA1 ADR 29 C H
CHA1 ADR 30 C H
CHA1 ADR 31 C H
CHA1 ADR 32 C H
CHA1 ADR 33 C H

REVISIONS		
CHK	CHANGE NO.	REV

digital
DRN. J. Toomy 02-AUG-84
CHK D. DELLORCO 02-AUG-84
ENG. C. A. JENS 02-AUG-84
BOARD LOCATION: 4AF27
SHEET 1 OF 1
XTRA1:<MCA25.M8514>PCHAB.DRW 05-JUL-84 14:11
FIRST USED ON OPTION/MODEL: MCA25
NEXT HIGHER ASSEMBLY: D-DD-M852-0

TITLE: CACHE DIR PARITY & WR BITS

SIZE	CODE	NUMBER	REV.
D	CS	M852-0-CHA2	A



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REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN.	DATE 02-AUG-84	ENG. C. A. JENS	DATE 02-AUG-84	TITLE:	CACHE DIR POWER, GND, CAP
CHK'D. D. DELLORCO	DATE 02-AUG-84	BOARD LOCATION: 4AF27			
		SHEET 1 OF 1			
XTRA:<MCA25.M85[*]>PCHAC.DRW	16-JUL-84 10:50	NEXT HIGHER ASSEMBLY:		SIZE D / CODE CS / NUMBER M852-0-CHA3	REV. A
FIRST USED ON OPTION/MODEL: MCA25		D-DD-M852-0			

1 MRO

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R133(1)	CHA2	A3	100Ω	%DL1(7)
R11(1)	CHA1	B8	56Ω	%E11(3)
R107(1)	CHA1	B5	56Ω	%E13(3)
R13(1)	CHA1	A8	56Ω	%E15(3)
R109(1)	CHA1	A5	56Ω	%E17(3)
R112(1)	CHA2	A2	68Ω	%E37(14)
R36(1)	CHA2	A3	68Ω	%E37(15)
R113(1)	CHA2	A2	68Ω	%E37(2)
R54(1)	CHA2	A2	68Ω	%E37(3)
R65(1)	CHA2	B2	68Ω	%E38(14)
R72(1)	CHA2	A2	68Ω	%E38(15)
R57(1)	CHA2	B2	68Ω	%E38(2)
R60(1)	CHA2	B2	68Ω	%E38(3)
R88(1)	CHA2	C2	68Ω	%E40(3)
R64(1)	CHA2	B3	68Ω	%E43(14)
R69(1)	CHA2	B3	68Ω	%E43(15)
R55(1)	CHA2	B3	68Ω	%E43(2)
R59(1)	CHA2	B3	68Ω	%E43(3)
R10(1)	CHA1	D8	56Ω	%E7(3)
R108(1)	CHA1	D5	56Ω	%E9(3)
R94(1)	CHA2	D7	68Ω	CHA TERM 01\#400\
R96(1)	CHA2	D7	68Ω	CHA TERM 03\#400\
R97(1)	CHA2	D7	68Ω	CHA TERM 04\#400\
R98(1)	CHA2	D7	68Ω	CHA TERM 05\#400\
R99(1)	CHA2	D7	68Ω	CHA TERM 06\#400\
R100(1)	CHA2	D7	68Ω	CHA TERM 07\#400\
R101(1)	CHA2	D7	68Ω	CHA TERM 08\#400\
R102(1)	CHA2	D7	68Ω	CHA TERM 09\#400\
R103(1)	CHA2	D7	68Ω	CHA TERM 10\#400\
R104(1)	CHA2	D7	68Ω	CHA TERM 11 \#400\
R3(1)	CHA1	A1	56Ω	CHA1 ADR 26 A H
R2(1)	CHA1	A1	56Ω	CHA1 ADR 26 B H
R1(1)	CHA1	A1	56Ω	CHA1 ADR 26 C H
R14(1)	CHA1	D1	56Ω	CHA1 ADR 27 A H
R15(1)	CHA1	D1	56Ω	CHA1 ADR 27 B H
R16(1)	CHA1	D1	56Ω	CHA1 ADR 27 C H
R17(1)	CHA1	D1	56Ω	CHA1 ADR 28 A H
R18(1)	CHA1	D1	56Ω	CHA1 ADR 28 B H
R19(1)	CHA1	D1	56Ω	CHA1 ADR 28 C H
R20(1)	CHA1	C1	56Ω	CHA1 ADR 29 A H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R21(1)	CHA1	C1	56Ω	CHA1 ADR 29 B H
R22(1)	CHA1	C1	56Ω	CHA1 ADR 29 C H
R23(1)	CHA1	C1	56Ω	CHA1 ADR 30 A H
R24(1)	CHA1	C1	56Ω	CHA1 ADR 30 B H
R25(1)	CHA1	C1	56Ω	CHA1 ADR 30 C H
R26(1)	CHA1	B1	56Ω	CHA1 ADR 31 A H
R27(1)	CHA1	B1	56Ω	CHA1 ADR 31 B H
R28(1)	CHA1	B1	56Ω	CHA1 ADR 31 C H
R9(1)	CHA1	B1	56Ω	CHA1 ADR 32 A H
R8(1)	CHA1	B1	56Ω	CHA1 ADR 32 B H
R7(1)	CHA1	B1	56Ω	CHA1 ADR 32 C H
R6(1)	CHA1	A1	56Ω	CHA1 ADR 33 A H
R5(1)	CHA1	A1	56Ω	CHA1 ADR 33 B H
R4(1)	CHA1	A1	56Ω	CHA1 ADR 33 C H
R63(1)	CHA2	D6	68Ω	CHA2 CSH 0 WD 0 WR H
R62(1)	CHA2	D6	68Ω	CHA2 CSH 0 WD 1 WR H
R73(1)	CHA2	D6	68Ω	CHA2 CSH 0 WD 2 WR H
R71(1)	CHA2	D6	68Ω	CHA2 CSH 0 WD 3 WR H
R90(1)	CHA2	C7	68Ω	-CHA2 CSH 0 WR WR H
R74(1)	CHA2	D5	68Ω	CHA2 CSH 1 WD 0 WR H
R70(1)	CHA2	D5	68Ω	CHA2 CSH 1 WD 1 WR H
R68(1)	CHA2	D5	68Ω	CHA2 CSH 1 WD 2 WR H
R67(1)	CHA2	D5	68Ω	CHA2 CSH 1 WD 3 WR H
R51(1)	CHA2	C7	68Ω	-CHA2 CSH 1 WR WR H
R81(1)	CHA2	D4	68Ω	CHA2 CSH 2 WD 0 WR H
R75(1)	CHA2	D4	68Ω	CHA2 CSH 2 WD 1 WR H
R77(1)	CHA2	D4	68Ω	CHA2 CSH 2 WD 2 WR H
R78(1)	CHA2	D4	68Ω	CHA2 CSH 2 WD 3 WR H
R49(1)	CHA2	B7	68Ω	-CHA2 CSH 2 WR WR H
R53(1)	CHA2	D3	68Ω	CHA2 CSH 3 WD 0 WR H
R83(1)	CHA2	D3	68Ω	CHA2 CSH 3 WD 1 WR H
R85(1)	CHA2	D3	68Ω	CHA2 CSH 3 WD 2 WR H
R87(1)	CHA2	D3	68Ω	CHA2 CSH 3 WD 3 WR H
R47(1)	CHA2	B7	68Ω	-CHA2 CSH 3 WR WR H
R38(1)	CHA2	B7	68Ω	-CHA2 CSH WR WD 0 SEL H
R40(1)	CHA2	A7	68Ω	-CHA2 CSH WR WD 1 SEL H
R42(1)	CHA2	A7	68Ω	-CHA2 CSH WR WD 2 SEL H
R45(1)	CHA2	A7	68Ω	-CHA2 CSH WR WD 3 SEL H
R80(1)	CHA2	A5	68Ω	CHA2 CSH WR WR DATA A H
R82(1)	CHA2	A5	68Ω	CHA2 CSH WR WR DATA B H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R84(1)	CHA2	A5	68Ω	CHA2 CSH WR WR DATA C H
R86(1)	CHA2	A5	68Ω	CHA2 CSH WR WR DATA D H
R56(1)	CHA2	B3	68Ω	-CHA2 WRITE 0 H
R58(1)	CHA2	B3	68Ω	-CHA2 WRITE 1 H
R61(1)	CHA2	B3	68Ω	-CHA2 WRITE 2 H
R66(1)	CHA2	A3	68Ω	-CHA2 WRITE 3 H
R91(1)	CHA2	C2	68Ω	-CON WR EVEN PAR DIR H
R76(1)	CHA2	C1	68Ω	-CSH WR OUT EN H
R39(1)	CHA2	B7	68Ω	CSH WR WD 0 EN H
R41(1)	CHA2	A7	68Ω	CSH WR WD 1 EN H
R43(1)	CHA2	A7	68Ω	CSH WR WD 2 EN H
R44(1)	CHA2	A7	68Ω	CSH WR WD 3 EN H
R30(1)	CHA1	D2	68Ω	MBC1 MBX CSH ADR 27 H
R29(1)	CHA1	D2	68Ω	MBC1 MBX CSH ADR 28 H
R31(1)	CHA1	C2	68Ω	MBC1 MBX CSH ADR 29 H
R32(1)	CHA1	C2	68Ω	MBC1 MBX CSH ADR 30 H
R34(1)	CHA1	B2	68Ω	MBC1 MBX CSH ADR 31 H
R33(1)	CHA1	B2	68Ω	MBC1 MBX CSH ADR 32 H
R35(1)	CHA1	A2	68Ω	MBC1 MBX CSH ADR 33 H
R134(1)	CHA2	A4	68Ω	-MBC2 CSH ADR WR PULSE H
R46(1)	CHA2	C8	68Ω	-MBC2 CSH WR WR PULSE H
R37(1)	CHA2	A7	68Ω	MBC3 CSH WR SEL ALL H
R79(1)	CHA2	A6	68Ω	MBC3 CSH WR WR DATA H
R92(1)	CHA2	C7	68Ω	-MBC5 CSH 0 WR EN H
R52(1)	CHA2	C7	68Ω	-MBC5 CSH 1 WR EN H
R50(1)	CHA2	B7	68Ω	-MBC5 CSH 2 WR EN H
R48(1)	CHA2	B7	68Ω	-MBC5 CSH 3 WR EN H
R110(1)	CHA3	C1	56Ω	NC
R111(1)	CHA3	C1	56Ω	NC
R114(1)	CHA3	C1	56Ω	NC
R115(1)	CHA3	C1	56Ω	NC
R116(1)	CHA3	C1	56Ω	NC
R117(1)	CHA3	C1	56Ω	NC
R118(1)	CHA3	C1	56Ω	NC
R119(1)	CHA3	C1	56Ω	NC
R120(1)	CHA3	C1	56Ω	NC
R121(1)	CHA3	C1	56Ω	NC
R122(1)	CHA3	C1	56Ω	NC
R123(1)	CHA3	C1	56Ω	NC
R124(1)	CHA3	C1	56Ω	NC

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R125(1)	CHA3	C1	56Ω	NC
R126(1)	CHA3	C1	56Ω	NC
R127(1)	CHA3	C1	56Ω	NC
R128(1)	CHA3	C1	56Ω	NC
R129(1)	CHA3	C1	56Ω	NC
R130(1)	CHA3	C1	56Ω	NC
R131(1)	CHA3	C1	56Ω	NC
R132(1)	CHA3	C1	56Ω	NC
R135(1)	CHA3	C1	56Ω	NC
R136(1)	CHA3	C1	56Ω	NC
R137(1)	CHA3	C1	56Ω	NC
R138(1)	CHA3	C1	56Ω	NC
R139(1)	CHA3	C1	56Ω	NC
R106(1)	CHA2	C7	68Ω	PAG1 PT ACCESS H
R105(1)	CHA2	C7	68Ω	PAG1 PT SOFTWARE H
R93(1)	CHA2	D7	68Ω	PAG1 PT WRITEABLE H
R95(1)	CHA2	D7	68Ω	-PAG3 PT MATCH H
R89(1)	CHA2	C2	68Ω	PMA4 14-25 PAR H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND ( ) INDICATES PIN NUMBER

REVISIONS

CHK	CHANGE NO.	REV

digital

DRN.	DATE 02-AUG-84	ENG. C. A. JENS	DATE 02-AUG-84
CHK'D. D. DELLORCO	DATE 02-AUG-84	BOARD LOCATION: SHEET 1 OF 1	

XTRA:<MCA25.M8514>M8521.DRW 23-JUL-84 12:56

NEXT HIGHER ASSEMBLY: D-DD-M852-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE DIRECTORY TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M852-0-RES	A

1 MRO

DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M853-00	MODULE REVISION	A1
D-UA-M853-0-0	1		CACHE EXTENSION	A
K-PL-M853-0-DBP	2		PART LIST, M853	A
D-CS-M853-0-CHX1	1		CSH ADR COMPR & VAL BIT MIXER	A
D-CS-M853-0-CHX2	1		CSH VALID BITS AND ADR MIXERS	A
D-CS-M853-0-CHX3	1		CACHE USE BITS ADR BUF & LRU BITS	A
D-CS-M853-0-CHX4	1		CSH DIR PAR NET AND DIAG MIXERS	A
D-CS-M853-0-CHX5	1		CHX POWER, GND, CAP	A
D-CS-M853-0-RES	2		CACHE EXTENSION TERMINATORS	A
K-PC-M853-0-DBI	-		P.C. DESIGN DATA BASE TAPE	A
D-DD-5017667-0	1		DRAWING DIRECTORY, 5017667	REF

REVISIONS		
CHK	CHANGE NO.	REV

digital

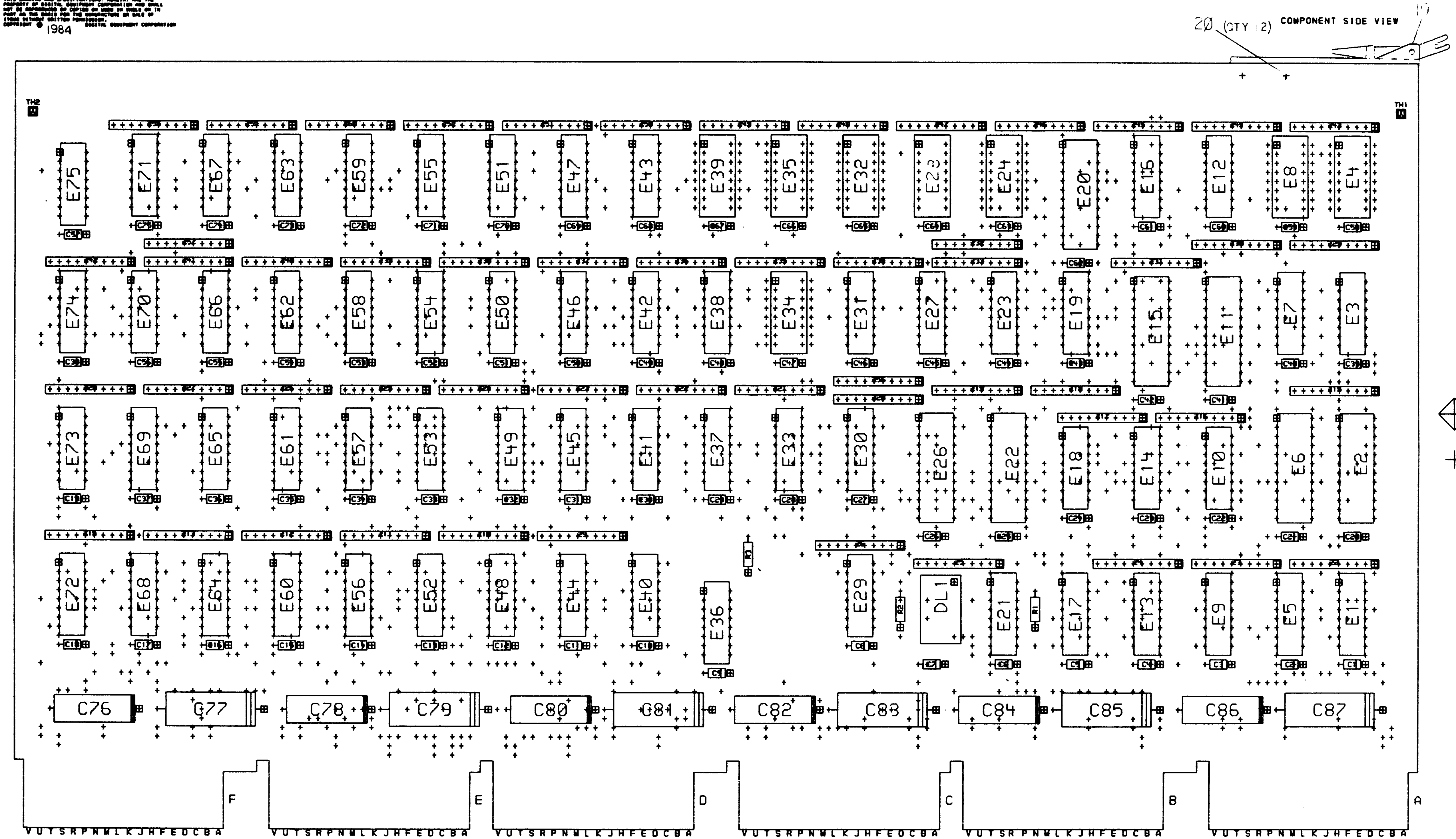
DRN. D. Toomey 29-JUN-84
CHK'D. D. CAUNTER 29-JUN-84
DSK:M853A.T2P[4,21] 29-JUN-84 15:54
FIRST USED ON OPTION/MODEL: KL10-PW

ENG. C. JENS 29-JUN-84
BOARD LOCATION: N/A
SHEET 1 OF 1
NEXT HIGHER ASSEMBLY: MCA25

TITLE: M853 DRAWING DIRECTORY

SIZE	CODE	NUMBER	REV.
D	DD	M853-0	A

MRO



NOTES:

SPARE COMPONENTS: E4,E8,E24,E28,E32, E34,E35,E39,Z34, Z43,Z44, Z47 THRU Z49

STEP & REPEAT	↑ Y AXIS Ø STEP Ø TIMES
	→ X AXIS Ø STEP Ø TIMES

REV	CHANGE NO	CHK

ETCH REV. A1

SIGNATURES		DATE
DRN.	J. Clark	4/27/84
CHK'D.	R W Counter	8/..../84
MECH.ENG.	[illegible]	
PROJ.ENG.	[illegible]	
PROD.	[illegible]	8-27-84

SCALE 2/1

SHT. 1 OF 1

TOP DOC.NO: D-DD-M853-Ø

digital

TITLE CACHE EXTENSION

SIZE	CODE	NUMBER	REV
D	UA	M853-Ø-Ø	A

MRO 1 MS# 41Ø672A

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REVISIONS		
CHK	CHANGE NO.	REV

digital

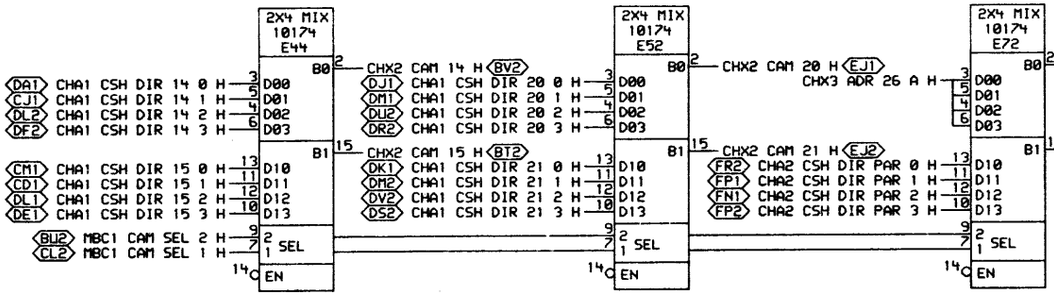
DRN. S. Toomby	DATE 06-AUG-84	ENG. C. A. JENS	DATE 06-AUG-84
CHK'D. D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION: 4AF28	
XTRA:<MCA25.M8515>PCHXA.DRW 23-JUL-84 12:24		SHEET 1 OF 1	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M853-0	

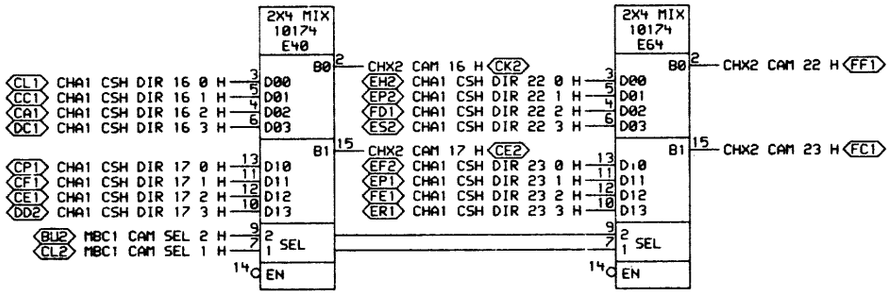
TITLE: CSH ADR COMPR & VAL BIT MIXER

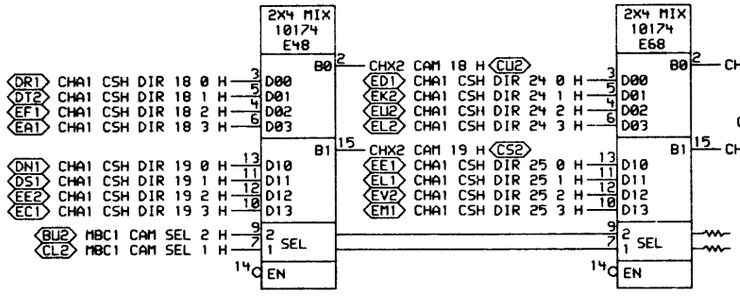
SIZE	CODE	NUMBER	REV.
D	CS	M853-0-CHX1	A

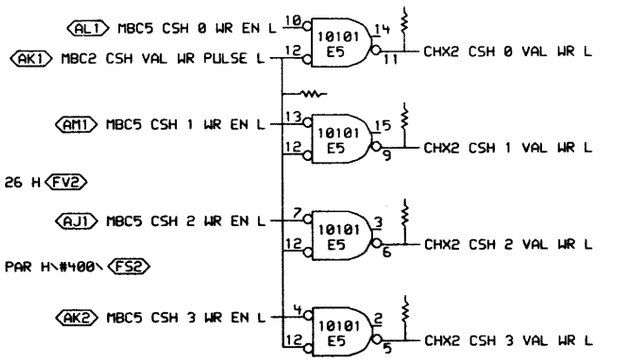
MRO 1

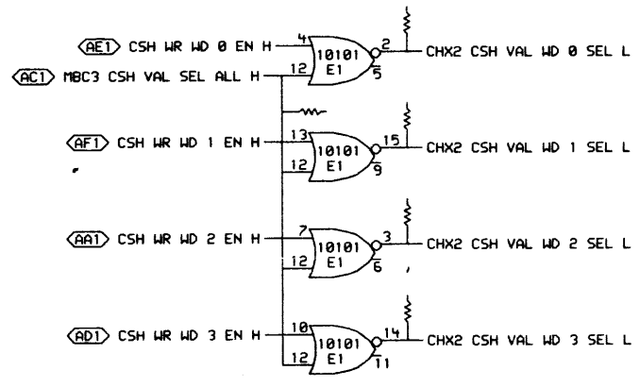
SIZE D | CODE CS | NUMBER M853-0-CHX2 | REV. A

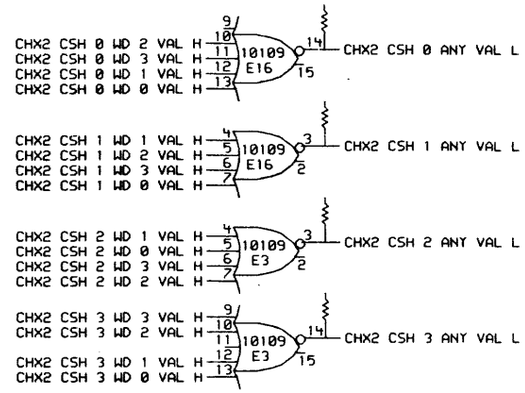


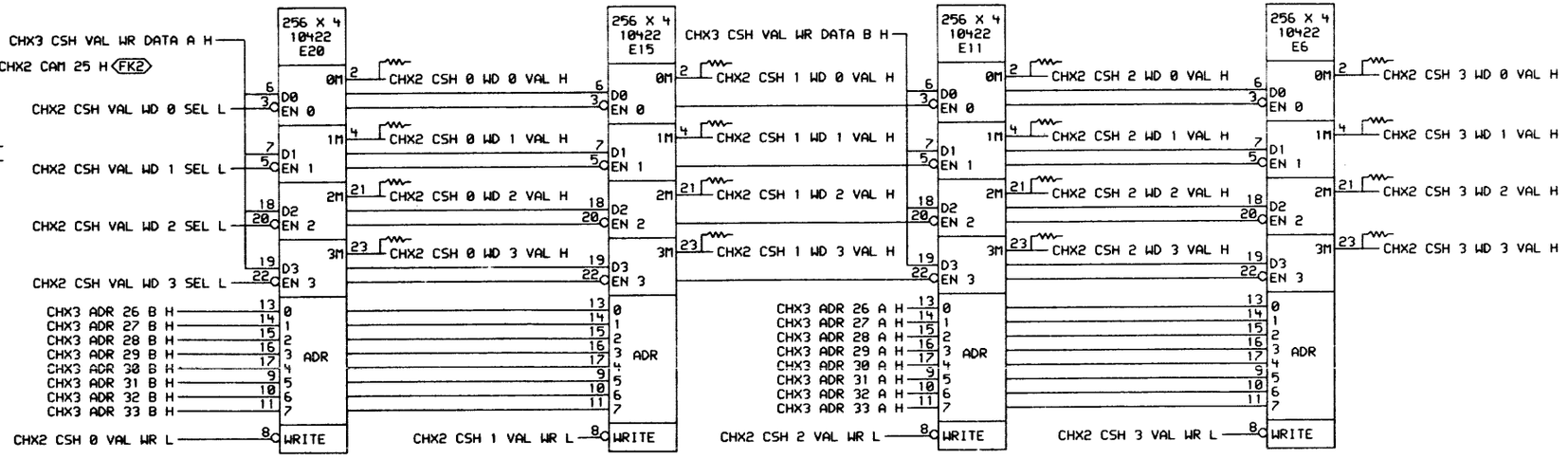












REVISIONS		
CHK	CHANGE NO.	REV

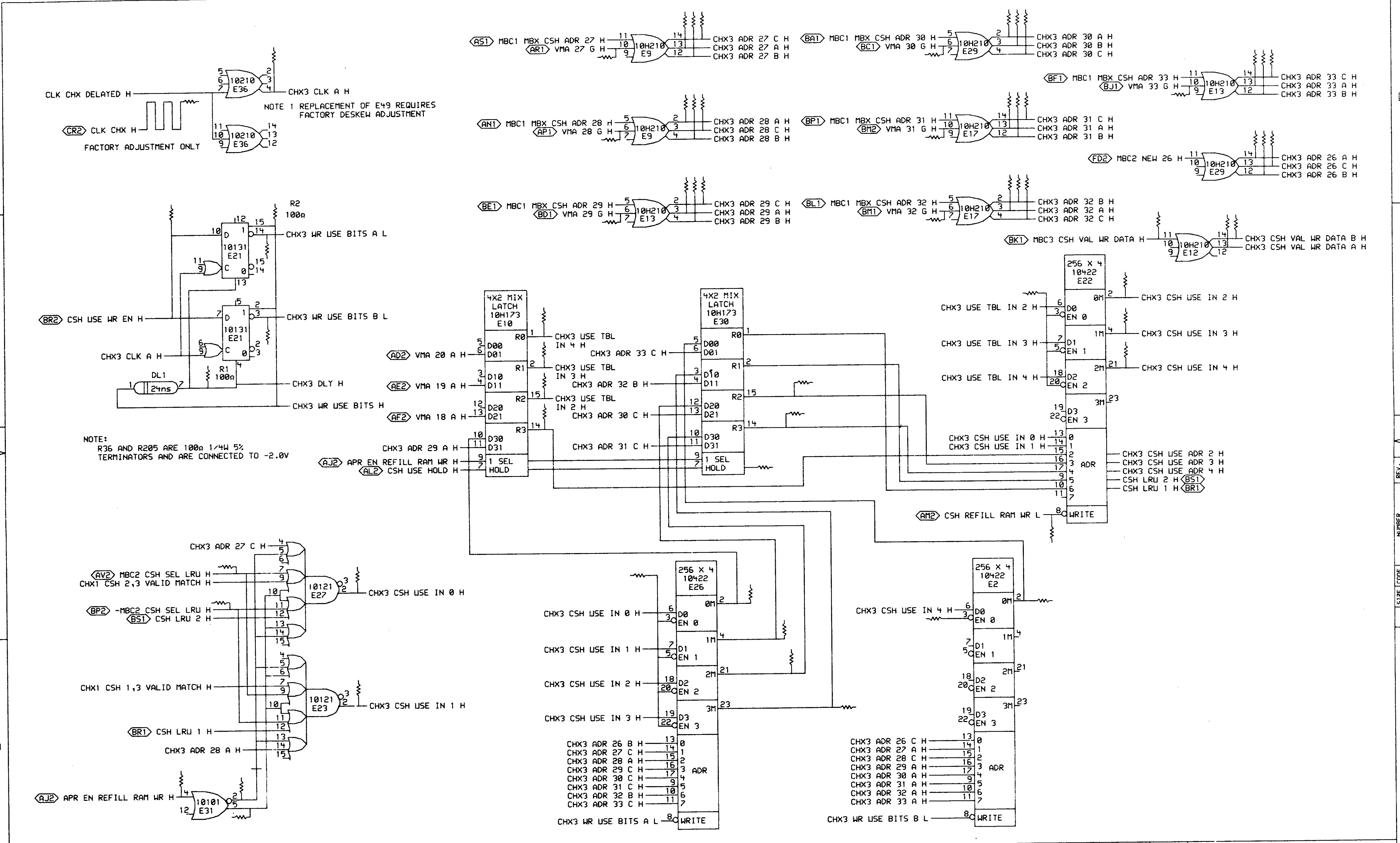
digital

DRN. S. Toomy | DATE 06-AUG-84 | ENG. C. A. JENS | DATE 06-AUG-84
CHK D. DELLORCO | DATE 06-AUG-84 | BOARD LOCATION: 4AF28
XTRA:<MCA25.M8515>PCHXB.DRW 23-JUL-84 12:25 | NEXT HIGHER ASSEMBLY: D-DD-M853-0
FIRST USED ON OPTION/MODEL: MCA25 | SHEET 1 OF 1

TITLE: CSH VALID BITS AND ADR MIXERS

SIZE	CODE	NUMBER	REV.
D	CS	M853-0-CHX2	A

MRO 1



REVISIONS		
CHK	CHANGE NO.	REV

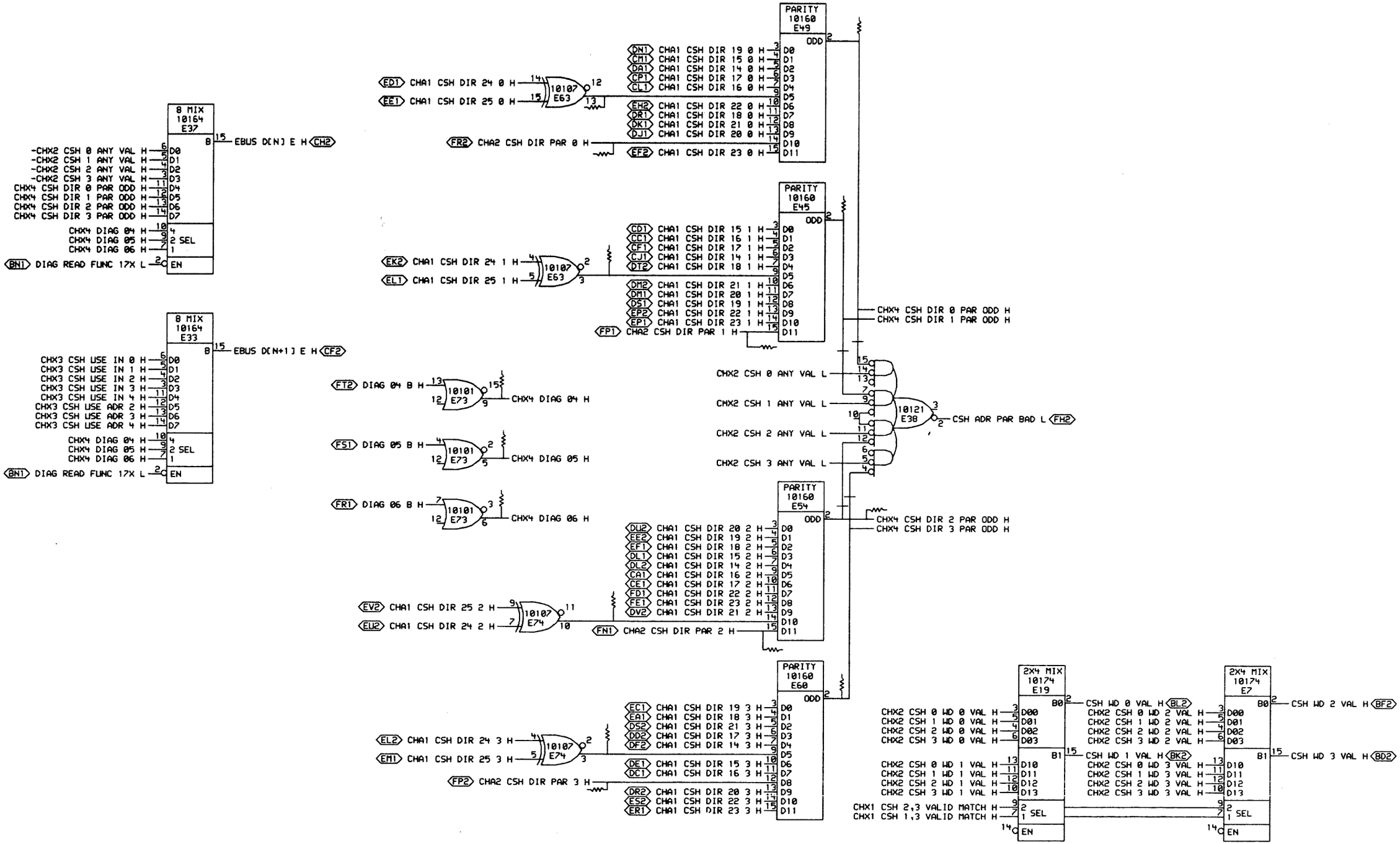
digital

DRN. [signature] DATE 06-AUG-84 | ENG. C. A. JENS DATE 06-AUG-84
CHK'D. D. DELLORCO DATE 06-AUG-84 | BOARD LOCATION: 4AF28 | SHEET 1 OF 1
XTRA:<MCA25.M8515>PCHXC.DRW 23-JUL-84 12:26 | NEXT HIGHER ASSEMBLY: D-DD-M853-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE USE BITS ADR BUF & LRU BITS

SIZE D | CODE CS | NUMBER M853-0-CHX3 | REV. A

MRO 1



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REVISIONS		
CHK	CHANGE NO.	REV

DRN. D. Toomey	DATE 06-AUG-84	ENG. C. A. JENS	DATE 06-AUG-84
CHK D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION: 4AF28	
		SHEET 1 OF 1	
XTRA:(MCA25.M8515)PCHXD.DRW 23-JUL-84 12:26		NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL: MCA25		D-DD-M853-0	

TITLE: CSH DIR PAR NET AND DIAG MIXERS

SIZE	CODE	NUMBER	REV.
D	CS	M853-0-CHX4	A

MRO 1

-5.2V\V\ GND ECL\G#19\

C1 10nF 50V — AB2
C2 10nF 50V — AU1
C3 10nF 50V — BB2
C4 10nF 50V — BU1
C5 10nF 50V — CB2
C6 10nF 50V — CU1
C7 10nF 50V — DB2
C8 10nF 50V — DU1
C9 10nF 50V — EB2
C10 10nF 50V — EU1
C11 10nF 50V — FB2
C12 10nF 50V — FU1
C13 10nF 50V
C14 10nF 50V — AC2
C15 10nF 50V — AH1
C16 10nF 50V — AN2
C17 10nF 50V — AT1
C18 10nF 50V — BC2
C19 10nF 50V — BH1
C20 10nF 50V — BN2
BT1
CC2
CH1
CT1
DC2
DH1
DN2
DT1
EC2
EH1

-5.2V\V\ GND ECL\G#19\

C21 10nF 50V — EN2
C22 10nF 50V — ET1
C23 10nF 50V — FC2
C24 10nF 50V — FH1
C25 10nF 50V — FN2
C26 10nF 50V — FT1
C27 10nF 50V
C28 10nF 50V
C29 10nF 50V
C30 10nF 50V
C31 10nF 50V
C32 10nF 50V
C33 10nF 50V
C34 10nF 50V
C35 10nF 50V
C36 10nF 50V
C37 10nF 50V
C38 10nF 50V
C39 10nF 50V
C40 10nF 50V

-5.2V\V\ GND ECL\G#19\

C41 10nF 50V
C42 10nF 50V
C43 10nF 50V
C44 10nF 50V
C45 10nF 50V
C46 10nF 50V
C47 10nF 50V
C48 10nF 50V
C49 10nF 50V
C50 10nF 50V
C51 10nF 50V
C52 10nF 50V
C53 10nF 50V
C54 10nF 50V
C55 10nF 50V
C56 10nF 50V
C57 10nF 50V
C58 10nF 50V
C59 10nF 50V — GND
C60 10nF 50V

-5.2V\V\ GND ECL\G#19\

C61 10nF 50V
C62 10nF 50V
C63 10nF 50V
C64 10nF 50V
C65 10nF 50V
C66 10nF 50V
C67 10nF 50V
C68 10nF 50V
C69 10nF 50V
C70 10nF 50V
C71 10nF 50V
C72 10nF 50V
C73 10nF 50V
C74 10nF 50V
C75 10nF 50V
C76 68µF 15V
C78 68µF 15V
C80 68µF 15V
C82 68µF 15V
C84 68µF 15V

-5.2V\V\ GND ECL\G#19\

SPR16 SPARE E34
SPR16 SPARE E4
SPR16 SPARE E8
SPR16 SPARE E24
SPR16 SPARE E28
SPR16 SPARE E32
SPR16 SPARE E35
SPR16 SPARE E39
C86 68µF 15V

NOTE: THESE ARE SPARE TERMINATORS

234 243 244 249 248 247 — NC

-2.0V\V\ GND ECL\G#19\

C77 330µF 6V
C79 330µF 6V — AB1
C81 330µF 6V — BB1
C83 330µF 6V — CB1
C85 330µF 6V — DB1
C87 330µF 6V — EB1
FB1

[B,NC,GND ECL\G#19\] — AA2
[B,NC,GND ECL\G#19\] — AV1
[B,NC,GND ECL\G#19\] — BA2
[B,NC,GND ECL\G#19\] — BV1
[B,NC,GND ECL\G#19\] — CA2
[B,NC,GND ECL\G#19\] — CV1
[B,NC,GND ECL\G#19\] — DA2
[B,NC,GND ECL\G#19\] — DV1
[B,NC,GND ECL\G#19\] — EA2
[B,NC,GND ECL\G#19\] — EV1
[B,NC,GND ECL\G#19\] — FA2
[B,NC,GND ECL\G#19\] — FV1

FL1 — [B,NC,PAG1 PT 26 B H\#19\]
FL2 — [B,NC,CSH DIR 26 1 H\#19\]
FU2 — [B,NC,CSH DIR 26 2 H\#19\]
FK1 — [B,NC,CSH DIR 26 3 H\#19\]

AH2 — [B,GND ECL\G#19\,NC]
AT2 — [B,GND ECL\G#19\,NC]

CN2 — [B,GND ECL,GND CLK\G#20\]

REVISIONS

CHK	CHANGE NO.	REV

digital

DRN. S. Toomy — DATE 06-AUG-84 — ENG. C. A. JENS — DATE 06-AUG-84
CHK D. DELLORCO — DATE 06-AUG-84 — BOARD LOCATION: 4AF28
SHEET 1 OF 1
XTRA:<MCA25.M8515>PCHXE.DRW 23-JUL-84 12:27 — NEXT HIGHER ASSEMBLY: D-DD-M853-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: CHX POWER, GND, CAP

SIZE	CODE	NUMBER	REV.
D	CS	M853-0-CHX5	A

MRO

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z20(8)	CHX3	B3	68Ω	%E2(2)
Z15(5)	CHX3	B3	68Ω	%E2(3)
Z19(3)	CHX3	C3	68Ω	%E22(3)
Z3(6)	CHX3	B4	68Ω	%E26(2)
Z6(6)	CHX3	A4	68Ω	%E26(21)
Z20(10)	CHX3	A4	68Ω	%E26(23)
Z20(1)	CHX3	B5	68Ω	%E26(3)
Z20(5)	CHX3	A4	68Ω	%E26(4)
Z33(6)	CHX3	A7	68Ω	%E31(2)
Z32(3)	CHX3	A7	68Ω	%E31(5)
Z39(10)	CHX1	D5	68Ω	%E41(2)
Z40(1)	CHX1	D5	68Ω	%E46(2)
Z22(10)	CHX1	D7	68Ω	%E47(2)
Z13(8)	CHX1	D4	68Ω	%E50(2)
Z52(1)	CHX1	A7	68Ω	%E51(12)
Z37(1)	CHX1	D7	68Ω	%E51(4)
Z50(6)	CHX1	D7	68Ω	%E53(2)
Z13(10)	CHX1	D4	68Ω	%E55(2)
Z41(10)	CHX1	D2	68Ω	%E56(2)
Z28(3)	CHX1	D2	68Ω	%E57(2)
Z22(8)	CHX1	D5	68Ω	%E59(14)
Z68(3)	CHX1	A6	68Ω	%E59(4)
Z40(3)	CHX1	D5	68Ω	%E61(2)
Z10(1)	CHX4	D5	68Ω	%E63(13)
Z9(5)	CHX4	C5	68Ω	%E63(3)
Z42(3)	CHX1	D2	68Ω	%E65(2)
Z50(8)	CHX1	D7	68Ω	%E66(2)
Z28(1)	CHX1	D4	68Ω	%E67(2)
Z55(8)	CHX1	A4	68Ω	%E71(12)
Z14(1)	CHX1	D4	68Ω	%E71(2)
Z38(8)	CHX4	B5	68Ω	%E74(10)
Z12(1)	CHX4	A5	68Ω	%E74(3)
Z42(8)	CHX1	A3	68Ω	%E75(12)
Z40(5)	CHX1	D2	68Ω	%E75(4)
Z6(5)	CHX3	A7	68Ω	APR EN REFILL RAM WR H
Z38(1)	CHX1	C7	68Ω	CHA1 CSH DIR 14 0 H
Z9(10)	CHX1	C6	68Ω	CHA1 CSH DIR 14 1 H
Z52(8)	CHX1	C4	68Ω	CHA1 CSH DIR 14 2 H
Z12(6)	CHX1	C3	68Ω	CHA1 CSH DIR 14 3 H
Z51(5)	CHX1	C7	68Ω	CHA1 CSH DIR 15 0 H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z9(1)	CHX1	C6	68Ω	CHA1 CSH DIR 15 1 H
Z52(10)	CHX1	C4	68Ω	CHA1 CSH DIR 15 2 H
Z25(10)	CHX1	C3	68Ω	CHA1 CSH DIR 15 3 H
Z51(1)	CHX1	C7	68Ω	CHA1 CSH DIR 16 0 H
Z9(6)	CHX1	C6	68Ω	CHA1 CSH DIR 16 1 H
Z52(5)	CHX1	C4	68Ω	CHA1 CSH DIR 16 2 H
Z25(6)	CHX1	C3	68Ω	CHA1 CSH DIR 16 3 H
Z50(10)	CHX1	C7	68Ω	CHA1 CSH DIR 17 0 H
Z9(8)	CHX1	C6	68Ω	CHA1 CSH DIR 17 1 H
Z52(6)	CHX1	C4	68Ω	CHA1 CSH DIR 17 2 H
Z12(10)	CHX1	C3	68Ω	CHA1 CSH DIR 17 3 H
Z11(3)	CHX1	B7	68Ω	CHA1 CSH DIR 18 0 H
Z23(10)	CHX1	B6	68Ω	CHA1 CSH DIR 18 1 H
Z39(3)	CHX1	B4	68Ω	CHA1 CSH DIR 18 2 H
Z10(3)	CHX1	B3	68Ω	CHA1 CSH DIR 18 3 H
Z25(3)	CHX1	B7	68Ω	CHA1 CSH DIR 19 0 H
Z23(8)	CHX1	B6	68Ω	CHA1 CSH DIR 19 1 H
Z39(1)	CHX1	B4	68Ω	CHA1 CSH DIR 19 2 H
Z10(5)	CHX1	B3	68Ω	CHA1 CSH DIR 19 3 H
Z11(1)	CHX1	B7	68Ω	CHA1 CSH DIR 20 0 H
Z37(5)	CHX1	B6	68Ω	CHA1 CSH DIR 20 1 H
Z24(6)	CHX1	B4	68Ω	CHA1 CSH DIR 20 2 H
Z12(3)	CHX1	B3	68Ω	CHA1 CSH DIR 20 3 H
Z10(10)	CHX1	B7	68Ω	CHA1 CSH DIR 21 0 H
Z23(5)	CHX1	B6	68Ω	CHA1 CSH DIR 21 1 H
Z24(3)	CHX1	B4	68Ω	CHA1 CSH DIR 21 2 H
Z12(8)	CHX1	B3	68Ω	CHA1 CSH DIR 21 3 H
Z13(3)	CHX1	B7	68Ω	CHA1 CSH DIR 22 0 H
Z13(1)	CHX1	B6	68Ω	CHA1 CSH DIR 22 1 H
Z57(5)	CHX1	B4	68Ω	CHA1 CSH DIR 22 2 H
Z13(5)	CHX1	B3	68Ω	CHA1 CSH DIR 22 3 H
Z41(5)	CHX1	B7	68Ω	CHA1 CSH DIR 23 0 H
Z9(3)	CHX1	B6	68Ω	CHA1 CSH DIR 23 1 H
Z55(1)	CHX1	B4	68Ω	CHA1 CSH DIR 23 2 H
Z27(5)	CHX1	B3	68Ω	CHA1 CSH DIR 23 3 H
Z54(1)	CHX1	A7	68Ω	CHA1 CSH DIR 24 0 H
Z54(3)	CHX1	A6	68Ω	CHA1 CSH DIR 24 1 H
Z54(8)	CHX1	A4	68Ω	CHA1 CSH DIR 24 2 H
Z28(8)	CHX1	A3	68Ω	CHA1 CSH DIR 24 3 H
Z68(10)	CHX1	A7	68Ω	CHA1 CSH DIR 25 0 H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z54(5)	CHX1	A6	68Ω	CHA1 CSH DIR 25 1 H
Z57(1)	CHX1	A4	68Ω	CHA1 CSH DIR 25 2 H
Z28(10)	CHX1	A3	68Ω	CHA1 CSH DIR 25 3 H
Z24(1)	CHX4	D5	68Ω	CHA2 CSH DIR PAR 0 H
Z23(3)	CHX4	C4	68Ω	CHA2 CSH DIR PAR 1 H
Z24(10)	CHX4	B4	68Ω	CHA2 CSH DIR PAR 2 H
Z12(5)	CHX4	A5	68Ω	CHA2 CSH DIR PAR 3 H
Z30(3)	CHX1	C2	68Ω	CHX1 CSH 1,3 VALID MATCH H
Z17(5)	CHX1	D2	68Ω	CHX1 CSH 2,3 VALID MATCH H
Z35(10)	CHX2	D1	68Ω	-CHX2 CSH 0 ANY VAL H
Z46(10)	CHX2	D3	68Ω	-CHX2 CSH 0 VAL WR H
Z17(8)	CHX2	B5	68Ω	CHX2 CSH 0 WD 0 VAL H
Z18(6)	CHX2	B5	68Ω	CHX2 CSH 0 WD 1 VAL H
Z17(6)	CHX2	A5	68Ω	CHX2 CSH 0 WD 2 VAL H
Z18(5)	CHX2	A5	68Ω	CHX2 CSH 0 WD 3 VAL H
Z35(8)	CHX2	D1	68Ω	-CHX2 CSH 1 ANY VAL H
Z18(3)	CHX2	D3	68Ω	-CHX2 CSH 1 VAL WR H
Z31(5)	CHX2	B4	68Ω	CHX2 CSH 1 WD 0 VAL H
Z45(5)	CHX2	B4	68Ω	CHX2 CSH 1 WD 1 VAL H
Z45(3)	CHX2	A4	68Ω	CHX2 CSH 1 WD 2 VAL H
Z31(3)	CHX2	A4	68Ω	CHX2 CSH 1 WD 3 VAL H
Z22(5)	CHX2	C1	68Ω	-CHX2 CSH 2 ANY VAL H
Z16(6)	CHX2	D3	68Ω	-CHX2 CSH 2 VAL WR H
Z33(1)	CHX2	B2	68Ω	CHX2 CSH 2 WD 0 VAL H
Z17(1)	CHX2	B2	68Ω	CHX2 CSH 2 WD 1 VAL H
Z30(1)	CHX2	A2	68Ω	CHX2 CSH 2 WD 2 VAL H
Z15(8)	CHX2	A2	68Ω	CHX2 CSH 2 WD 3 VAL H
Z22(3)	CHX2	C1	68Ω	-CHX2 CSH 3 ANY VAL H
Z3(3)	CHX2	C3	68Ω	-CHX2 CSH 3 VAL WR H
Z33(3)	CHX2	B1	68Ω	CHX2 CSH 3 WD 0 VAL H
Z31(8)	CHX2	B1	68Ω	CHX2 CSH 3 WD 1 VAL H
Z29(3)	CHX2	A1	68Ω	CHX2 CSH 3 WD 2 VAL H
Z15(10)	CHX2	A1	68Ω	CHX2 CSH 3 WD 3 VAL H
Z45(1)	CHX2	C3	68Ω	-CHX2 CSH VAL WD 0 SEL H
Z46(6)	CHX2	C3	68Ω	-CHX2 CSH VAL WD 1 SEL H
Z45(8)	CHX2	C3	68Ω	-CHX2 CSH VAL WD 2 SEL H
Z46(1)	CHX2	B3	68Ω	-CHX2 CSH VAL WD 3 SEL H
Z2(8)	CHX3	D1	68Ω	CHX3 ADR 26 A H
Z31(10)	CHX3	D1	68Ω	CHX3 ADR 26 B H
Z2(6)	CHX3	D1	68Ω	CHX3 ADR 26 C H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z16(1)	CHX3	D5	68Ω	CHX3 ADR 27 A H
Z45(10)	CHX3	D4	68Ω	CHX3 ADR 27 B H
Z56(3)	CHX3	D4	68Ω	CHX3 ADR 27 C H
Z33(5)	CHX3	D5	68Ω	CHX3 ADR 28 A H
Z45(6)	CHX3	D4	68Ω	CHX3 ADR 28 B H
Z2(1)	CHX3	D4	68Ω	CHX3 ADR 28 C H
Z30(5)	CHX3	D5	68Ω	CHX3 ADR 29 A H
Z46(5)	CHX3	D4	68Ω	CHX3 ADR 29 B H
Z19(10)	CHX3	D4	68Ω	CHX3 ADR 29 C H
Z15(1)	CHX3	D3	68Ω	CHX3 ADR 30 A H
Z46(3)	CHX3	D3	68Ω	CHX3 ADR 30 B H
Z56(6)	CHX3	D3	68Ω	CHX3 ADR 30 C H
Z16(5)	CHX3	D3	68Ω	CHX3 ADR 31 A H
Z18(1)	CHX3	D3	68Ω	CHX3 ADR 31 B H
Z56(5)	CHX3	D3	68Ω	CHX3 ADR 31 C H
Z16(3)	CHX3	D3	68Ω	CHX3 ADR 32 A H
Z21(1)	CHX3	D3	68Ω	CHX3 ADR 32 B H
Z4(10)	CHX3	D3	68Ω	CHX3 ADR 32 C H
Z16(8)	CHX3	D1	68Ω	CHX3 ADR 33 A H
Z17(3)	CHX3	D1	68Ω	CHX3 ADR 33 B H
Z56(10)	CHX3	D1	68Ω	CHX3 ADR 33 C H
Z5(3)	CHX3	D7	68Ω	CHX3 CLK A H
Z5(1)	CHX3	B5	68Ω	CHX3 CSH USE ADR 2 H
Z18(8)	CHX3	C4	68Ω	CHX3 CSH USE ADR 3 H
Z17(10)	CHX3	C4	68Ω	CHX3 CSH USE ADR 4 H
Z20(3)	CHX3	B6	68Ω	CHX3 CSH USE IN 0 H
Z6(1)	CHX3	A6	68Ω	CHX3 CSH USE IN 1 H
Z21(8)	CHX3	C2	68Ω	CHX3 CSH USE IN 2 H
Z21(6)	CHX3	C2	68Ω	CHX3 CSH USE IN 3 H
Z15(3)	CHX3	C2	68Ω	CHX3 CSH USE IN 4 H
Z46(8)	CHX3	C1	68Ω	CHX3 CSH VAL WR DATA A H
Z3(1)	CHX3	C1	68Ω	CHX3 CSH VAL WR DATA B H
R1(1)	CHX3	C7	100Ω	CHX3 DLY H
Z19(6)	CHX3	C5	68Ω	CHX3 USE TBL IN 2 H
Z19(5)	CHX3	C5	68Ω	CHX3 USE TBL IN 3 H
Z18(10)	CHX3	C5	68Ω	CHX3 USE TBL IN 4 H
R2(1)	CHX3	C7	100Ω	CHX3 WR USE BITS H
Z5(10)	CHX3	C7	68Ω	-CHX3 WR USE BITS A H
Z2(5)	CHX3	C7	68Ω	-CHX3 WR USE BITS B H
Z36(1)	CHX4	D4	68Ω	CHX4 CSH DIR 0 PAR ODD H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN D. Loomby 06-AUG-84 | ENG. C. A. JENS 06-AUG-84

CHK D. DELLORCO 06-AUG-84 | BOARD LOCATION: 4AF28

SHEET 1 OF 2

XTRA:\MCA25.M8515\M8531.DRW 24-JUL-84 11:28

FIRST USED ON OPTION/MODEL: MCA25

NEXT HIGHER ASSEMBLY: D-DD-M853-0

TITLE: CACHE EXTENSION TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M853-0-RES	A

REV. A | NUMBER M853-0-RES | CODE CS | SIZE D | B | A

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z36(5)	CHX4	C4	68Ω	CHX4 CSH DIR 1 PAR ODD H
Z22(1)	CHX4	B4	68Ω	CHX4 CSH DIR 2 PAR ODD H
Z36(3)	CHX4	A4	68Ω	CHX4 CSH DIR 3 PAR ODD H
Z21(3)	CHX4	C6	68Ω	CHX4 DIAG 04 H
Z21(5)	CHX4	B6	68Ω	CHX4 DIAG 05 H
Z21(10)	CHX4	B6	68Ω	CHX4 DIAG 06 H
R3(1)	CHX3	D7	68Ω	CLK CHX H
Z19(8)	CHX3	B2	68Ω	-CSH REFILL RAM WR H
Z6(10)	CHX3	B4	68Ω	CSH USE HOLD H
Z5(5)	CHX3	C7	68Ω	CSH USE WR EN H
Z42(6)	CHX1	A8	68Ω	FORCE NO MATCH H
Z14(5)	CHX2	A6	68Ω	MBC1 CAM SEL 1 H
Z14(3)	CHX2	B6	68Ω	MBC1 CAM SEL 2 H
Z56(1)	CHX3	B7	68Ω	MBC2 CSH SEL LRU H
Z32(1)	CHX3	B7	68Ω	-MBC2 CSH SEL LRU H
Z2(10)	CHX2	D4	68Ω	-MBC2 CSH VAL WR PULSE H
Z2(3)	CHX2	C4	68Ω	MBC3 CSH VAL SEL ALL H
Z30(6)	CHX3	C2	68Ω	MBC3 CSH VAL WR DATA H
Z37(3)	CHX1	A7	68Ω	MBC5 FORCE VAL MATCH 0 H
Z26(3)	CHX1	A6	68Ω	MBC5 FORCE VAL MATCH 1 H
Z42(1)	CHX1	A4	68Ω	MBC5 FORCE VAL MATCH 2 H
Z42(10)	CHX1	A3	68Ω	MBC5 FORCE VAL MATCH 3 H
Z34(1)	CHX5	B4	68Ω	NC
Z43(1)	CHX5	B4	68Ω	NC
Z44(1)	CHX5	B4	68Ω	NC
Z47(1)	CHX5	B4	68Ω	NC
Z48(1)	CHX5	B4	68Ω	NC
Z49(1)	CHX5	B4	68Ω	NC
Z51(8)	CHX1	D7	68Ω	PAG2 PT 14 B H
Z51(6)	CHX1	D7	68Ω	PAG2 PT 15 B H
Z51(3)	CHX1	D7	68Ω	PAG2 PT 16 B H
Z37(6)	CHX1	D7	68Ω	PAG2 PT 17 B H
Z37(8)	CHX1	D7	68Ω	PAG2 PT 18 B H
Z37(10)	CHX1	D7	68Ω	PAG2 PT 19 B H
Z23(1)	CHX1	D7	68Ω	PAG7 PT 20 B H
Z23(6)	CHX1	D7	68Ω	PAG7 PT 21 B H
Z57(6)	CHX1	D7	68Ω	PAG7 PT 22 B H
Z55(3)	CHX1	D7	68Ω	PAG7 PT 23 B H
Z54(10)	CHX1	C7	68Ω	PAG7 PT 24 B H
Z57(3)	CHX1	C7	68Ω	PAG7 PT 25 B H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z3(5)	CHX3	D5	68Ω	VMA 27 G H
Z3(8)	CHX3	D5	68Ω	VMA 28 G H
Z4(6)	CHX3	C5	68Ω	VMA 29 G H
Z6(8)	CHX3	D3	68Ω	VMA 30 G H
Z4(8)	CHX3	D3	68Ω	VMA 31 G H
Z4(5)	CHX3	C3	68Ω	VMA 32 G H
Z4(3)	CHX3	D2	68Ω	VMA 33 G H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND ( ) INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. S. Toomey — DATE 06-AUG-84 — ENG. C. A. JENS — DATE 06-AUG-84

CHK D. DELLORCO — DATE 06-AUG-84 — BOARD LOCATION: 4AF28

SHEET 2 OF 2

XTRA:(MCA25.M8515)M8532.DRW 24-JUL-84 11:32

NEXT HIGHER ASSEMBLY: D-DD-M853-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE EXTENSION TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M853-0-RES	A

MRO 1

SIZE D | CODE CS | NUMBER M853-0-RES | REV. A

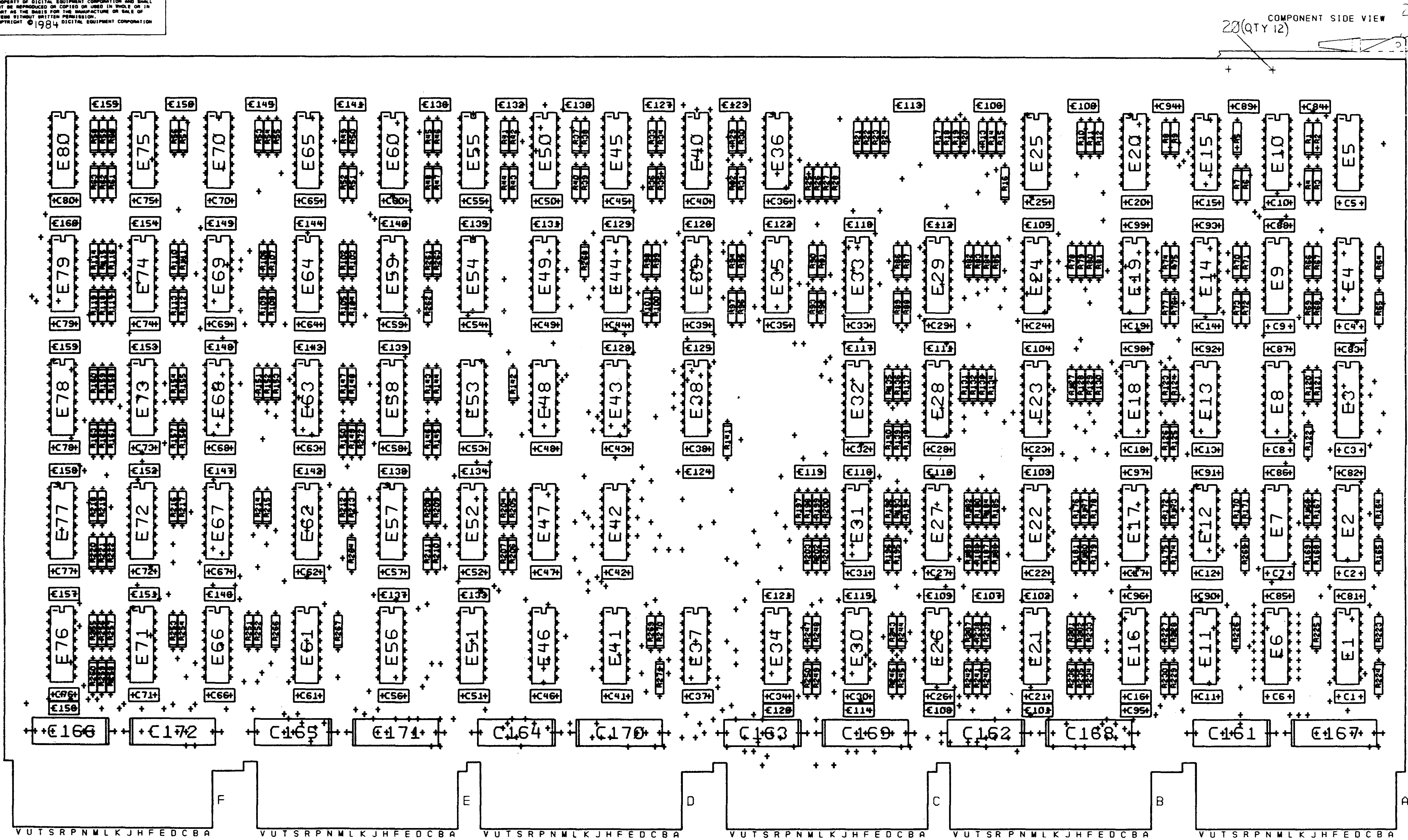
DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M854-00	MODULE REVISION	A1
D-UA-M854-0-0	1		PHYSICAL MEMORY ADDRESS	A
K-PL-M854-0-DBP	2		PART LIST, M854	A
D-CS-M854-0-PMA1	1		EBR & UBR REG UEBR MIX & VA BUF	A
D-CS-M854-0-PMA2	1		CACHE CLEARER ADR CTR	A
D-CS-M854-0-PMA3	1		PHY ADR MIX PA 14-31	A
D-CS-M854-0-PMA4	1		ERA REG, ADR PAR, PA 32-35 MIX	A
D-CS-M854-0-PMA5	1		PHY MEM ADR CONTROL LOGIC	A
D-CS-M854-0-PMA6	1		PHYSICAL MEM ADR PWR, GND,CAP	A
D-CS-M854-0-RES	2		PHYSICAL MEMORY ADDRESS TERMINATORS	A
K-PC-M854-0-DBI	-		P.C. DESIGN DATA BASE TAPE	A
D-DD-5017660-0	1		DRAWING DIRECTORY, 5017660	REF

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. DELLORCO	DATE 09-JUL-84	ENG. C. KACZOR	DATE 09-JUL-84	TITLE: M854 DRAWING DIRECTORY	
CHK D. DELLORCO	DATE 09-JUL-84	BOARD LOCATION: N/A			
DSK:M854A.T2P[4,21] 09-JUL-84 16:40		SHEET 1 OF 1			
FIRST USED ON OPTION/MODEL: KL10-PW		NEXT HIGHER ASSEMBLY: MCA25		SIZE D / CODE DD / NUMBER M854-0 / REV. A	

MRO 1



NOTES: SPARE COMPONENT LOCATIONS ARE: E6, R49, R72, R88, R101, R154, R195, R203, R217, R254, R197

STEP E	↑ Y AXIS	0	STEP	0	TIMES
REPEAT	→ X AXIS	0	STEP	0	TIMES

ETCH REV. A1

SIGNATURES	DATE
DRN.	4/13/84
CHK'D.	
MECH. ENG. C.	
PROJ. ENG. C.	
PROD.	

SCALE 2/1
SHT. 1 OF 1

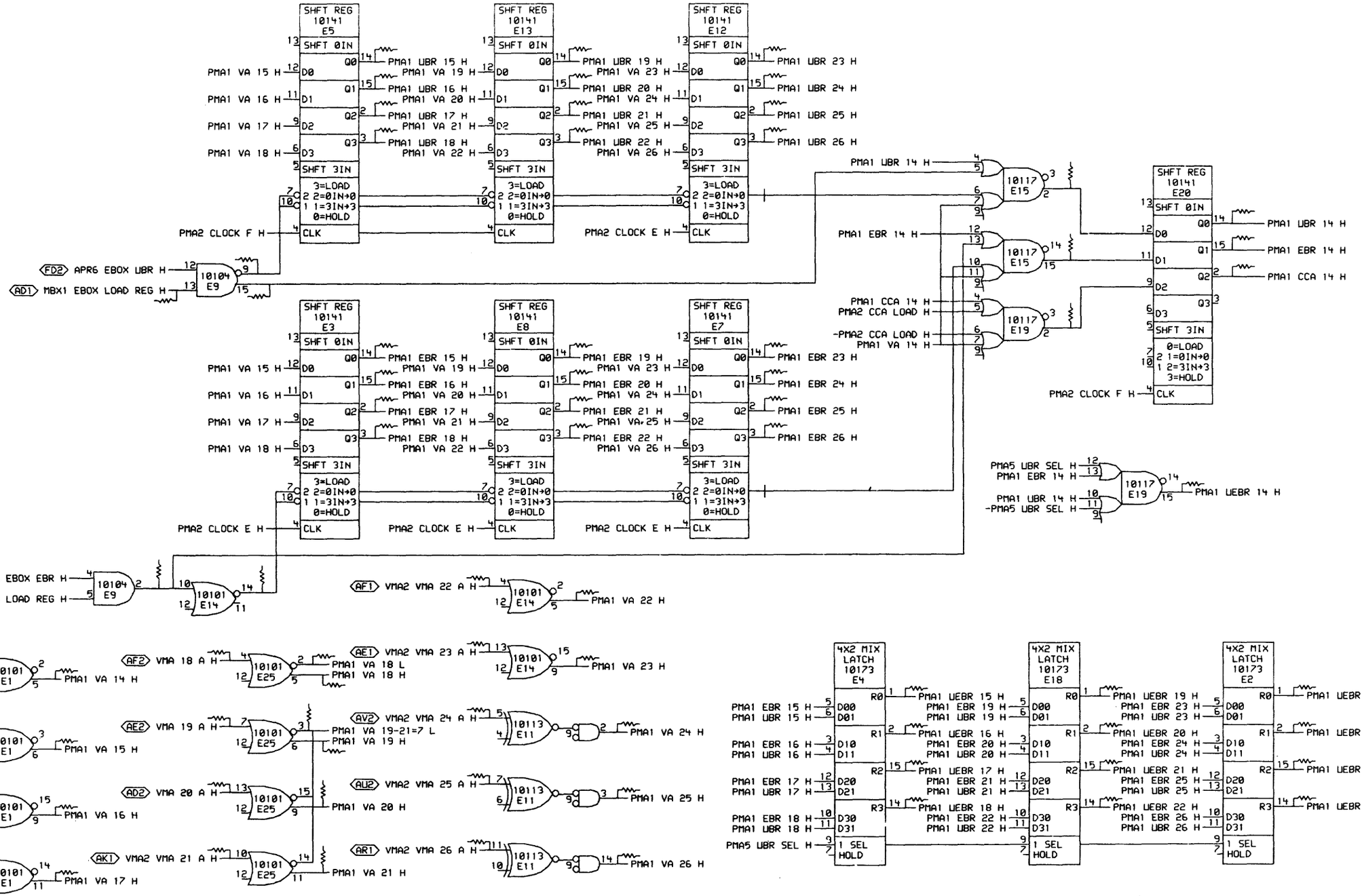
digital

TITLE PHYSICAL MEMORY ADDRESS

SIZE D CODE UA NUMBER M854-0-0 REV A

TOP DOC. NO: D-DD-M854-0

MRO 1 WO#4106697A



1 OF 6

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Toomey 05-JUL-84 | ENG. C. KACZOR 05-JUL-84 | CHK'D D. DELLORCO 05-JUL-84 | BOARD LOCATION: 4AF29 | SHEET 1 OF 1

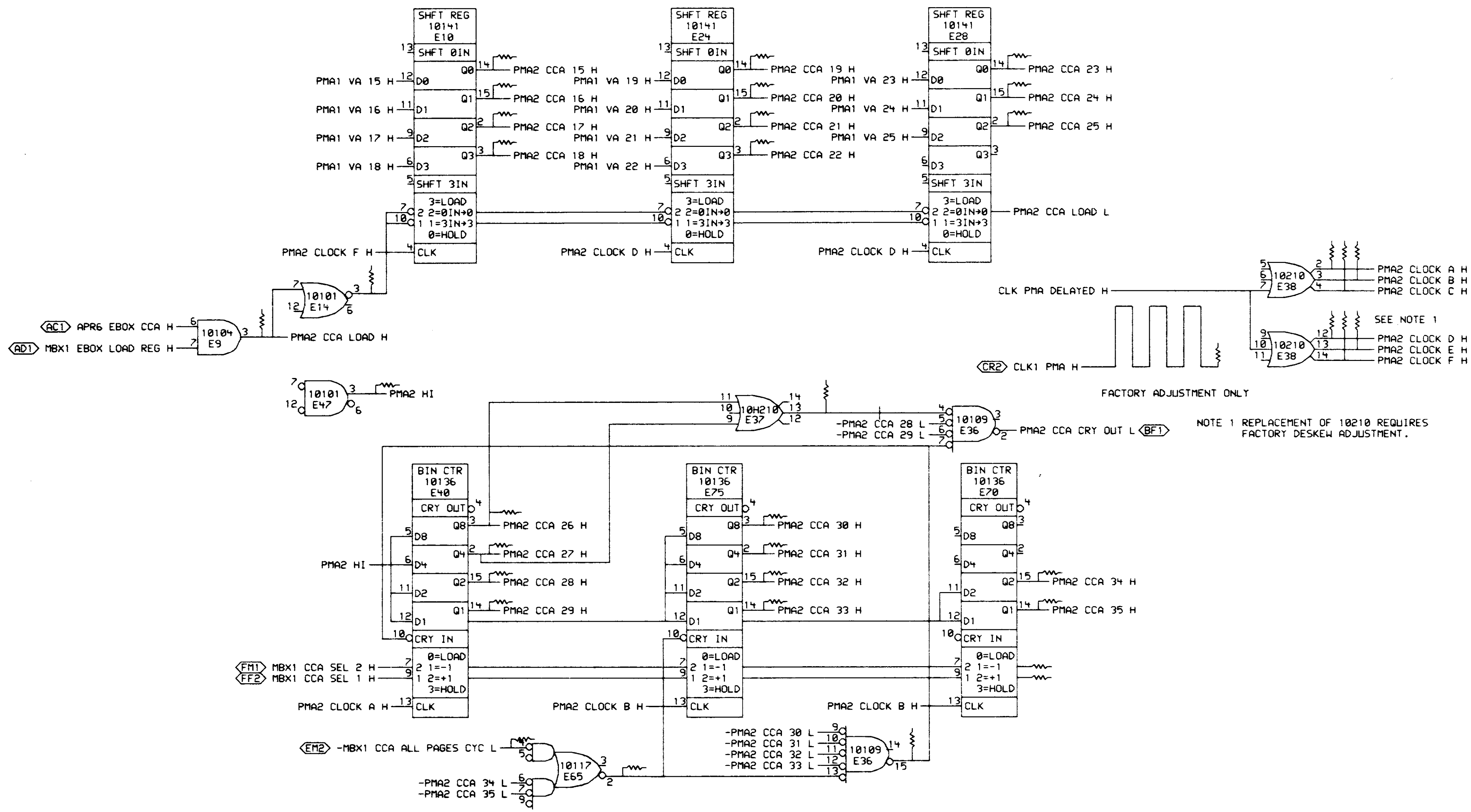
XTRA:(MCA25.M8518)PPMA1.DRW 05-JUL-84 12:26 | NEXT HIGHER ASSEMBLY: D-DD-M854-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: EBR & UBR REG UEBR MIX & VA BUF

SIZE	CODE	NUMBER	REV.
D	CS	M854-0-PMA1	A

M.R.O


SHFT REG 10141 E10
SHFT 0IN
PMA1 VA 15 H
PMA1 VA 16 H
PMA1 VA 17 H
PMA1 VA 18 H
PMA2 CCA 15 H
PMA2 CCA 16 H
PMA2 CCA 17 H
PMA2 CCA 18 H
SHFT 3IN
3=LOAD
2=0IN→0
1=3IN→3
0=HOLD
PMA2 CLOCK F H
CLK
SHFT REG 10141 E24
PMA1 VA 19 H
PMA1 VA 20 H
PMA1 VA 21 H
PMA1 VA 22 H
PMA2 CCA 19 H
PMA2 CCA 20 H
PMA2 CCA 21 H
PMA2 CCA 22 H
PMA2 CLOCK D H
SHFT REG 10141 E28
PMA1 VA 23 H
PMA1 VA 24 H
PMA1 VA 25 H
PMA2 CCA 23 H
PMA2 CCA 24 H
PMA2 CCA 25 H
PMA2 CCA LOAD L
10101 E14
10104 E9
AC1 APR6 EBOX CCA H
AD1 MBX1 EBOX LOAD REG H
PMA2 CCA LOAD H
10101 E47
PMA2 HI
CLK PMA DELAYED H
10210 E38
PMA2 CLOCK A H
PMA2 CLOCK B H
PMA2 CLOCK C H
SEE NOTE 1
PMA2 CLOCK D H
PMA2 CLOCK E H
PMA2 CLOCK F H
CR2 CLK1 PMA H
FACTORY ADJUSTMENT ONLY
10H210 E37
-PMA2 CCA 28 L
-PMA2 CCA 29 L
10109 E36
PMA2 CCA CRY OUT L BF1
NOTE 1 REPLACEMENT OF 10210 REQUIRES FACTORY DESKEW ADJUSTMENT.
BIN CTR 10136 E40
CRY OUT
PMA2 CCA 26 H
PMA2 CCA 27 H
PMA2 CCA 28 H
PMA2 CCA 29 H
PMA2 HI
CRY IN
0=LOAD
2 1=-1
1 2=+1
3=HOLD
FM1 MBX1 CCA SEL 2 H
FF2 MBX1 CCA SEL 1 H
PMA2 CLOCK A H
BIN CTR 10136 E75
PMA2 CCA 30 H
PMA2 CCA 31 H
PMA2 CCA 32 H
PMA2 CCA 33 H
PMA2 CLOCK B H
BIN CTR 10136 E70
PMA2 CCA 34 H
PMA2 CCA 35 H
PMA2 CLOCK B H
EM2 -MBX1 CCA ALL PAGES CYC L
-PMA2 CCA 34 L
-PMA2 CCA 35 L
10117 E65
-PMA2 CCA 30 L
-PMA2 CCA 31 L
-PMA2 CCA 32 L
-PMA2 CCA 33 L
10109 E36

2 OF 6

REVISIONS		
CHK	CHANGE NO.	REV

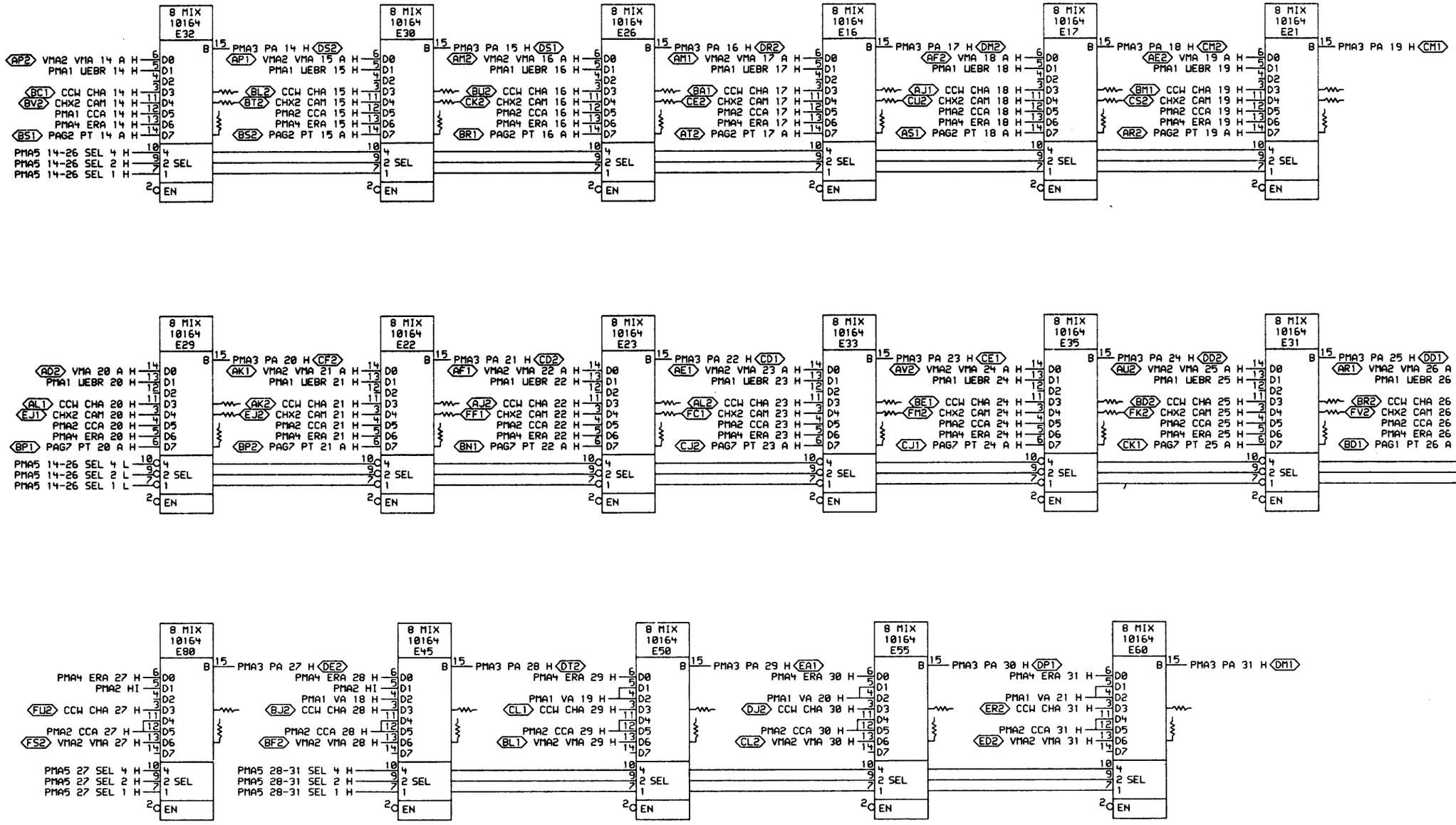
digital

DRN. [signature] DATE 05-JUL-84 ENG. C. KACZOR DATE 05-JUL-84
CHK'D. D. DELLORCO DATE 05-JUL-84 BOARD LOCATION: 4AF29 SHEET 1 OF 1
XTRA:<MCA25.M8518>PPMA2.DRW 05-JUL-84 12:26 NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE CLEARER ADR CTR

SIZE	CODE	NUMBER	REV.
D	CS	M854-0-PMA2	A

1 MRO



3 OF 6

REVISIONS		
CHK	CHANGE NO.	REV

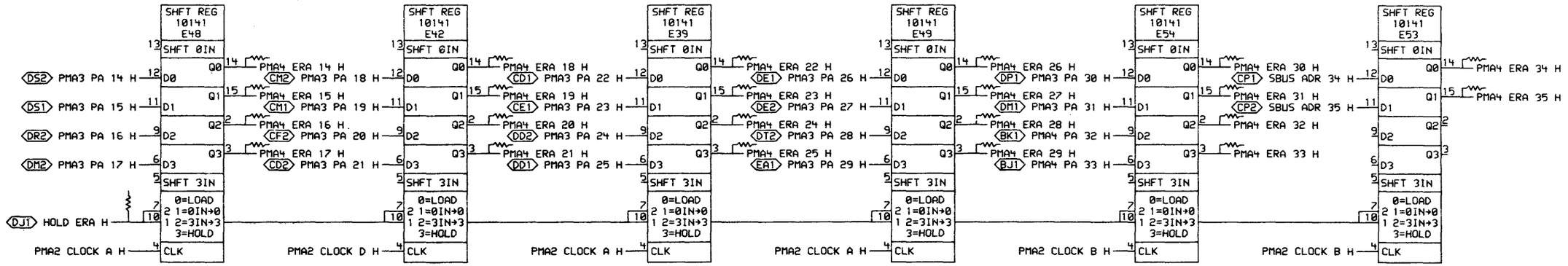
digital

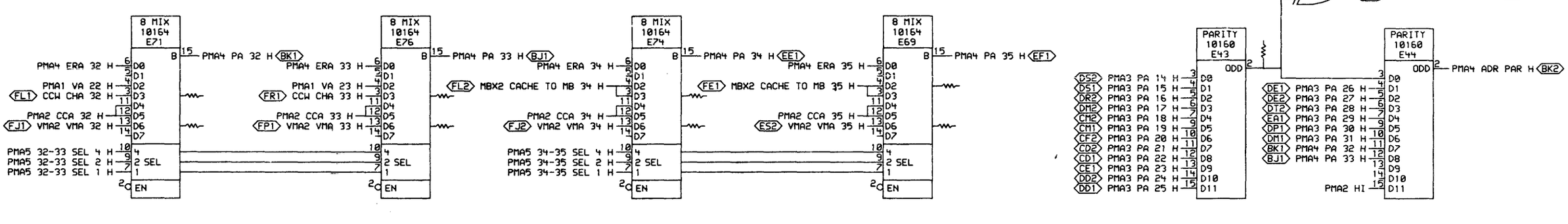
DRN. D. Toomey 05-JUL-84
CHK'D. D. DELLORCO 05-JUL-84
ENG. C. KACZOR 05-JUL-84
DATE 05-JUL-84
BOARD LOCATION: 4AF29
SHEET 1 OF 1
XTRA:<MCA25.M8518>PPMA3.DRW 05-JUL-84 12:26
NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25

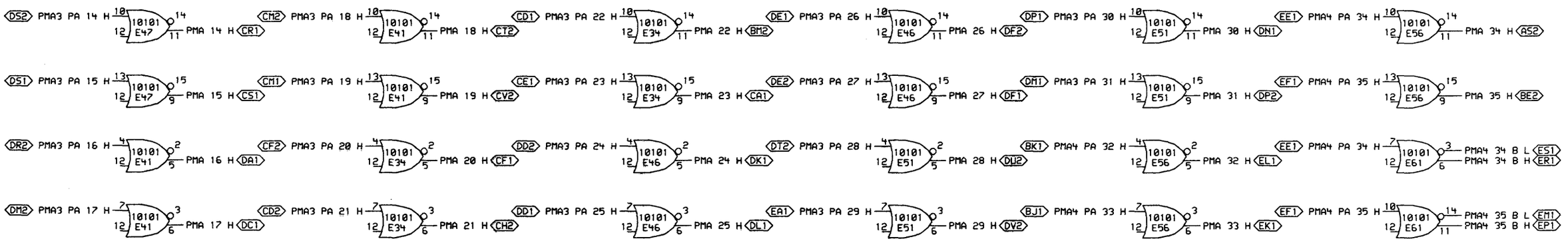
TITLE: PHY ADR MIX PA 14-31

SIZE	CODE	NUMBER	REV.
D	CS	M854-0-PMA3	A

1 MRO







4 OF 6

REVISIONS		
CHK	CHANGE NO.	REV

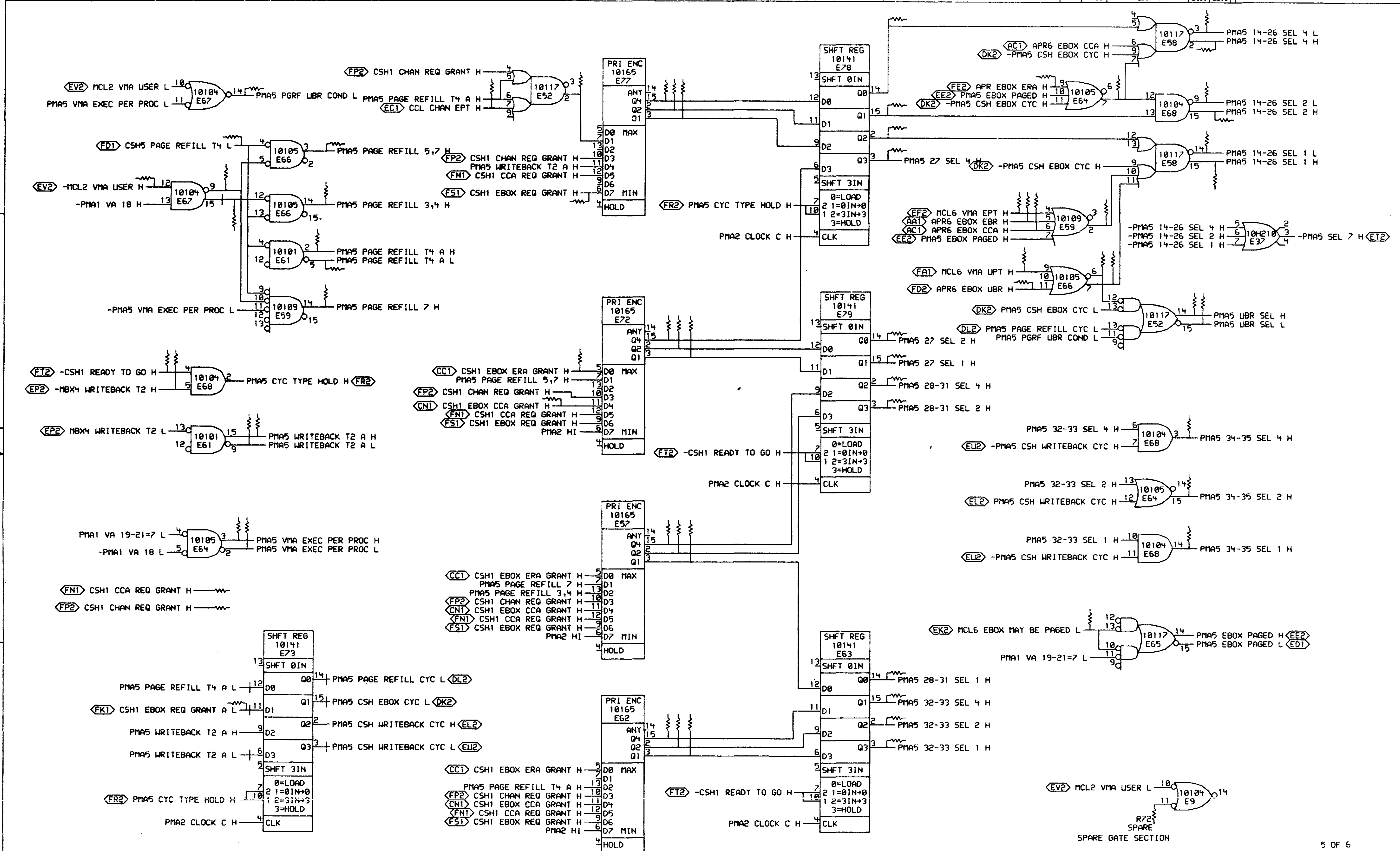
digital

DRN S. Toomey 05-JUL-84 | ENG. C. KACZOR 05-JUL-84 | DATE 05-JUL-84
CHK D. DELLORCO 05-JUL-84 | BOARD LOCATION: 4AF29
SHEET 1 OF 1
XTRA:<MCA25.M8518>PPMA4.DRW 05-JUL-84 12:27 | NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: ERA REG, ADR PAR, PA 32-35 MIX

SIZE	CODE	NUMBER	REV.
D	CS	M854-0-PMA4	A

MRO



REVISIONS		
CHK	CHANGE NO.	REV

digital

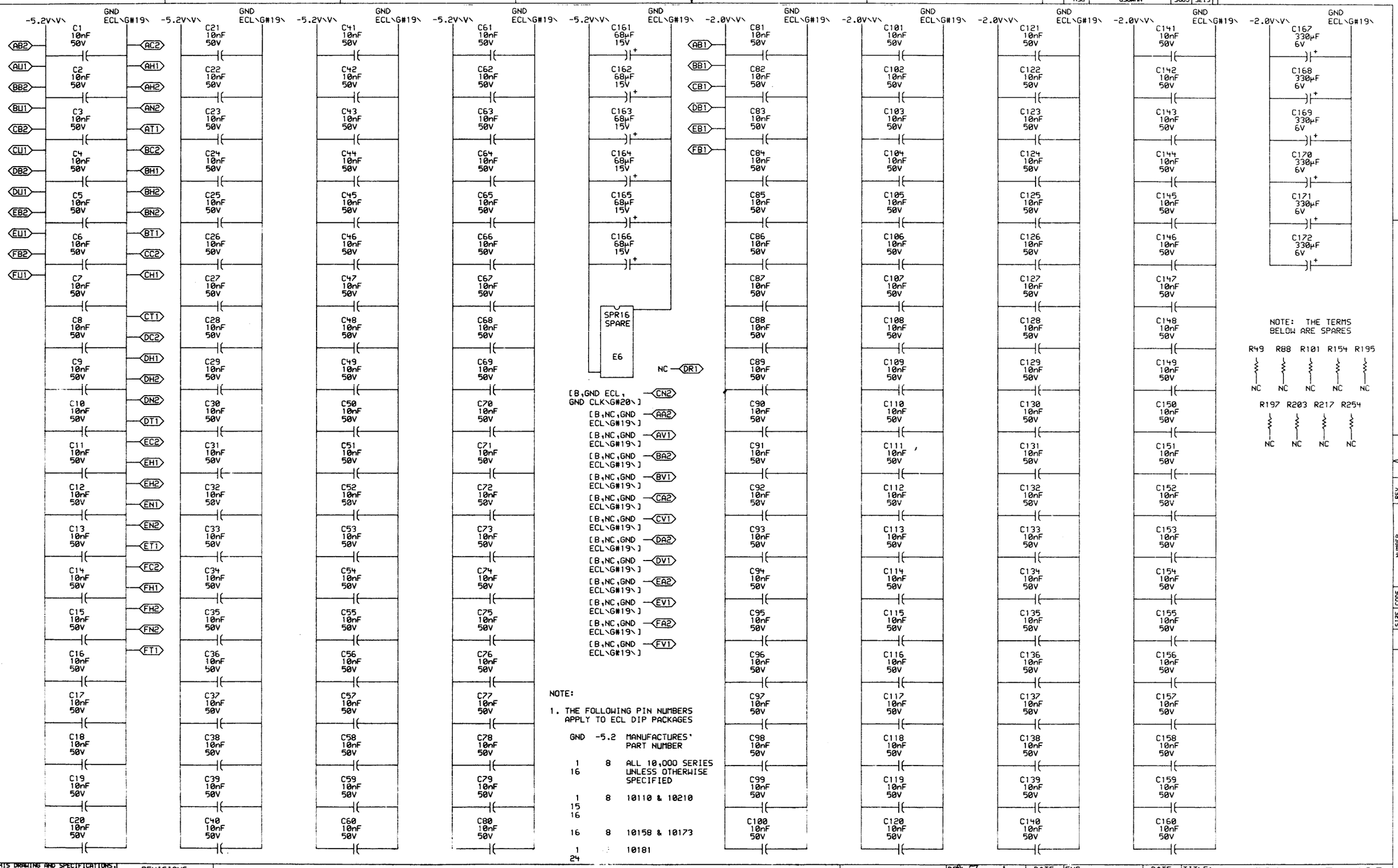
DRN: [signature] DATE 05-JUL-84 | ENG. C. KACZOR DATE 05-JUL-84
CHK'D: D. DELLORCO DATE 05-JUL-84 | BOARD LOCATION: 4AF29
SHEET 1 OF 1

XTRA:<MCA25.M0510>PPMA5.DRW 05-JUL-84 12:27 | NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PHY MEM ADR CONTROL LOGIC

SIZE	CODE	NUMBER	REV.
D	CS	M854-0-PMA5	A

1 MRO


-5.2V\V\
GND ECL\G#19\
C1 10nF 50V
C2 10nF 50V
C3 10nF 50V
C4 10nF 50V
C5 10nF 50V
C6 10nF 50V
C7 10nF 50V
C8 10nF 50V
C9 10nF 50V
C10 10nF 50V
C11 10nF 50V
C12 10nF 50V
C13 10nF 50V
C14 10nF 50V
C15 10nF 50V
C16 10nF 50V
C17 10nF 50V
C18 10nF 50V
C19 10nF 50V
C20 10nF 50V
AB2
AU1
BB2
BU1
CB2
CU1
DB2
DU1
EB2
EU1
FB2
FU1
AC2
AH1
AH2
AN2
AT1
BC2
BH1
BH2
BN2
BT1
CC2
CH1
CT1
DC2
DH1
DH2
DN2
DT1
EC2
EH1
EH2
EN1
EN2
ET1
FC2
FH1
FH2
FN2
FT1
C21 10nF 50V
C22 10nF 50V
C23 10nF 50V
C24 10nF 50V
C25 10nF 50V
C26 10nF 50V
C27 10nF 50V
C28 10nF 50V
C29 10nF 50V
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C78 10nF 50V
C79 10nF 50V
C80 10nF 50V
C161 68µF 15V
C162 68µF 15V
C163 68µF 15V
C164 68µF 15V
C165 68µF 15V
C166 68µF 15V
SPR16 SPARE
E6
NC DR1
[B,GND ECL, GND CLK\G#20\] CN2
[B,NC,GND ECL\G#19\] AA2
[B,NC,GND ECL\G#19\] AV1
[B,NC,GND ECL\G#19\] BA2
[B,NC,GND ECL\G#19\] BV1
[B,NC,GND ECL\G#19\] CA2
[B,NC,GND ECL\G#19\] CV1
[B,NC,GND ECL\G#19\] DA2
[B,NC,GND ECL\G#19\] DV1
[B,NC,GND ECL\G#19\] EA2
[B,NC,GND ECL\G#19\] EV1
[B,NC,GND ECL\G#19\] FA2
[B,NC,GND ECL\G#19\] FV1
-2.0V\V\
AB1
BB1
CB1
DB1
EB1
FB1
C81 10nF 50V
C82 10nF 50V
C83 10nF 50V
C84 10nF 50V
C85 10nF 50V
C86 10nF 50V
C87 10nF 50V
C88 10nF 50V
C89 10nF 50V
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C152 10nF 50V
C153 10nF 50V
C154 10nF 50V
C155 10nF 50V
C156 10nF 50V
C157 10nF 50V
C158 10nF 50V
C159 10nF 50V
C160 10nF 50V
C167 330µF 6V
C168 330µF 6V
C169 330µF 6V
C170 330µF 6V
C171 330µF 6V
C172 330µF 6V
NOTE: THE TERMS BELOW ARE SPARES
R49 R88 R101 R154 R195
NC NC NC NC NC
R197 R203 R217 R254
NC NC NC NC
NOTE:
1. THE FOLLOWING PIN NUMBERS APPLY TO ECL DIP PACKAGES
GND -5.2 MANUFACTURES' PART NUMBER
1 16 8 ALL 10,000 SERIES UNLESS OTHERWISE SPECIFIED
1 15 16 8 10110 & 10210
16 8 10158 & 10173
1 24 10181
SIZE D CODE CS NUMBER M854-0-PMA6 REV. A
REV. A
SIZE D CODE CS M854-0-PMA6
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REVISIONS
CHK CHANGE NO. REV
digital
DRN S. Toomey
CHK D. DELLORCO
DATE 05-JUL-84
ENG. C. KACZOR
DATE 05-JUL-84
DATE 05-JUL-84
BOARD LOCATION: 4AF29
SHEET 1 OF 1
TITLE: PHYSICAL MEM ADR PWR, GND, CAP
XTRA:<MCA25.M8518>PPMA6.DRW 05-JUL-84 12:27
NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25
SIZE D CODE CS NUMBER M854-0-PMA6 REV. A
8 7 6 5 4 3 2 1 MRC

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R171(1)	PMA1	B6	68Ω	%E14(14)
R11(1)	PMA1	C2	68Ω	%E15(15)
R12(1)	PMA1	D2	68Ω	%E15(2)
R8(1)	PMA1	C2	68Ω	%E19(2)
R30(1)	PMA2	A4	68Ω	%E36(15)
R29(1)	PMA2	C4	68Ω	%E37(13)
R226(1)	PMA4	C2	68Ω	%E43(2)
R219(1)	PMA5	D5	68Ω	%E52(2)
R163(1)	PMA5	B5	68Ω	%E57(15)
R160(1)	PMA5	B5	68Ω	%E57(2)
R147(1)	PMA5	B5	68Ω	%E57(3)
R144(1)	PMA5	C2	68Ω	%E59(2)
R150(1)	PMA5	A5	68Ω	%E62(15)
R153(1)	PMA5	A5	68Ω	%E62(2)
R152(1)	PMA5	A5	68Ω	%E62(3)
R145(1)	PMA5	D2	68Ω	%E64(7)
R28(1)	PMA2	A5	68Ω	%E65(2)
R204(1)	PMA5	C2	68Ω	%E66(6)
R146(1)	PMA5	C2	68Ω	%E66(7)
R251(1)	PMA5	D7	68Ω	%E67(15)
R262(1)	PMA5	D7	68Ω	%E67(9)
R159(1)	PMA5	C5	68Ω	%E72(15)
R114(1)	PMA5	C5	68Ω	%E72(2)
R119(1)	PMA5	C5	68Ω	%E72(3)
R158(1)	PMA5	D5	68Ω	%E77(15)
R162(1)	PMA5	D5	68Ω	%E77(2)
R161(1)	PMA5	D5	68Ω	%E77(3)
R148(1)	PMA5	D3	68Ω	%E78(14)
R151(1)	PMA5	D3	68Ω	%E78(15)
R143(1)	PMA5	D3	68Ω	%E78(2)
R72(1)	PMA5	A2	68Ω	%E9(11)
R9(1)	PMA1	C6	68Ω	%E9(15)
R5(1)	PMA1	B7	68Ω	%E9(2)
R170(1)	PMA1	C6	68Ω	%E9(9)
R104(1)	PMA5	D3	68Ω	APR EBOX ERA H
R272(1)	PMA5	D3	68Ω	APR6 EBOX CCA H
R103(1)	PMA5	D3	68Ω	APR6 EBOX EBR H
R71(1)	PMA5	C3	68Ω	APR6 EBOX UBR H
R205(1)	PMA5	D6	68Ω	CCL CHAN EPT H
R135(1)	PMA3	D7	68Ω	CCW CHA 14 H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R247(1)	PMA3	D6	68Ω	CCW CHA 15 H
R243(1)	PMA3	D5	68Ω	CCW CHA 16 H
R232(1)	PMA3	D4	68Ω	CCW CHA 17 H
R177(1)	PMA3	D3	68Ω	CCW CHA 18 H
R238(1)	PMA3	D2	68Ω	CCW CHA 19 H
R84(1)	PMA3	C7	68Ω	CCW CHA 20 H
R187(1)	PMA3	C6	68Ω	CCW CHA 21 H
R80(1)	PMA3	C5	68Ω	CCW CHA 22 H
R202(1)	PMA3	C4	68Ω	CCW CHA 23 H
R93(1)	PMA3	C3	68Ω	CCW CHA 24 H
R196(1)	PMA3	C2	68Ω	CCW CHA 25 H
R189(1)	PMA3	C1	68Ω	CCW CHA 26 H
R60(1)	PMA3	B7	68Ω	CCW CHA 27 H
R34(1)	PMA3	B6	68Ω	CCW CHA 28 H
R44(1)	PMA3	B5	68Ω	CCW CHA 29 H
R48(1)	PMA3	B4	68Ω	CCW CHA 30 H
R52(1)	PMA3	B3	68Ω	CCW CHA 31 H
R255(1)	PMA4	C7	68Ω	CCW CHA 32 H
R218(1)	PMA4	C6	68Ω	CCW CHA 33 H
R89(1)	PMA3	D7	68Ω	CHX2 CAM 14 H
R245(1)	PMA3	D6	68Ω	CHX2 CAM 15 H
R241(1)	PMA3	D5	68Ω	CHX2 CAM 16 H
R230(1)	PMA3	D4	68Ω	CHX2 CAM 17 H
R175(1)	PMA3	D3	68Ω	CHX2 CAM 18 H
R234(1)	PMA3	D2	68Ω	CHX2 CAM 19 H
R19(1)	PMA3	C7	68Ω	CHX2 CAM 20 H
R183(1)	PMA3	C6	68Ω	CHX2 CAM 21 H
R81(1)	PMA3	C5	68Ω	CHX2 CAM 22 H
R23(1)	PMA3	C4	68Ω	CHX2 CAM 23 H
R97(1)	PMA3	C3	68Ω	CHX2 CAM 24 H
R92(1)	PMA3	C2	68Ω	CHX2 CAM 25 H
R198(1)	PMA3	C1	68Ω	CHX2 CAM 26 H
R141(1)	PMA2	C2	68Ω	CLK1 PMA H
R210(1)	PMA5	B7	68Ω	CSH1 CCA REQ GRANT H
R209(1)	PMA5	B7	68Ω	CSH1 CHAN REQ GRANT H
R211(1)	PMA5	C5	68Ω	CSH1 EBOX CCA GRANT H
R213(1)	PMA5	C5	68Ω	CSH1 EBOX ERA GRANT H
R212(1)	PMA5	D5	68Ω	CSH1 EBOX REQ GRANT H
R157(1)	PMA5	A7	68Ω	-CSH1 EBOX REQ GRANT A H
R149(1)	PMA5	C8	68Ω	-CSH1 READY TO GO H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R263(1)	PMA5	D7	68Ω	-CSH5 PAGE REFILL T4 H
R100(1)	PMA4	C7	68Ω	HOLD ERA H
R54(1)	PMA2	A6	68Ω	MBX1 CCA ALL PAGES CYC H
R32(1)	PMA2	B3	68Ω	MBX1 CCA SEL 1 H
R99(1)	PMA2	B3	68Ω	MBX1 CCA SEL 2 H
R70(1)	PMA1	C7	68Ω	MBX1 EBOX LOAD REG H
R115(1)	PMA4	C5	68Ω	MBX2 CACHE TO MB 34 H
R111(1)	PMA4	C4	68Ω	MBX2 CACHE TO MB 35 H
R155(1)	PMA5	C7	68Ω	-MBX4 WRITEBACK T2 H
R73(1)	PMA5	D8	68Ω	-MCL2 VMA USER H
R55(1)	PMA5	B2	68Ω	-MCL6 EBOX MAY BE PAGED H
R102(1)	PMA5	D3	68Ω	MCL6 VMA EPT H
R252(1)	PMA5	C3	68Ω	MCL6 VMA UPT H
R49(1)	PMA6	C1	68Ω	NC
R88(1)	PMA6	C1	68Ω	NC
R101(1)	PMA6	C1	68Ω	NC
R154(1)	PMA6	C1	68Ω	NC
R195(1)	PMA6	C1	68Ω	NC
R197(1)	PMA6	C1	68Ω	NC
R203(1)	PMA6	C1	68Ω	NC
R217(1)	PMA6	C1	68Ω	NC
R254(1)	PMA6	C1	68Ω	NC
R140(1)	PMA3	C1	68Ω	PAG1 PT 26 A H
R137(1)	PMA3	D7	68Ω	PAG2 PT 14 A H
R249(1)	PMA3	D6	68Ω	PAG2 PT 15 A H
R237(1)	PMA3	D5	68Ω	PAG2 PT 16 A H
R228(1)	PMA3	D4	68Ω	PAG2 PT 17 A H
R173(1)	PMA3	D3	68Ω	PAG2 PT 18 A H
R231(1)	PMA3	D2	68Ω	PAG2 PT 19 A H
R83(1)	PMA3	C7	68Ω	PAG7 PT 20 A H
R186(1)	PMA3	C6	68Ω	PAG7 PT 21 A H
R133(1)	PMA3	C5	68Ω	PAG7 PT 22 A H
R21(1)	PMA3	C4	68Ω	PAG7 PT 23 A H
R96(1)	PMA3	C3	68Ω	PAG7 PT 24 A H
R201(1)	PMA3	C2	68Ω	PAG7 PT 25 A H
R86(1)	PMA1	C2	68Ω	PMA1 CCA 14 H
R75(1)	PMA1	C2	68Ω	PMA1 EBR 14 H
R69(1)	PMA1	C6	68Ω	PMA1 EBR 15 H
R66(1)	PMA1	C6	68Ω	PMA1 EBR 16 H
R65(1)	PMA1	C6	68Ω	PMA1 EBR 17 H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R120(1)	PMA1	C6	68Ω	PMA1 EBR 18 H
R130(1)	PMA1	C5	68Ω	PMA1 EBR 19 H
R127(1)	PMA1	C5	68Ω	PMA1 EBR 20 H
R123(1)	PMA1	C5	68Ω	PMA1 EBR 21 H
R125(1)	PMA1	C5	68Ω	PMA1 EBR 22 H
R169(1)	PMA1	C4	68Ω	PMA1 EBR 23 H
R166(1)	PMA1	C4	68Ω	PMA1 EBR 24 H
R165(1)	PMA1	C4	68Ω	PMA1 EBR 25 H
R225(1)	PMA1	C4	68Ω	PMA1 EBR 26 H
R76(1)	PMA1	D2	68Ω	PMA1 UBR 14 H
R68(1)	PMA1	D6	68Ω	PMA1 UBR 15 H
R67(1)	PMA1	D6	68Ω	PMA1 UBR 16 H
R64(1)	PMA1	D6	68Ω	PMA1 UBR 17 H
R122(1)	PMA1	D6	68Ω	PMA1 UBR 18 H
R129(1)	PMA1	D5	68Ω	PMA1 UBR 19 H
R128(1)	PMA1	D5	68Ω	PMA1 UBR 20 H
R124(1)	PMA1	D5	68Ω	PMA1 UBR 21 H
R126(1)	PMA1	D5	68Ω	PMA1 UBR 22 H
R168(1)	PMA1	D4	68Ω	PMA1 UBR 23 H
R167(1)	PMA1	D4	68Ω	PMA1 UBR 24 H
R164(1)	PMA1	D4	68Ω	PMA1 UBR 25 H
R224(1)	PMA1	D4	68Ω	PMA1 UBR 26 H
R138(1)	PMA1	B2	68Ω	PMA1 UEBR 14 H
R248(1)	PMA1	B3	68Ω	PMA1 UEBR 15 H
R244(1)	PMA1	A3	68Ω	PMA1 UEBR 16 H
R233(1)	PMA1	A3	68Ω	PMA1 UEBR 17 H
R178(1)	PMA1	A3	68Ω	PMA1 UEBR 18 H
R239(1)	PMA1	B2	68Ω	PMA1 UEBR 19 H
R85(1)	PMA1	A2	68Ω	PMA1 UEBR 20 H
R176(1)	PMA1	A2	68Ω	PMA1 UEBR 21 H
R79(1)	PMA1	A2	68Ω	PMA1 UEBR 22 H
R18(1)	PMA1	B1	68Ω	PMA1 UEBR 23 H
R90(1)	PMA1	A1	68Ω	PMA1 UEBR 24 H
R193(1)	PMA1	A1	68Ω	PMA1 UEBR 25 H
R188(1)	PMA1	A1	68Ω	PMA1 UEBR 26 H
R7(1)	PMA1	B7	68Ω	PMA1 VA 14 H
R6(1)	PMA1	A7	68Ω	PMA1 VA 15 H
R1(1)	PMA1	A7	68Ω	PMA1 VA 16 H
R3(1)	PMA1	A7	68Ω	PMA1 VA 17 H
R105(1)	PMA1	B6	68Ω	PMA1 VA 18 H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. Tommy
CHK'D D. DELLORCO
DATE 05-JUL-84
ENG. C. KACZOR
DATE 05-JUL-84
DATE 05-JUL-84
BOARD LOCATION: 4AF29
SHEET 1 OF 2
XTRA:<MCA25.M8510>M8541.DRW 05-JUL-84 12:28
NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PHYSICAL MEMORY ADDRESS--TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M854-0-RES	A

SIZE D | CODE CS | NUMBER M854-0-RES | REV. A

M80

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R215(1)	PMA1	B6	68Ω	-PMA1 VA 18 H
R42(1)	PMA1	A6	68Ω	PMA1 VA 19 H
R107(1)	PMA1	A6	68Ω	-PMA1 VA 19-21=7 H
R46(1)	PMA1	A6	68Ω	PMA1 VA 20 H
R50(1)	PMA1	A6	68Ω	PMA1 VA 21 H
R256(1)	PMA1	B5	68Ω	PMA1 VA 22 H
R222(1)	PMA1	B5	68Ω	PMA1 VA 23 H
R87(1)	PMA1	B4	68Ω	PMA1 VA 24 H
R131(1)	PMA1	A4	68Ω	PMA1 VA 25 H
R265(1)	PMA1	A4	68Ω	PMA1 VA 26 H
R246(1)	PMA2	D6	68Ω	PMA2 CCA 15 H
R240(1)	PMA2	D6	68Ω	PMA2 CCA 16 H
R229(1)	PMA2	D6	68Ω	PMA2 CCA 17 H
R174(1)	PMA2	D6	68Ω	PMA2 CCA 18 H
R236(1)	PMA2	D5	68Ω	PMA2 CCA 19 H
R20(1)	PMA2	D5	68Ω	PMA2 CCA 20 H
R184(1)	PMA2	D5	68Ω	PMA2 CCA 21 H
R132(1)	PMA2	D5	68Ω	PMA2 CCA 22 H
R24(1)	PMA2	D3	68Ω	PMA2 CCA 23 H
R94(1)	PMA2	D3	68Ω	PMA2 CCA 24 H
R199(1)	PMA2	D3	68Ω	PMA2 CCA 25 H
R194(1)	PMA2	B6	68Ω	PMA2 CCA 26 H
R58(1)	PMA2	B6	68Ω	PMA2 CCA 27 H
R36(1)	PMA2	B6	68Ω	PMA2 CCA 28 H
R37(1)	PMA2	B6	68Ω	PMA2 CCA 29 H
R31(1)	PMA2	B5	68Ω	PMA2 CCA 30 H
R25(1)	PMA2	B5	68Ω	PMA2 CCA 31 H
R26(1)	PMA2	B5	68Ω	PMA2 CCA 32 H
R27(1)	PMA2	B5	68Ω	PMA2 CCA 33 H
R113(1)	PMA2	B3	68Ω	PMA2 CCA 34 H
R109(1)	PMA2	B3	68Ω	PMA2 CCA 35 H
R74(1)	PMA2	C7	68Ω	PMA2 CCA LOAD H
R4(1)	PMA2	C6	68Ω	-PMA2 CCA LOAD H
R142(1)	PMA2	C2	68Ω	PMA2 CLOCK A H
R56(1)	PMA2	C2	68Ω	PMA2 CLOCK B H
R63(1)	PMA2	C2	68Ω	PMA2 CLOCK C H
R16(1)	PMA2	C2	68Ω	PMA2 CLOCK D H
R121(1)	PMA2	C2	68Ω	PMA2 CLOCK E H
R2(1)	PMA2	C2	68Ω	PMA2 CLOCK F H
R268(1)	PMA2	C6	68Ω	PMA2 HI

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R136(1)	PMA4	D7	68Ω	PMA4 ERA 14 H
R250(1)	PMA4	D7	68Ω	PMA4 ERA 15 H
R242(1)	PMA4	D7	68Ω	PMA4 ERA 16 H
R227(1)	PMA4	D7	68Ω	PMA4 ERA 17 H
R172(1)	PMA4	D6	68Ω	PMA4 ERA 18 H
R235(1)	PMA4	D6	68Ω	PMA4 ERA 19 H
R82(1)	PMA4	D6	68Ω	PMA4 ERA 20 H
R185(1)	PMA4	D6	68Ω	PMA4 ERA 21 H
R134(1)	PMA4	D5	68Ω	PMA4 ERA 22 H
R22(1)	PMA4	D5	68Ω	PMA4 ERA 23 H
R95(1)	PMA4	D5	68Ω	PMA4 ERA 24 H
R200(1)	PMA4	D5	68Ω	PMA4 ERA 25 H
R139(1)	PMA4	D4	68Ω	PMA4 ERA 26 H
R61(1)	PMA4	D4	68Ω	PMA4 ERA 27 H
R39(1)	PMA4	D4	68Ω	PMA4 ERA 28 H
R43(1)	PMA4	D4	68Ω	PMA4 ERA 29 H
R47(1)	PMA4	D3	68Ω	PMA4 ERA 30 H
R51(1)	PMA4	D3	68Ω	PMA4 ERA 31 H
R257(1)	PMA4	D3	68Ω	PMA4 ERA 32 H
R221(1)	PMA4	D3	68Ω	PMA4 ERA 33 H
R116(1)	PMA4	D1	68Ω	PMA4 ERA 34 H
R108(1)	PMA4	D1	68Ω	PMA4 ERA 35 H
R181(1)	PMA5	D2	68Ω	PMA5 14-26 SEL 1 H
R271(1)	PMA5	D2	68Ω	-PMA5 14-26 SEL 1 H
R180(1)	PMA5	D2	68Ω	PMA5 14-26 SEL 2 H
R270(1)	PMA5	D2	68Ω	-PMA5 14-26 SEL 2 H
R179(1)	PMA5	D2	68Ω	PMA5 14-26 SEL 4 H
R269(1)	PMA5	D2	68Ω	-PMA5 14-26 SEL 4 H
R62(1)	PMA5	C3	68Ω	PMA5 27 SEL 1 H
R53(1)	PMA5	C3	68Ω	PMA5 27 SEL 2 H
R57(1)	PMA5	D3	68Ω	PMA5 27 SEL 4 H
R40(1)	PMA5	A3	68Ω	PMA5 28-31 SEL 1 H
R98(1)	PMA5	C3	68Ω	PMA5 28-31 SEL 2 H
R35(1)	PMA5	C3	68Ω	PMA5 28-31 SEL 4 H
R220(1)	PMA5	A3	68Ω	PMA5 32-33 SEL 1 H
R258(1)	PMA5	A3	68Ω	PMA5 32-33 SEL 2 H
R259(1)	PMA5	A3	68Ω	PMA5 32-33 SEL 4 H
R117(1)	PMA5	B2	68Ω	PMA5 34-35 SEL 1 H
R118(1)	PMA5	B2	68Ω	PMA5 34-35 SEL 2 H
R112(1)	PMA5	B2	68Ω	PMA5 34-35 SEL 4 H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R208(1)	PMA5	D7	68Ω	PMA5 PAGE REFILL 3,4 H
R216(1)	PMA5	D7	68Ω	PMA5 PAGE REFILL 5,7 H
R264(1)	PMA5	C7	68Ω	PMA5 PAGE REFILL 7 H
R206(1)	PMA5	C7	68Ω	PMA5 PAGE REFILL T4 A H
R266(1)	PMA5	C7	68Ω	-PMA5 PAGE REFILL T4 A H
R207(1)	PMA5	D7	68Ω	-PMA5 PGRF UBR COND H
R223(1)	PMA5	C2	68Ω	PMA5 UBR SEL H
R77(1)	PMA5	C2	68Ω	-PMA5 UBR SEL H
R261(1)	PMA5	B7	68Ω	PMA5 VMA EXEC PER PROC H
R214(1)	PMA5	B7	68Ω	-PMA5 VMA EXEC PER PROC H
R156(1)	PMA5	B7	68Ω	PMA5 WRITEBACK T2 A H
R267(1)	PMA5	B7	68Ω	-PMA5 WRITEBACK T2 A H
R13(1)	PMA1	B6	68Ω	VMA 18 A H
R14(1)	PMA1	B6	68Ω	VMA 19 A H
R18(1)	PMA1	A6	68Ω	VMA 20 A H
R15(1)	PMA1	A6	68Ω	VMA2 VMA 21 A H
R78(1)	PMA1	B5	68Ω	VMA2 VMA 22 A H
R17(1)	PMA1	B5	68Ω	VMA2 VMA 23 A H
R91(1)	PMA1	B5	68Ω	VMA2 VMA 24 A H
R192(1)	PMA1	A5	68Ω	VMA2 VMA 25 A H
R182(1)	PMA1	A5	68Ω	VMA2 VMA 26 A H
R59(1)	PMA3	A7	68Ω	VMA2 VMA 27 H
R33(1)	PMA3	A6	68Ω	VMA2 VMA 28 H
R38(1)	PMA3	A5	68Ω	VMA2 VMA 29 H
R41(1)	PMA3	A4	68Ω	VMA2 VMA 30 H
R45(1)	PMA3	A3	68Ω	VMA2 VMA 31 H
R253(1)	PMA4	C7	68Ω	VMA2 VMA 32 H
R260(1)	PMA4	C6	68Ω	VMA2 VMA 33 H
R110(1)	PMA4	C5	68Ω	VMA2 VMA 34 H
R106(1)	PMA4	C4	68Ω	VMA2 VMA 35 H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND ( ) INDICATES PIN NUMBER

REVISIONS | CHK | CHANGE NO. | REV

digital

DRN. G. Toomby — DATE 05-JUL-84 — ENG. C. KACZOR — DATE 05-JUL-84
CHK'D. D. DELLORCO — DATE 05-JUL-84 — BOARD LOCATION: 4AF29 — SHEET 2 OF 2
XTRA1<MCA25.M8518>M8542.DRW 05-JUL-84 12:28 — NEXT HIGHER ASSEMBLY: D-DD-M854-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PHYSICAL MEMORY ADDRESS--TERMINATORS

SIZE D | CODE CS | NUMBER M854-0-RES | REV. A

MRO

DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M855-00	MODULE REVISION	A1
E-UA-M855-0-0	1		PAG	A1
K-PL-M855-0-DBP	2		PART LIST, M855	A1
D-CS-M855-0-PAG1	1		PAGE TABLE DATA PT ACCESS-PT 17	A1
D-CS-M855-0-PAG2	1		PAGE TABLE DATA PT 16 - PT 26	A1
D-CS-M855-0-PAG3	1		PAGE TABLE DIRECTORY	A1
D-CS-M855-0-PAG4	1		PAGE TABLE CONTROL LOGIC	A1
D-CS-M855-0-PAG5	1		PAGE TABLE PARITY LOGIC	A1
D-CS-M855-0-PAG6	1		PAGING KEEP BIT SELECTION	A1
D-CS-M855-0-PAG7	1		PAGE TABLE DATA PT 20 - 25	A1
D-CS-M855-0-PAG8	1		PAGE TABLE VALID BIT SELECTION	A1
D-CS-M855-0-PAG9	1		PAGE TABLE 1 DIRECTORY	A1
D-CS-M855-0-PAGA	1		PAGING BOARD POWER, GND, CAP	A1
D-CS-M855-0-PAGB	1		PAGING BOARD GND	A1
D-CS-M855-0-RES	3		PAG TERMINATORS	A1
K-PC-M855-0-DBM	-		MULTIWIRE DESIGN DATA BASE TAPE	A1
D-DD-5017661-0	2		DRAWING DIRECTORY, 5017661	REF

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. DELLORCO | DATE 19-JUL-84 | ENG. C. KACZOR | DATE 19-JUL-84

CHK'D. D. DELLORCO | DATE 19-JUL-84 | BOARD LOCATION: N/A | SHEET 1 OF 2

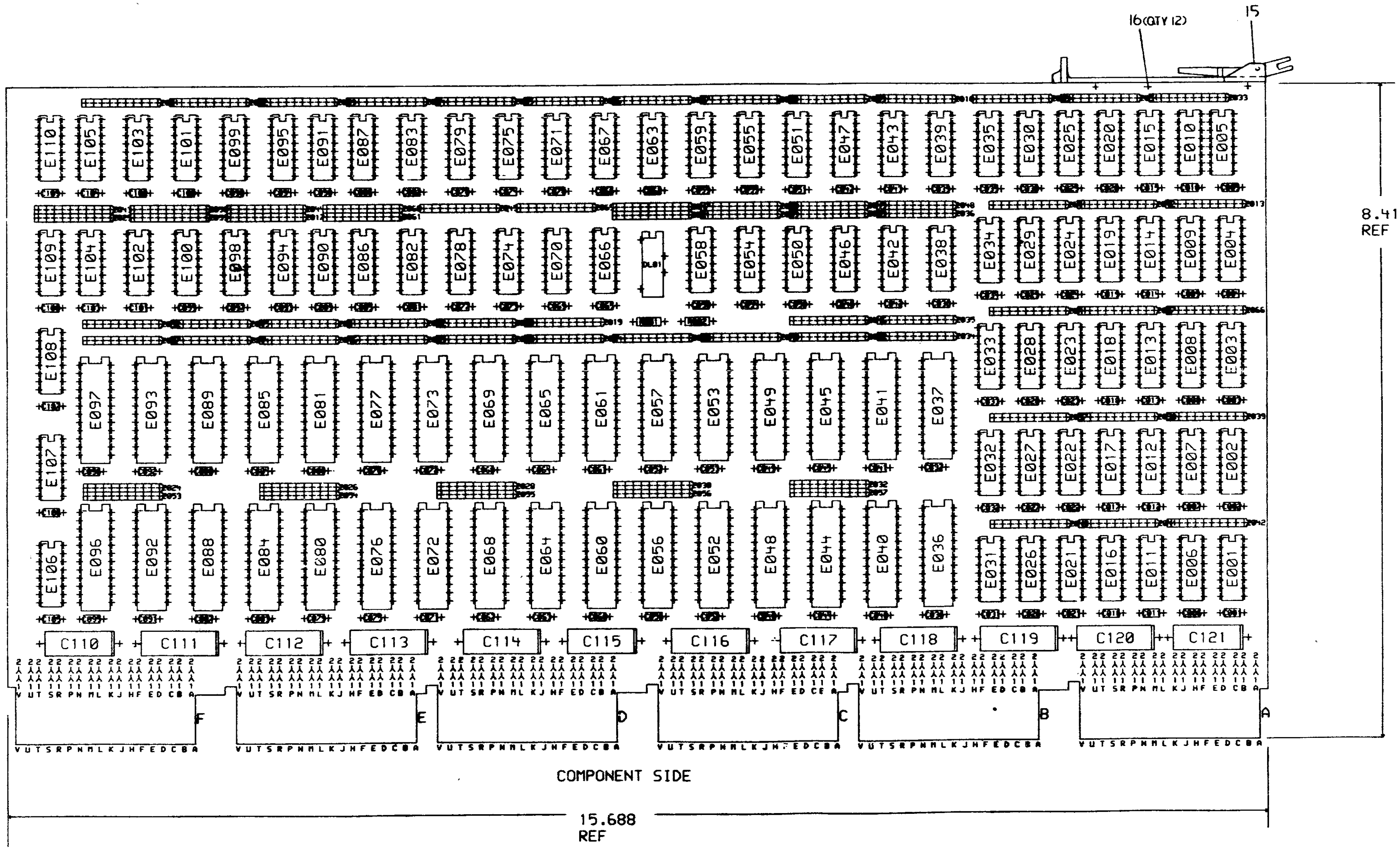
DSK:M855A1.T2P[4,21] 19-JUL-84 16:44 | NEXT HIGHER ASSEMBLY: KL10-PW | FIRST USED ON OPTION/MODEL: MCA25

TITLE: M855 DRAWING DIRECTORY

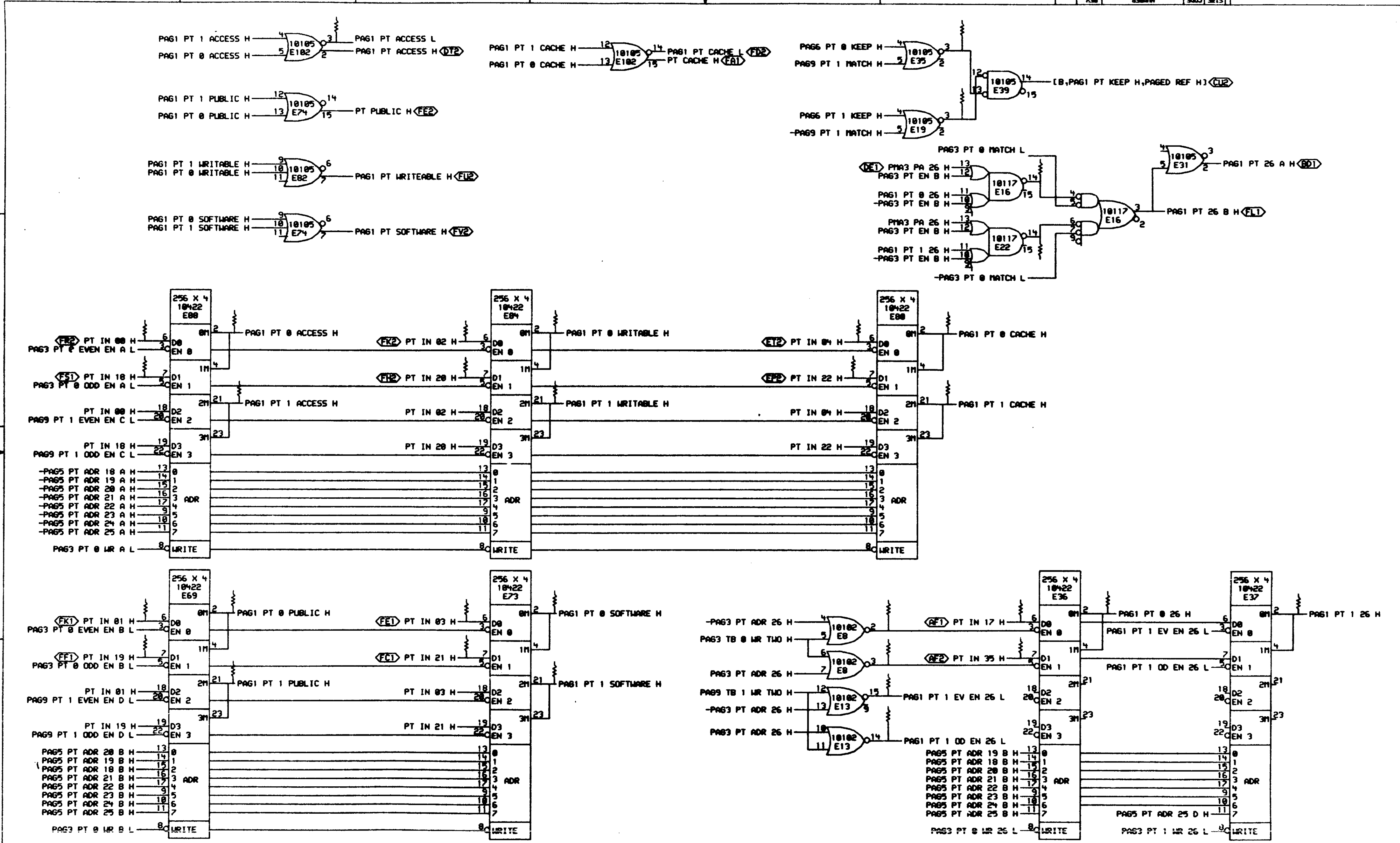
SIZE	CODE	NUMBER	REV.
D	DD	M855-0	A

MRO

NOTES: 1. THIS BOARD MUST MEET SAFETY REQ. FOR HPWR.
2. SPARE COMPONENT LOCATIONS ARE: E12, E43, E103, E105.



DRN P. LASSEN	DATE 08MAR84	TITLE PAG	digital
CHK D	DATE 14 Jun 84		
DES. ENG.	DATE 7-25-84		
RESP. ENG.	DATE 7-25-84	DOCUMENT NUMBER	
MFG. ENG.	DATE 26 July 84	SIZE E CODE VA NUMBER M855-0-0	REV A1
NEXT HIGHER DOC D-DD-M855-0		SCALE 2/1	SHEET 1 OF 1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PT PUBLIC H
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PAG1 PT 0 WRITABLE H
10105 E82
PAG1 PT WRITEABLE H
PAG1 PT 0 SOFTWARE H
PAG1 PT 1 SOFTWARE H
10105 E74
PAG1 PT SOFTWARE H
PAG1 PT 1 CACHE H
PAG1 PT 0 CACHE H
10105 E102
PAG1 PT CACHE L
PT CACHE H
PAG6 PT 0 KEEP H
PAG9 PT 1 MATCH H
10105 E35
10105 E39
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PAG6 PT 1 KEEP H
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PAG3 PT 0 MATCH L
PMA3 PA 26 H
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PAG1 PT 0 26 H
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10117 E16
10117 E22
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10105 E31
PAG1 PT 26 A H
10117 E16
PAG1 PT 26 B H
256 X 4 10422 E88
PT IN 00 H
PAG3 PT 0 EVEN EN A L
PT IN 18 H
PAG3 PT 0 ODD EN A L
PAG9 PT 1 EVEN EN C L
PAG9 PT 1 ODD EN C L
-PAG5 PT ADR 18 A H
-PAG5 PT ADR 19 A H
-PAG5 PT ADR 20 A H
-PAG5 PT ADR 21 A H
-PAG5 PT ADR 22 A H
-PAG5 PT ADR 23 A H
-PAG5 PT ADR 24 A H
-PAG5 PT ADR 25 A H
PAG3 PT 0 WR A L
PAG1 PT 0 ACCESS H
PAG1 PT 1 ACCESS H
256 X 4 10422 E84
PT IN 02 H
PT IN 20 H
PAG1 PT 0 WRITABLE H
PAG1 PT 1 WRITABLE H
256 X 4 10422 E80
PT IN 04 H
PT IN 22 H
PAG1 PT 0 CACHE H
PAG1 PT 1 CACHE H
256 X 4 10422 E69
PT IN 01 H
PAG3 PT 0 EVEN EN B L
PT IN 19 H
PAG3 PT 0 ODD EN B L
PAG9 PT 1 EVEN EN D L
PAG9 PT 1 ODD EN D L
PAG5 PT ADR 20 B H
PAG5 PT ADR 19 B H
PAG5 PT ADR 18 B H
PAG5 PT ADR 21 B H
PAG5 PT ADR 22 B H
PAG5 PT ADR 23 B H
PAG5 PT ADR 24 B H
PAG5 PT ADR 25 B H
PAG3 PT 0 WR B L
PAG1 PT 0 PUBLIC H
PAG1 PT 1 PUBLIC H
256 X 4 10422 E73
PT IN 03 H
PT IN 21 H
PAG1 PT 0 SOFTWARE H
PAG1 PT 1 SOFTWARE H
-PAG3 PT ADR 26 H
PAG3 TB 0 WR TWO H
10102 E8
PAG3 PT ADR 26 H
PAG9 TB 1 WR TWO H
10102 E13
PAG1 PT 1 EV EN 26 L
PAG1 PT 1 OD EN 26 L
256 X 4 10422 E36
PT IN 17 H
PT IN 35 H
PAG5 PT ADR 19 B H
PAG5 PT ADR 18 B H
PAG5 PT ADR 20 B H
PAG5 PT ADR 21 B H
PAG5 PT ADR 22 B H
PAG5 PT ADR 23 B H
PAG5 PT ADR 24 B H
PAG5 PT ADR 25 B H
PAG3 PT 0 WR 26 L
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256 X 4 10422 E37
PAG5 PT ADR 25 D H
PAG3 PT 1 WR 26 L
PAG1 PT 1 26 H
D0 EN 0 D1 EN 1 D2 EN 2 D3 EN 3 ADR WRITE

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 23-JUL-84	ENG. C. KACZOR	DATE 23-JUL-84
CHK'D. D. DELLORCO	DATE 23-JUL-84	BOARD LOCATION: 4AF30	
23-JUL-84 09:03		SHEET 1 OF 1	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0	

TITLE: PAGE TABLE DATA PT ACCESS-PT 17

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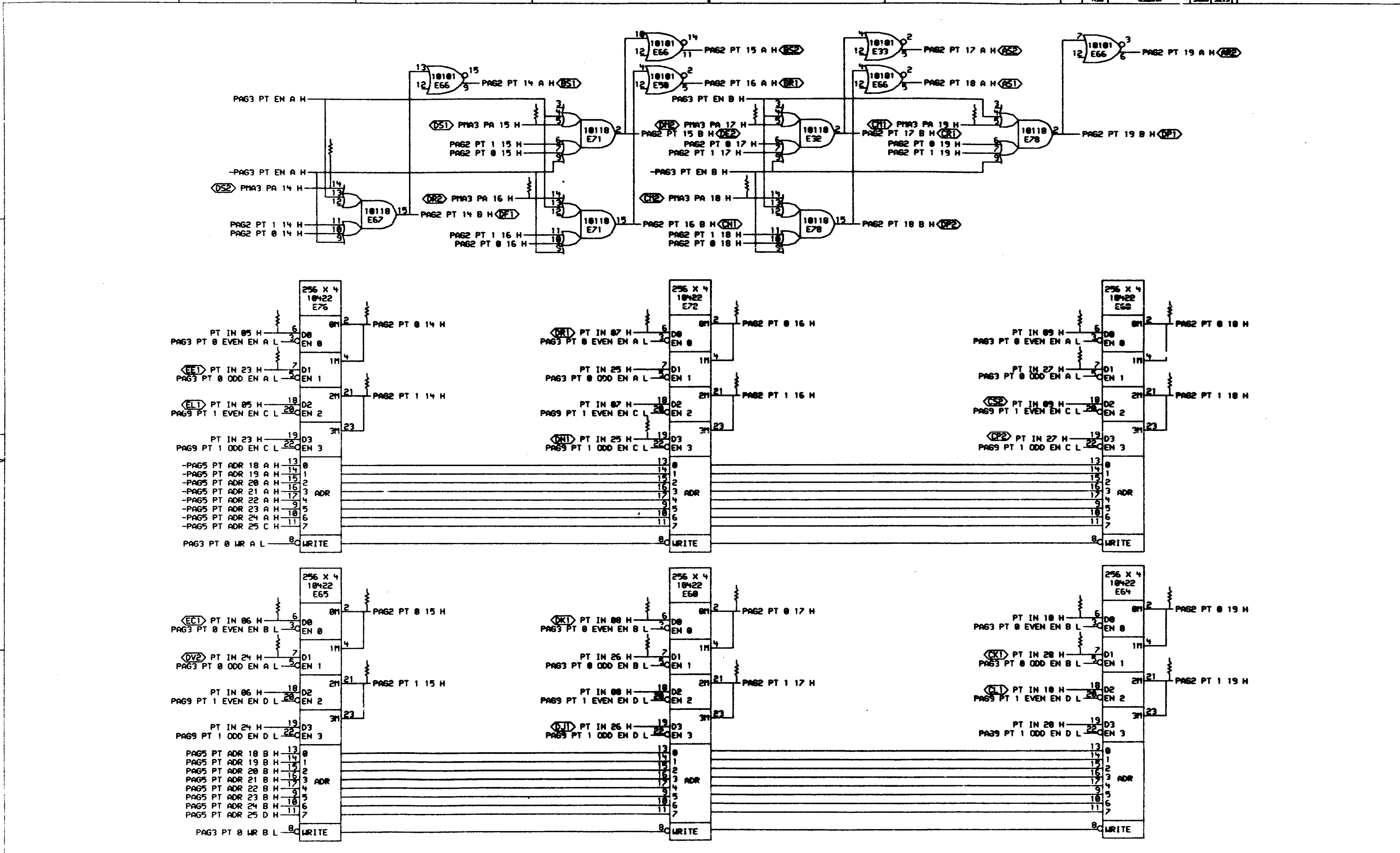


REVISIONS		
CHK	CHANGE NO.	REV

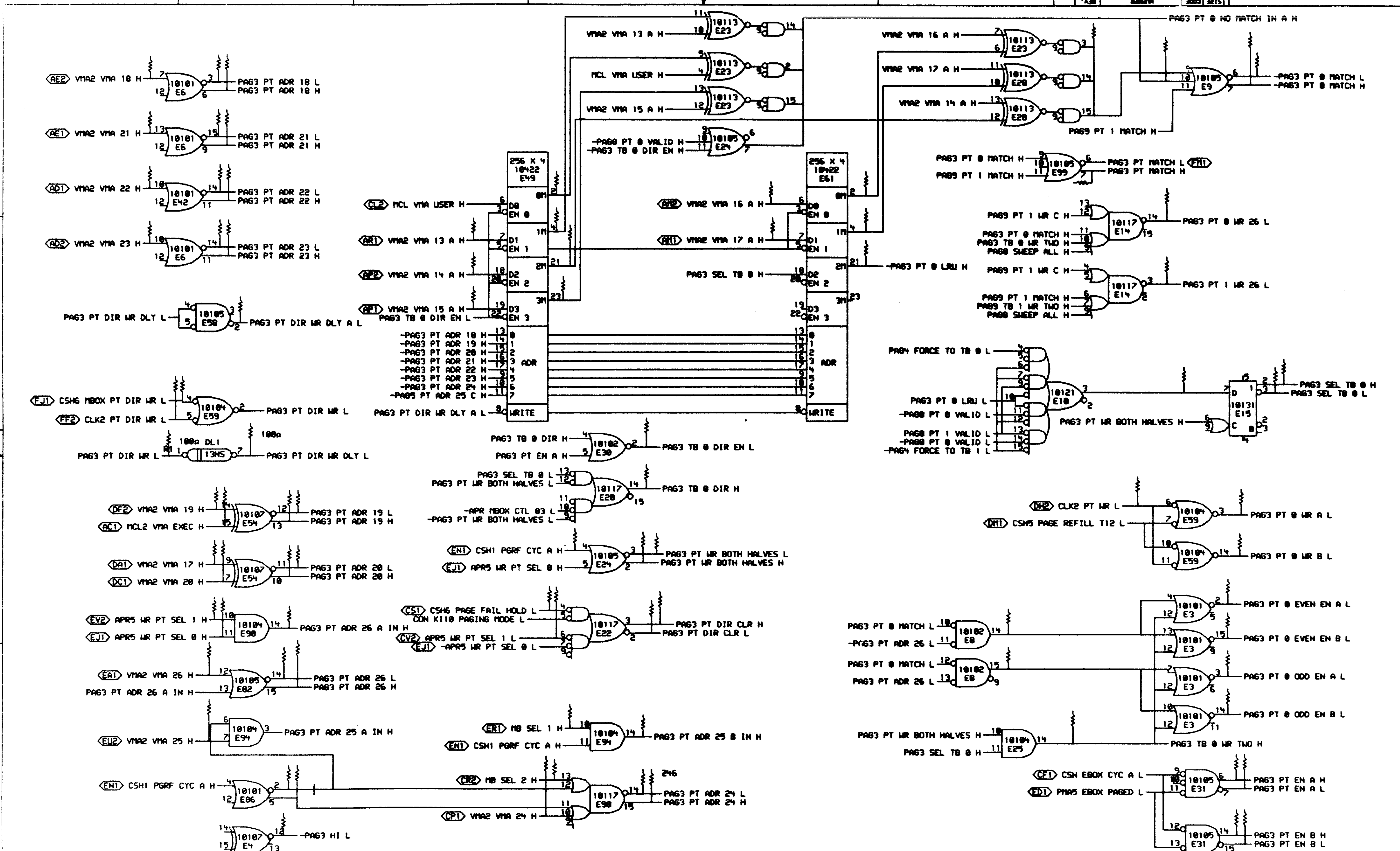
digital

DRN. C. KACZOR — DATE 23-JUL-84
ENG. C. KACZOR — DATE 23-JUL-84
CHK'D D. DELLORCO — DATE 23-JUL-84
BOARD LOCATION: 4AF30
SHEET 1 OF 1
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

PAGE TABLE DATA PT 16 - PT 26

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG2	A1

MRO



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 23-JUL-84	ENG. C. KACZOR	DATE 23-JUL-84
CHK'D. D. DELLORCO	DATE 23-JUL-84	BOARD LOCATION: 4AF30	SHEET 1 OF 1
23-JUL-84 09:04		NEXT HIGHER ASSEMBLY: D-DD-M855-0	
FIRST USED ON OPTION/MODEL: MCA25			

TITLE: PAGE TABLE DIRECTORY

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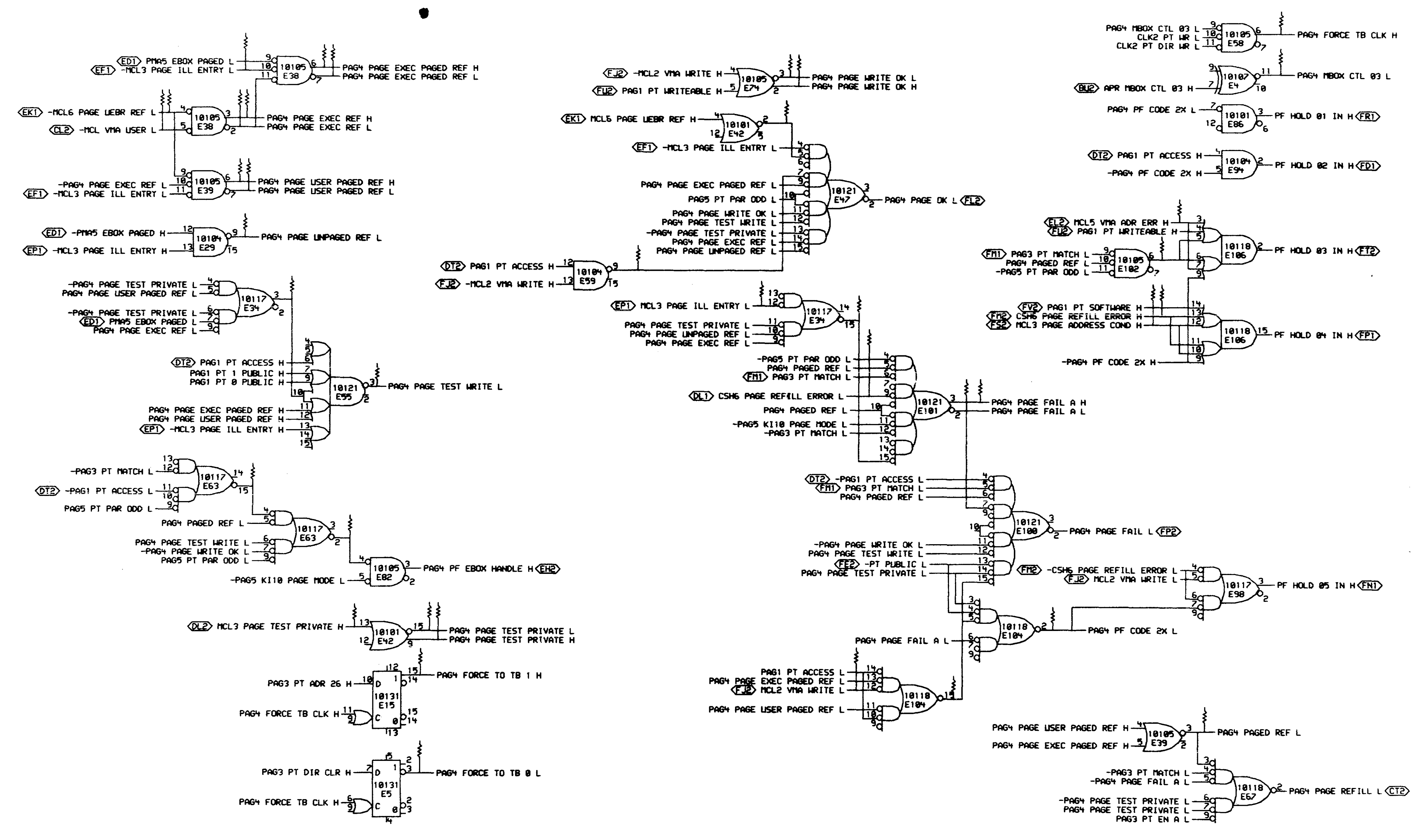
MRO

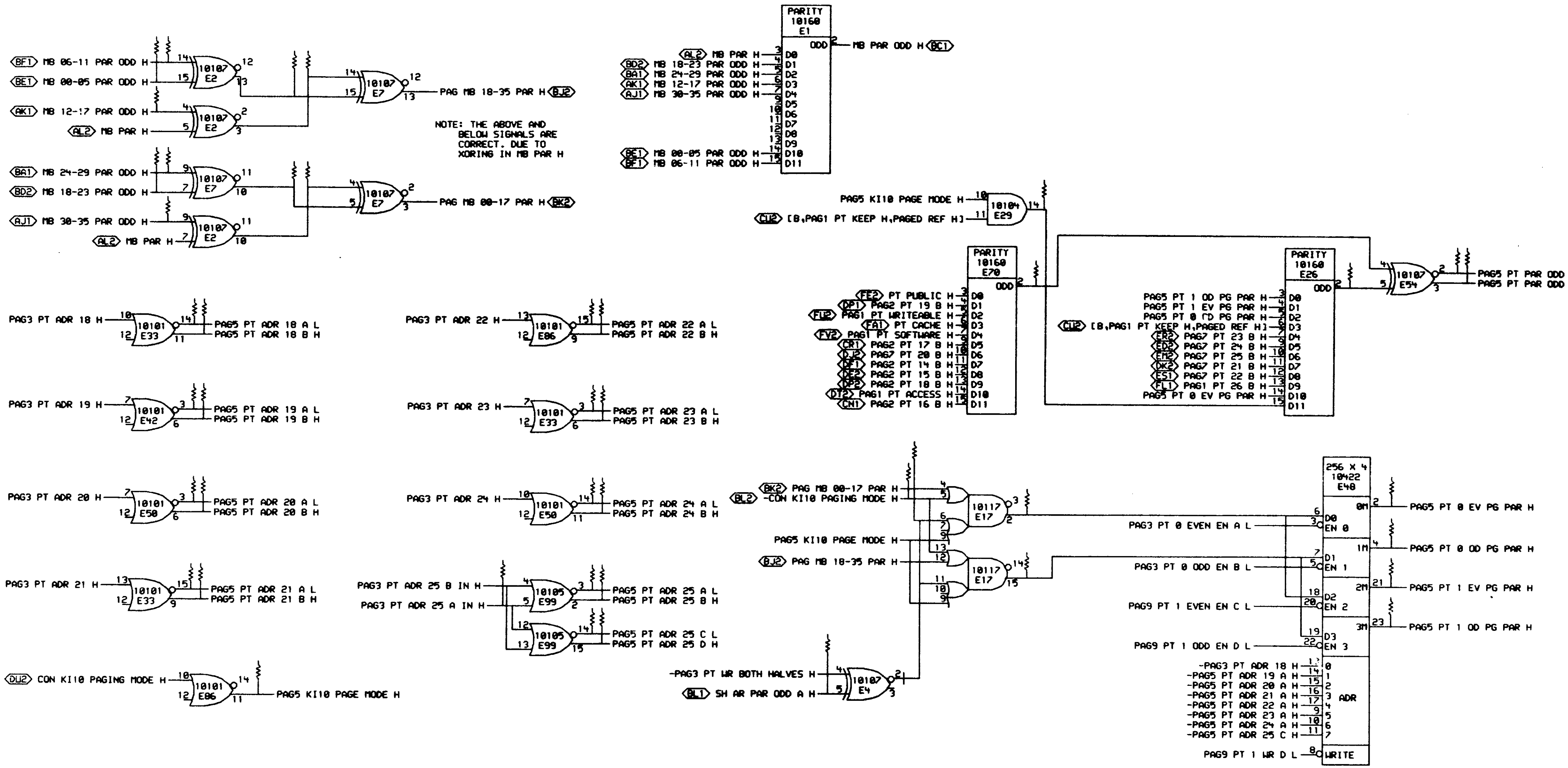


REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 23-JUL-84	ENG. C. KACZOR	DATE 23-JUL-84	TITLE: PAGE TABLE CONTROL LOGIC
CHK'D D. DELLORCO	DATE 23-JUL-84	BOARD LOCATION: 4AF30	SHEET 1 OF 1	
XTRA:(MCA25.M8520.TAPE)PAG4.DRW 23-JUL-84 09:04		NEXT HIGHER ASSEMBLY: D-DD-M855-0		SIZE D CODE CS NUMBER M855-0-PAG4 REV. A1
FIRST USED ON OPTION/MODEL: MCA25				

1 MRO



REVISIONS		
CHK	CHANGE NO.	REV

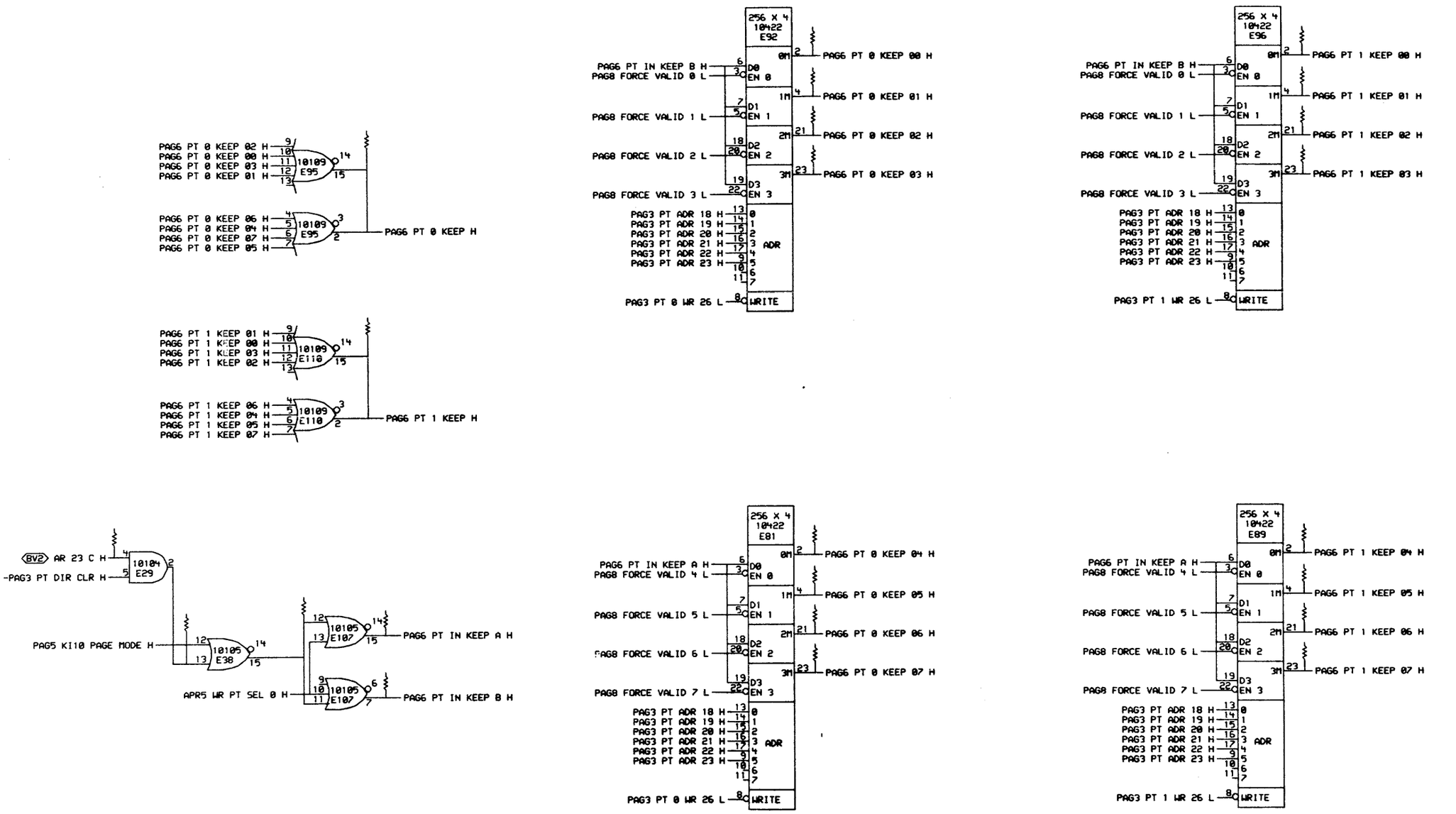
digital

DRN. C. KACZOR — DATE 02-AUG-84
CHK'D. D. DELLORCO — DATE 02-AUG-84
ENG. C. KACZOR — DATE 02-AUG-84
BOARD LOCATION: 4AF30
SHEET 1 OF 1
XTRA1<MCA25.M8520.TAPE>EPAG5.DRW 02-AUG-84 15:15
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PAGE TABLE PARITY LOGIC

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG5	A1

1 MRO



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 23-JUL-84	ENG. C. KACZOR	DATE 23-JUL-84
CHK'D. D. DELLORCO	DATE 23-JUL-84	BOARD LOCATION: 4AF30	
XTRA1:<MCA25.M8520.TAPE>2PAG6.DMU 23-JUL-84 09:05		SHEET 1 OF 1	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0	

TITLE: PAGING
KEEP BIT SELECTION

SIZE	CODE	NUMBER	REV.
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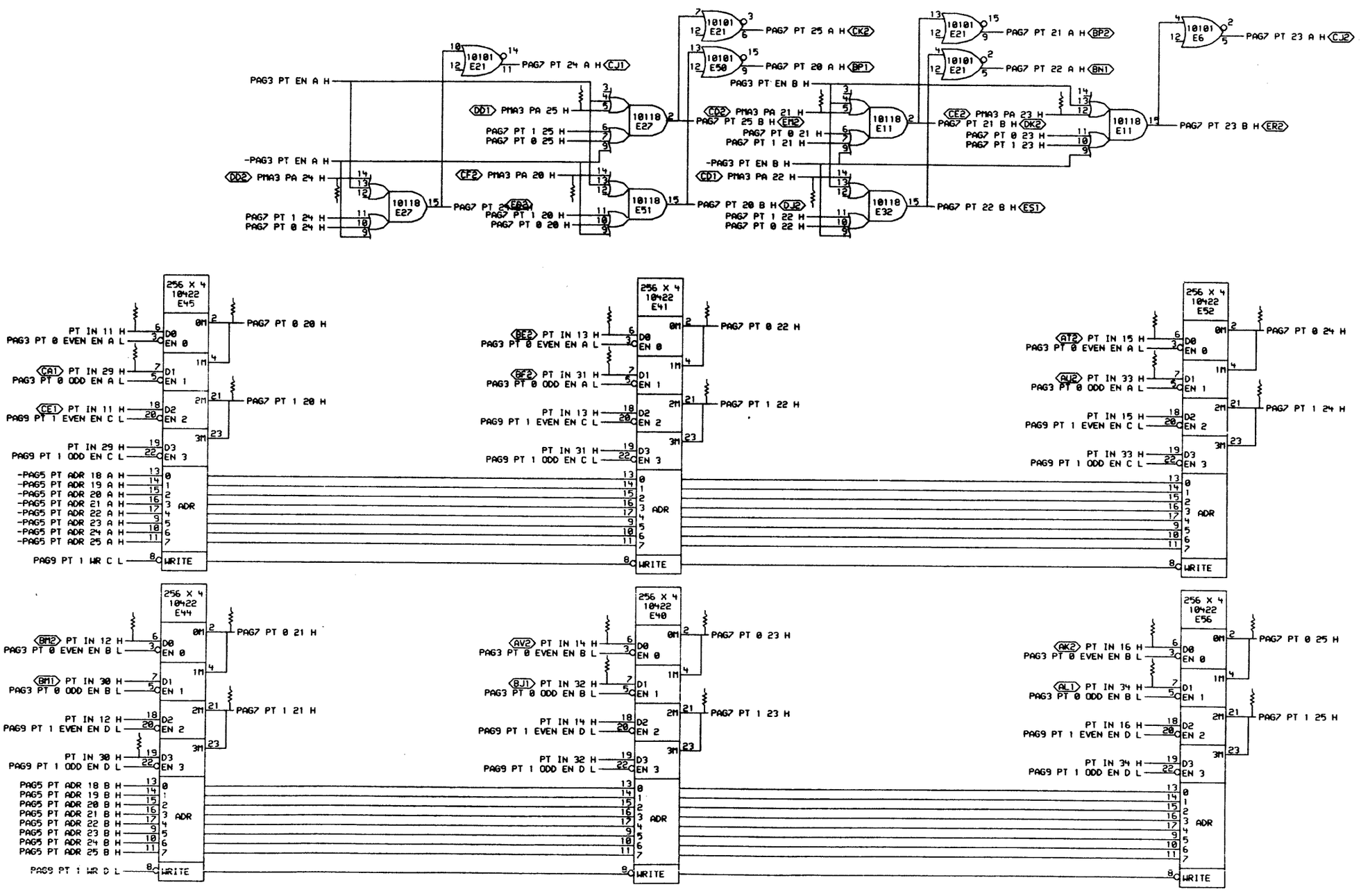
MRO



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REVISIONS		
CHK	CHANGE NO.	REV

digital

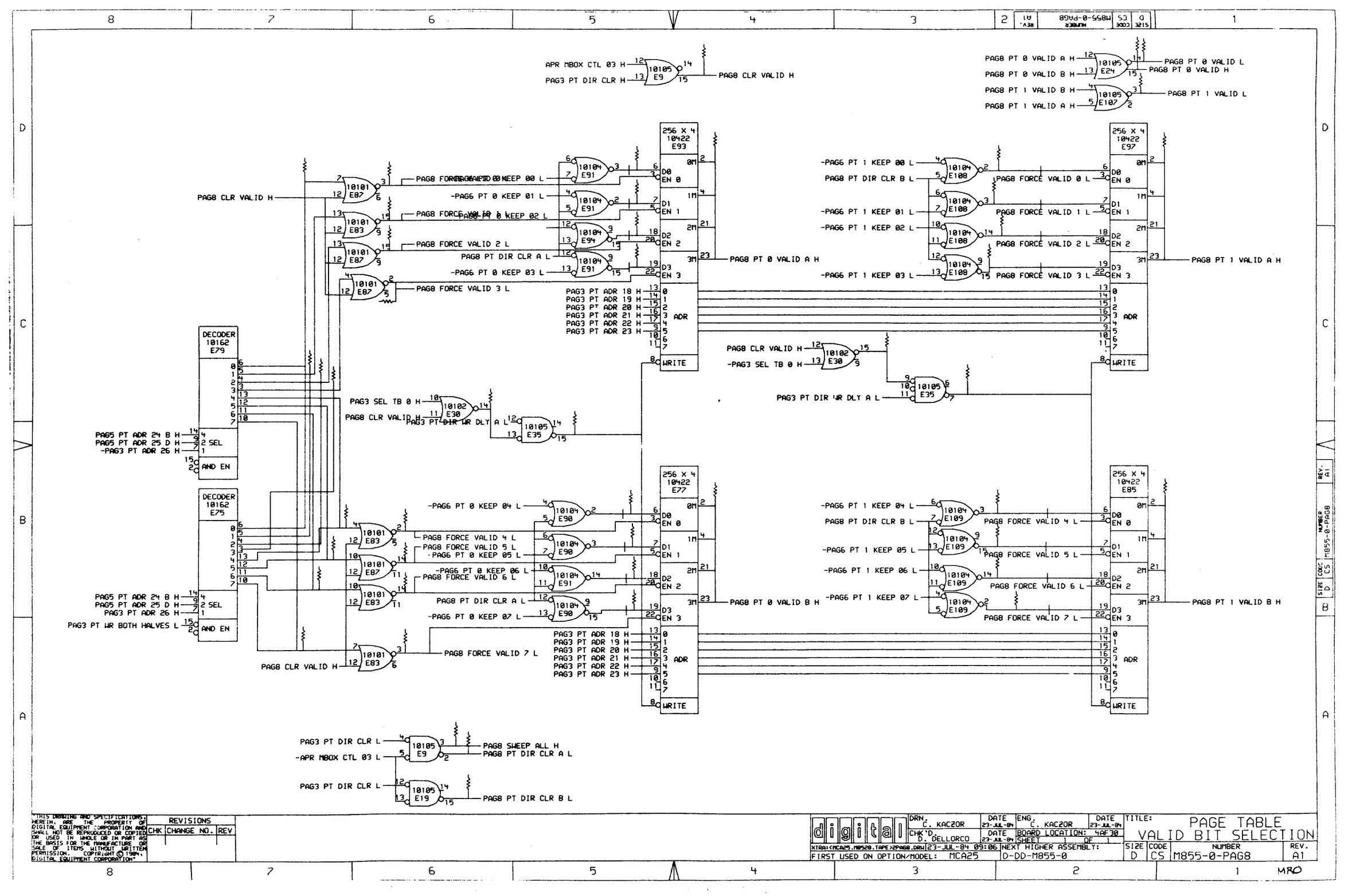
DRN. C. KACZOR — DATE 23-JUL-84
CHK'D D. DELLORCO — DATE 23-JUL-84
ENG. C. KACZOR — DATE 23-JUL-84
BOARD LOCATION: 4AF30
SHEET 1 OF 1

XTRA1:<MCA25.M8520.TAPE>2PAG7.DBU 23-JUL-84 09:05
FIRST USED ON OPTION/MODEL: MCA25
NEXT HIGHER ASSEMBLY: D-DD-M855-0

TITLE: PAGE TABLE DATA PT 20 - 25

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG7	A1

NRO



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REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 23-JUL-84	ENG. C. KACZOR	DATE 23-JUL-84
CHK'D. D. DELLORCO	DATE 23-JUL-84	BOARD LOCATION: 4AF30	
XTRA1:<MCA25.M8520.TAPE>2PAG8.DRW 23-JUL-84 09:06		SHEET 1 OF 1	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0	

TITLE: PAGE TABLE VALID BIT SELECTION

SIZE	CODE	NUMBER	REV.
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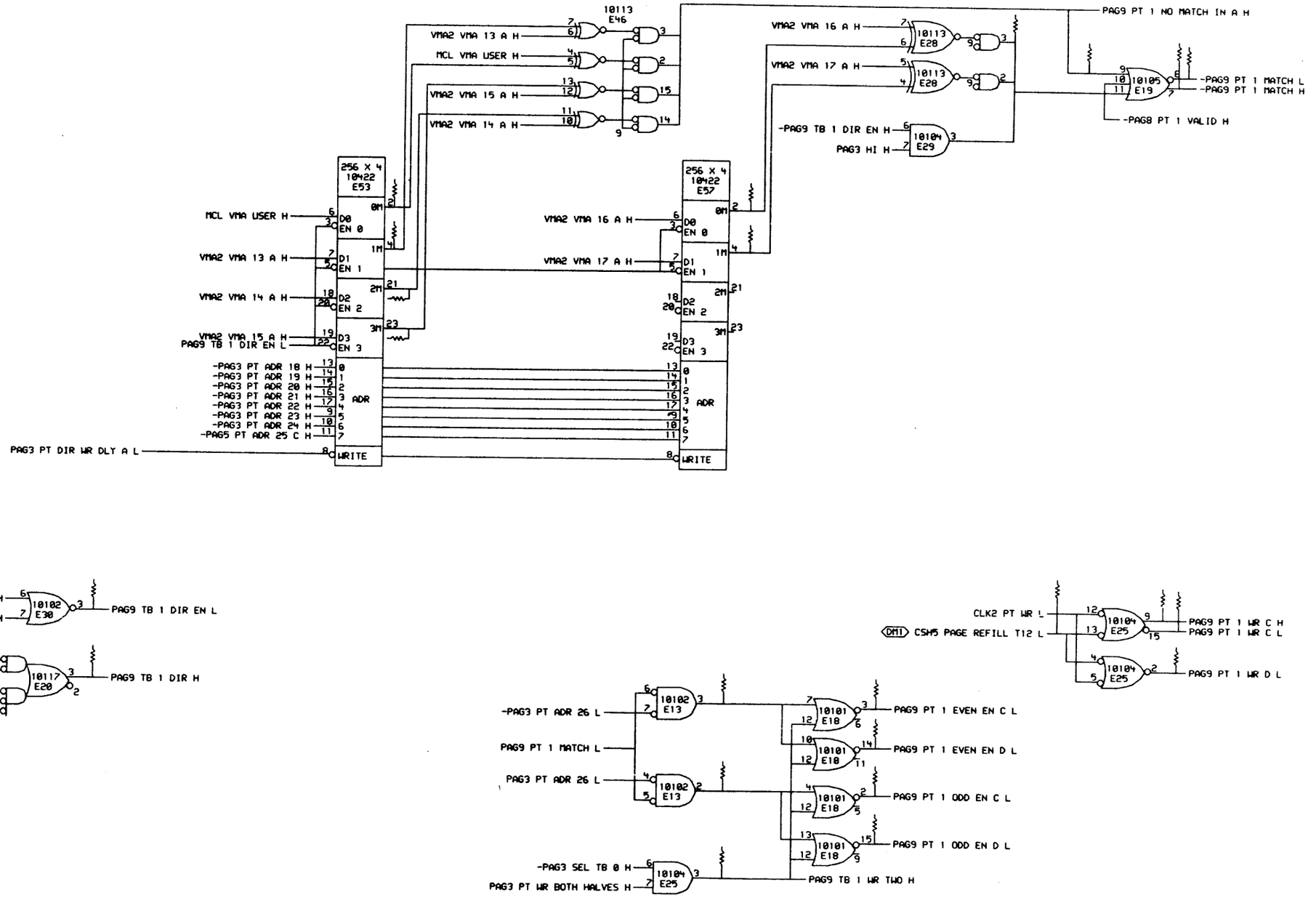
MRO



REVISIONS		
CHK	CHANGE NO.	REV

digital

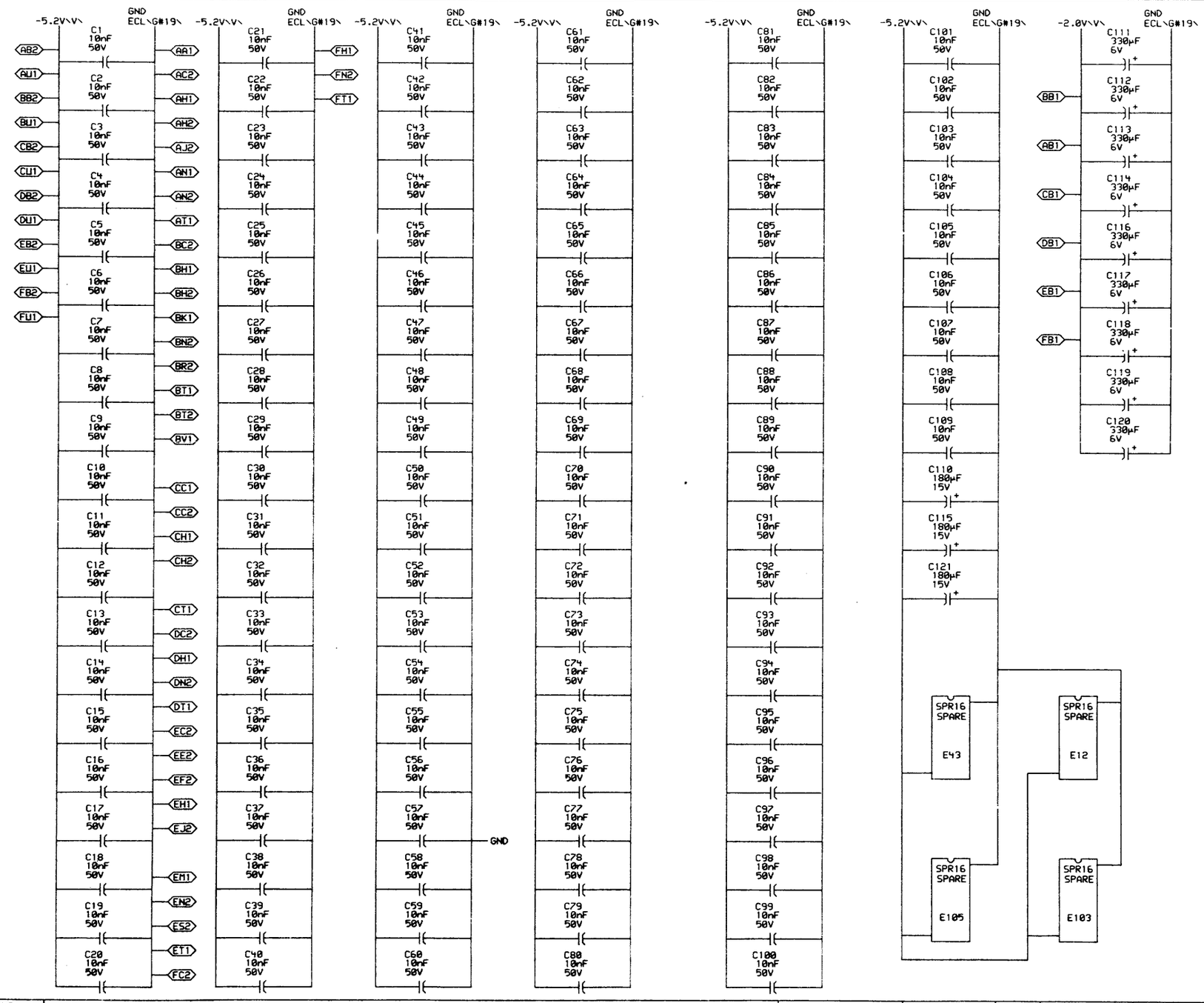
DRN. C. KACZOR	DATE 23-JUL-84	ENG. C. KACZOR	DATE 23-JUL-84
CHK'D. D. DELLORCO	DATE 23-JUL-84	BOARD LOCATION: 4AF30	
		SHEET 1 OF 1	

XTRA1:<MCA25.MP520.TAPE>2PAG9.DRW 23-JUL-84 09:06 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MCA25 D-DD-M855-0

TITLE: PAGE TABLE 1 DIRECTORY

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG9	A1

MRC



REVISIONS		
CHK	CHANGE NO.	REV

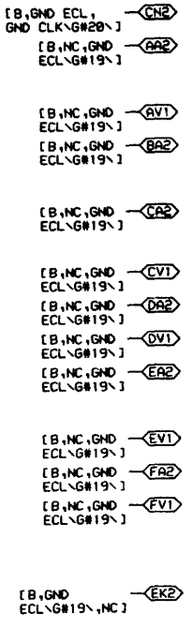
digital

DRN: C. KACZOR DATE 23-JUL-84
CHK: D. DELLORCO DATE 23-JUL-84
ENG. C. KACZOR DATE 23-JUL-84
BOARD LOCATION: 4AF30
SHEET 1 OF 1
XTRA1: (MCA25.M8520.TAPE)2PAGA.DRW 23-JUL-84 09:06
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PAGING BOARD POWER, GND, CAP

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAGA	A1

MRO



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR 23-JUL-84
CHK'D D. DELLORCO 23-JUL-84
ENG. C. KACZOR 23-JUL-84
BOARD LOCATION: 4AF30
SHEET 1 OF 1
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25
XTRA1:<MCA25.MB320.TAPE>2PAGB.DAU 23-JUL-84 09:07

TITLE: PAGING BOARD GND

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAGB	A1

MRO

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z12(3)	PAG3	C2	68Ω	%E10(3)
Z53(8)	PAG4	C2	68Ω	%E102(6)
Z59(3)	PAG4	A3	68Ω	%E104(15)
Z52(5)	PAG8	C2	68Ω	%E108(14)
Z27(6)	PAG8	C3	68Ω	%E108(15)
Z27(10)	PAG8	D2	68Ω	%E108(2)
Z52(8)	PAG8	D2	68Ω	%E108(3)
Z16(5)	PAG8	B2	68Ω	%E109(14)
Z16(8)	PAG8	B2	68Ω	%E109(15)
Z16(6)	PAG8	B2	68Ω	%E109(2)
Z51(8)	PAG8	B2	68Ω	%E109(3)
Z67(10)	PAG9	A4	68Ω	%E13(2)
Z71(5)	PAG9	A4	68Ω	%E13(3)
Z41(10)	PAG1	D3	68Ω	%E16(14)
Z30(3)	PAG5	B3	68Ω	%E17(15)
Z56(1)	PAG5	B3	68Ω	%E17(2)
Z10(3)	PAG1	D3	68Ω	%E19(3)
Z38(1)	PAG5	C7	68Ω	%E2(10)
Z39(6)	PAG5	D7	68Ω	%E2(13)
Z39(8)	PAG5	D7	68Ω	%E2(3)
Z40(3)	PAG1	C3	68Ω	%E22(14)
Z66(6)	PAG3	D2	68Ω	%E23(3)
Z69(5)	PAG5	C2	68Ω	%E26(2)
Z12(5)	FAG9	D2	68Ω	%E28(2)
Z40(5)	PAG5	D3	68Ω	%E29(14)
Z36(3)	PAG6	B7	68Ω	%E29(2)
Z29(8)	PAG8	C6	68Ω	%E30(14)
Z11(10)	PAG8	C3	68Ω	%E30(15)
Z2(8)	PAG4	C4	68Ω	%E34(15)
Z68(1)	PAG4	C7	68Ω	%E34(3)
Z27(1)	PAG8	B5	68Ω	%E35(15)
Z10(1)	PAG1	D3	68Ω	%E35(3)
Z27(8)	PAG8	C3	68Ω	%E35(7)
Z24(10)	PAG6	B7	68Ω	%E38(15)
Z38(10)	PAG5	B4	68Ω	%E4(2)
Z9(6)	PAG4	D4	68Ω	%E42(2)
Z35(1)	PAG3	D5	68Ω	%E49(2)
Z35(3)	PAG3	C5	68Ω	%E49(21)
Z71(1)	PAG3	C5	68Ω	%E49(23)
Z71(6)	PAG3	C5	68Ω	%E49(4)

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z23(5)	PAG9	C5	68Ω	%E53(2)
Z23(1)	PAG9	C5	68Ω	%E53(21)
Z23(3)	PAG9	C5	68Ω	%E53(23)
Z46(6)	PAG9	C5	68Ω	%E53(4)
Z34(3)	PAG9	C4	68Ω	%E57(2)
Z35(5)	PAG9	C4	68Ω	%E57(4)
Z49(5)	PAG4	C5	68Ω	%E59(9)
Z35(6)	PAG3	D4	68Ω	%E61(2)
Z34(1)	PAG3	C4	68Ω	%E61(4)
Z7(6)	PAG4	B7	68Ω	%E63(15)
Z61(3)	PAG4	B6	68Ω	%E63(2)
Z38(3)	PAG5	C7	68Ω	%E7(10)
Z21(1)	PAG5	C3	68Ω	%E70(2)
Z60(3)	PAG8	A7	68Ω	%E75(10)
Z45(10)	PAG8	B7	68Ω	%E75(11)
Z60(5)	PAG8	B7	68Ω	%E75(12)
Z4(5)	PAG8	B6	68Ω	%E75(13)
Z4(10)	PAG8	C7	68Ω	%E75(3)
Z4(8)	PAG8	C7	68Ω	%E75(4)
Z4(1)	PAG8	C7	68Ω	%E75(5)
Z60(6)	PAG8	D7	68Ω	%E75(6)
Z66(1)	PAG3	B3	68Ω	%E8(14)
Z66(5)	PAG3	A3	68Ω	%E8(15)
Z57(3)	PAG1	B3	68Ω	%E8(2)
Z57(5)	PAG1	A3	68Ω	%E8(3)
Z44(10)	PAG3	A7	68Ω	%E86(2)
Z17(10)	PAG3	A7	68Ω	%E86(5)
Z63(6)	PAG8	B5	68Ω	%E90(15)
Z63(8)	PAG8	B5	68Ω	%E90(2)
Z63(10)	PAG8	B5	68Ω	%E90(3)
Z62(8)	PAG8	B5	68Ω	%E91(14)
Z15(10)	PAG8	C5	68Ω	%E91(15)
Z27(3)	PAG8	D5	68Ω	%E91(2)
Z52(3)	PAG8	D5	68Ω	%E91(3)
Z14(10)	PAG8	C5	68Ω	%E94(15)
Z11(5)	PAG3	B7	68Ω	APR5 WR PT SEL 0 H
Z51(1)	PAG3	B7	68Ω	APR5 WR PT SEL 1 H
Z37(5)	PAG3	B5	68Ω	-APR5 WR PT SEL 1 H
Z36(1)	PAG6	B7	68Ω	AR 23 C H
Z47(1)	PAG3	C7	68Ω	-CLK2 PT DIR WR H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z12(8)	PAG3	B2	68Ω	-CLK2 PT WR H
Z38(6)	PAG5	B4	68Ω	-CON KI10 PAGING MODE H
Z11(3)	PAG3	B5	68Ω	CSH1 PGRF CYC A H
Z31(8)	PAG9	B2	68Ω	-CSH5 PAGE REFILL T12 H
Z7(3)	PAG3	C7	68Ω	-CSH6 MBOX PT DIR WR H
Z37(3)	PAG3	B5	68Ω	-CSH6 PAGE FAIL HOLD H
Z58(1)	PAG4	C2	68Ω	CSH6 PAGE REFILL ERROR H
Z58(3)	PAG4	C4	68Ω	-CSH6 PAGE REFILL ERROR H
Z39(1)	PAG5	D8	68Ω	MB 00-05 PAR ODD H
Z39(3)	PAG5	D7	68Ω	MB 06-11 PAR ODD H
Z39(5)	PAG5	D8	68Ω	MB 12-17 PAR ODD H
Z38(5)	PAG5	C8	68Ω	MB 18-23 PAR ODD H
Z39(10)	PAG5	C7	68Ω	MB 24-29 PAR ODD H
Z42(1)	PAG5	C7	68Ω	MB 30-35 PAR ODD H
Z51(5)	PAG3	A5	68Ω	MB SEL 1 H
Z17(8)	PAG3	A5	68Ω	MB SEL 2 H
Z71(8)	PAG4	D8	68Ω	MCL VMA USER H
Z69(3)	PAG3	B7	68Ω	MCL2 VMA EXEC H
Z7(1)	PAG4	A4	68Ω	-MCL2 VMA WRITE H
Z24(6)	PAG4	C2	68Ω	MCL3 PAGE ADDRESS COND H
Z9(5)	PAG4	D7	68Ω	MCL3 PAGE ILL ENTRY H
Z11(6)	PAG4	C4	68Ω	-MCL3 PAGE ILL ENTRY H
Z36(6)	PAG4	B6	68Ω	MCL3 PAGE TEST PRIVATE H
Z53(10)	PAG4	C2	68Ω	MCL5 VMA ADR ERR H
Z48(1)	PAG4	D7	68Ω	MCL6 PAGE UEBR REF H
Z41(8)	PAG1	B2	68Ω	PAG1 PT 0 26 H
Z43(1)	PAG1	C7	68Ω	PAG1 PT 0 ACCESS H
Z59(8)	PAG1	C3	68Ω	PAG1 PT 0 CACHE H
Z68(3)	PAG1	B7	68Ω	PAG1 PT 0 PUBLIC H
Z19(10)	PAG1	B5	68Ω	PAG1 PT 0 SOFTWARE H
Z62(5)	PAG1	C5	68Ω	PAG1 PT 0 WRITABLE H
Z37(1)	PAG1	B1	68Ω	PAG1 PT 1 26 H
Z59(10)	PAG1	C7	68Ω	PAG1 PT 1 ACCESS H
Z59(6)	PAG1	C3	68Ω	PAG1 PT 1 CACHE H
Z35(10)	PAG1	A3	68Ω	-PAG1 PT 1 EV EN 26 H
Z46(1)	PAG1	A3	68Ω	-PAG1 PT 1 OD EN 26 H
Z68(6)	PAG1	A7	68Ω	PAG1 PT 1 PUBLIC H
Z19(8)	PAG1	A5	68Ω	PAG1 PT 1 SOFTWARE H
Z62(3)	PAG1	C5	68Ω	PAG1 PT 1 WRITABLE H
Z43(3)	PAG1	D7	68Ω	-PAG1 PT ACCESS H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z47(10)	PAG2	C6	68Ω	PAG2 PT 0 14 H
Z65(8)	PAG2	B6	68Ω	PAG2 PT 0 15 H
Z65(6)	PAG2	C4	68Ω	PAG2 PT 0 16 H
Z32(8)	PAG2	B4	68Ω	PAG2 PT 0 17 H
Z50(5)	PAG2	C2	68Ω	PAG2 PT 0 18 H
Z50(10)	PAG2	B2	68Ω	PAG2 PT 0 19 H
Z7(8)	PAG2	C6	68Ω	PAG2 PT 1 14 H
Z65(10)	PAG2	A6	68Ω	PAG2 PT 1 15 H
Z6(6)	PAG2	C4	68Ω	PAG2 PT 1 16 H
Z32(1)	PAG2	A4	68Ω	PAG2 PT 1 17 H
Z50(3)	PAG2	C2	68Ω	PAG2 PT 1 18 H
Z50(8)	PAG2	A2	68Ω	PAG2 PT 1 19 H
Z71(10)	PAG3	A7	68Ω	PAG3 HI H
Z14(5)	PAG3	B2	68Ω	-PAG3 PT 0 EVEN EN A H
Z63(1)	PAG3	B2	68Ω	-PAG3 PT 0 EVEN EN B H
Z13(6)	PAG3	C4	68Ω	-PAG3 PT 0 LRU H
Z44(8)	PAG3	D1	68Ω	PAG3 PT 0 MATCH H
Z40(1)	PAG3	D1	68Ω	-PAG3 PT 0 MATCH H
Z66(10)	PAG3	D2	68Ω	PAG3 PT 0 NO MATCH IN A H
Z15(3)	PAG3	A2	68Ω	-PAG3 PT 0 ODD EN A H
Z63(3)	PAG3	A2	68Ω	-PAG3 PT 0 ODD EN B H
Z16(3)	PAG3	D2	68Ω	-PAG3 PT 0 WR 26 H
Z14(1)	PAG3	B1	68Ω	-PAG3 PT 0 WR A H
Z63(5)	PAG3	B1	68Ω	-PAG3 PT 0 WR B H
Z53(6)	PAG3	C2	68Ω	-PAG3 PT 1 WR 26 H
Z14(6)	PAG3	D7	68Ω	PAG3 PT ADR 18 H
Z30(10)	PAG3	D7	68Ω	-PAG3 PT ADR 18 H
Z24(3)	PAG3	B7	68Ω	PAG3 PT ADR 19 H
Z30(8)	PAG3	B7	68Ω	-PAG3 PT ADR 19 H
Z14(8)	PAG3	B7	68Ω	PAG3 PT ADR 20 H
Z20(6)	PAG3	B7	68Ω	-PAG3 PT ADR 20 H
Z15(8)	PAG3	D7	68Ω	PAG3 PT ADR 21 H
Z64(1)	PAG3	D7	68Ω	-PAG3 PT ADR 21 H
Z27(5)	PAG3	D7	68Ω	PAG3 PT ADR 22 H
Z20(8)	PAG3	D7	68Ω	-PAG3 PT ADR 22 H
Z53(5)	PAG3	C7	68Ω	PAG3 PT ADR 23 H
Z64(5)	PAG3	C7	68Ω	-PAG3 PT ADR 23 H
Z46(8)	PAG3	A5	68Ω	PAG3 PT ADR 24 H
Z70(5)	PAG3	A5	68Ω	-PAG3 PT ADR 24 H
Z2(3)	PAG5	B6	68Ω	PAG3 PT ADR 25 A IN H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS:

CHK	CHANGE NO.	REV

digital

DRN. C.KACZOR DATE 02-AUG-84
CHK'D. D.DELLORCO DATE 02-AUG-84
ENG C.KACZOR DATE 02-AUG-84
BOARD LOCATION:
SHEET 1 OF 3
XTRA1:<MCA25.M9520.TAPE>M9551.DRW 02-AUG-84 12:14
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: MULTIWIRE PAGER TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-RES	A1

MRO

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z2(5)	PAG3	A5	68Ω	PAG3 PT ADR 25 B IN H
Z62(5)	PAG3	A7	68Ω	PAG3 PT ADR 26 H
Z66(8)	PAG3	A7	68Ω	-PAG3 PT ADR 26 H
Z58(1)	PAG3	B7	68Ω	PAG3 PT ADR 26 A IN H
Z13(3)	PAG3	B5	68Ω	PAG3 PT DIR CLR H
Z13(10)	PAG3	B5	68Ω	-PAG3 PT DIR CLR H
R2(1)	PAG3	B7	100Ω	-PAG3 PT DIR WR H
R1(1)	PAG3	B7	100Ω	-PAG3 PT DIR WR DLY H
Z29(6)	PAG3	C7	68Ω	-PAG3 PT DIR WR DLY A H
Z6(8)	PAG3	A1	68Ω	PAG3 PT EN A H
Z65(5)	PAG3	A1	68Ω	-PAG3 PT EN A H
Z45(6)	PAG3	A1	68Ω	PAG3 PT EN B H
Z58(6)	PAG3	A1	68Ω	-PAG3 PT EN B H
Z7(5)	PAG3	D2	68Ω	PAG3 PT MATCH H
Z31(1)	PAG3	B5	68Ω	PAG3 PT WR BOTH HALVES H
Z5(1)	PAG3	B5	68Ω	-PAG3 PT WR BOTH HALVES H
Z20(10)	PAG3	C1	68Ω	PAG3 SEL TB 0 H
Z29(3)	PAG3	C1	68Ω	-PAG3 SEL TB 0 H
Z29(5)	PAG3	B5	68Ω	PAG3 TB 0 DIR H
Z64(3)	PAG3	B5	68Ω	-PAG3 TB 0 DIR EN H
Z66(3)	PAG3	A2	68Ω	PAG3 TB 0 WR TWO H
Z33(1)	PAG4	D1	68Ω	PAG4 FORCE TB CLK H
Z33(8)	PAG4	A6	68Ω	-PAG4 FORCE TO TB 0 H
Z33(3)	PAG4	A6	68Ω	PAG4 FORCE TO TB 1 H
Z20(1)	PAG4	D1	68Ω	-PAG4 MBOX CTL 03 H
Z68(5)	PAG4	D7	68Ω	PAG4 PAGE EXEC PAGED REF H
Z25(3)	PAG4	D7	68Ω	-PAG4 PAGE EXEC PAGED REF H
Z48(3)	PAG4	D7	68Ω	PAG4 PAGE EXEC REF H
Z9(1)	PAG4	D7	68Ω	-PAG4 PAGE EXEC REF H
Z6(1)	PAG4	C3	68Ω	PAG4 PAGE FAIL A H
Z25(6)	PAG4	C3	68Ω	-PAG4 PAGE FAIL A H
Z65(3)	PAG4	B6	68Ω	PAG4 PAGE TEST PRIVATE H
Z25(5)	PAG4	B6	68Ω	-PAG4 PAGE TEST PRIVATE H
Z59(1)	PAG4	C6	68Ω	-PAG4 PAGE TEST WRITE H
Z9(3)	PAG4	C7	68Ω	-PAG4 PAGE UNPAGED REF H
Z8(3)	PAG4	D7	68Ω	PAG4 PAGE USER PAGED REF H
Z25(1)	PAG4	D7	68Ω	-PAG4 PAGE USER PAGED REF H
Z59(5)	PAG4	D4	68Ω	PAG4 PAGE WRITE OK H
Z49(1)	PAG4	D4	68Ω	-PAG4 PAGE WRITE OK H
Z52(1)	PAG4	A2	68Ω	-PAG4 PAGED REF H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z62(10)	PAG4	B3	68Ω	-PAG4 PF CODE 2X H
Z38(8)	PAG5	A7	68Ω	PAG5 KI10 PAGE MODE H
Z40(6)	PAG5	B1	68Ω	PAG5 PT 0 EV PG PAR H
Z57(1)	PAG5	B1	68Ω	PAG5 PT 0 OD PG PAR H
Z40(10)	PAG5	B1	68Ω	PAG5 PT 1 EV PG PAR H
Z40(8)	PAG5	B1	68Ω	PAG5 PT 1 OD PG PAR H
Z26(3)	PAG5	C7	68Ω	-PAG5 PT ADR 18 A H
Z18(3)	PAG5	C7	68Ω	PAG5 PT ADR 18 B H
Z54(5)	PAG5	B7	68Ω	-PAG5 PT ADR 19 A H
Z28(6)	PAG5	B7	68Ω	PAG5 PT ADR 19 B H
Z26(5)	PAG5	B7	68Ω	-PAG5 PT ADR 20 A H
Z28(8)	PAG5	B7	68Ω	PAG5 PT ADR 20 B H
Z54(6)	PAG5	B7	68Ω	-PAG5 PT ADR 21 A H
Z18(5)	PAG5	B7	68Ω	PAG5 PT ADR 21 B H
Z46(5)	PAG5	C5	68Ω	-PAG5 PT ADR 22 A H
Z34(8)	PAG5	C5	68Ω	PAG5 PT ADR 22 B H
Z16(10)	PAG5	B5	68Ω	-PAG5 PT ADR 23 A H
Z62(6)	PAG5	B5	68Ω	PAG5 PT ADR 23 B H
Z26(8)	PAG5	B5	68Ω	-PAG5 PT ADR 24 A H
Z5(3)	PAG5	B5	68Ω	PAG5 PT ADR 24 B H
Z22(8)	PAG5	B5	68Ω	-PAG5 PT ADR 25 A H
Z57(6)	PAG5	B5	68Ω	PAG5 PT ADR 25 B H
Z64(6)	PAG5	A5	68Ω	-PAG5 PT ADR 25 C H
Z22(3)	PAG5	A5	68Ω	PAG5 PT ADR 25 D H
Z2(10)	PAG5	C1	68Ω	PAG5 PT PAR ODD H
Z49(3)	PAG5	C2	68Ω	-PAG5 PT PAR ODD H
Z29(10)	PAG6	D6	68Ω	PAG6 PT 0 KEEP H
Z44(1)	PAG6	D4	68Ω	PAG6 PT 0 KEEP 00 H
Z3(5)	PAG6	D4	68Ω	PAG6 PT 0 KEEP 01 H
Z44(3)	PAG6	D4	68Ω	PAG6 PT 0 KEEP 02 H
Z3(1)	PAG6	C4	68Ω	PAG6 PT 0 KEEP 03 H
Z3(10)	PAG6	B4	68Ω	PAG6 PT 0 KEEP 04 H
Z44(5)	PAG6	B4	68Ω	PAG6 PT 0 KEEP 05 H
Z3(8)	PAG6	B4	68Ω	PAG6 PT 0 KEEP 06 H
Z44(6)	PAG6	A4	68Ω	PAG6 PT 0 KEEP 07 H
Z12(6)	PAG6	C6	68Ω	PAG6 PT 1 KEEP H
Z43(8)	PAG6	D1	68Ω	PAG6 PT 1 KEEP 00 H
Z43(6)	PAG6	D1	68Ω	PAG6 PT 1 KEEP 01 H
Z1(6)	PAG6	D1	68Ω	PAG6 PT 1 KEEP 02 H
Z43(5)	PAG6	C1	68Ω	PAG6 PT 1 KEEP 03 H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z1(8)	PAG6	B1	68Ω	PAG6 PT 1 KEEP 04 H
Z25(10)	PAG6	B1	68Ω	PAG6 PT 1 KEEP 05 H
Z1(10)	PAG6	B1	68Ω	PAG6 PT 1 KEEP 06 H
Z43(10)	PAG6	A1	68Ω	PAG6 PT 1 KEEP 07 H
Z16(1)	PAG6	B6	68Ω	PAG6 PT IN KEEP A H
Z53(1)	PAG6	A6	68Ω	PAG6 PT IN KEEP B H
Z49(8)	PAG7	C7	68Ω	PAG7 PT 0 20 H
Z41(5)	PAG7	B7	68Ω	PAG7 PT 0 21 H
Z32(5)	PAG7	C4	68Ω	PAG7 PT 0 22 H
Z41(1)	PAG7	B4	68Ω	PAG7 PT 0 23 H
Z32(3)	PAG7	C1	68Ω	PAG7 PT 0 24 H
Z32(6)	PAG7	B2	68Ω	PAG7 PT 0 25 H
Z23(8)	PAG7	C7	68Ω	PAG7 PT 1 20 H
Z41(6)	PAG7	A7	68Ω	PAG7 PT 1 21 H
Z35(8)	PAG7	C4	68Ω	PAG7 PT 1 22 H
Z42(8)	PAG7	A4	68Ω	PAG7 PT 1 23 H
Z37(8)	PAG7	C1	68Ω	PAG7 PT 1 24 H
Z34(6)	PAG7	A2	68Ω	PAG7 PT 1 25 H
Z4(6)	PAG8	D4	68Ω	PAG8 CLR VALID H
Z24(5)	PAG8	D6	68Ω	-PAG8 FORCE VALID 0 H
Z53(3)	PAG8	D6	68Ω	-PAG8 FORCE VALID 1 H
Z24(1)	PAG8	C6	68Ω	-PAG8 FORCE VALID 2 H
Z52(6)	PAG8	C6	68Ω	-PAG8 FORCE VALID 3 H
Z15(6)	PAG8	B6	68Ω	-PAG8 FORCE VALID 4 H
Z15(5)	PAG8	B6	68Ω	-PAG8 FORCE VALID 5 H
Z15(1)	PAG8	B6	68Ω	-PAG8 FORCE VALID 6 H
Z14(3)	PAG8	A6	68Ω	-PAG8 FORCE VALID 7 H
Z33(5)	PAG8	D2	68Ω	PAG8 PT 0 VALID H
Z71(3)	PAG8	D2	68Ω	-PAG8 PT 0 VALID H
Z11(1)	PAG8	D4	68Ω	PAG8 PT 0 VALID A H
Z12(10)	PAG8	B4	68Ω	PAG8 PT 0 VALID B H
Z33(6)	PAG8	D2	68Ω	-PAG8 PT 1 VALID H
Z24(8)	PAG8	D1	68Ω	PAG8 PT 1 VALID A H
Z52(10)	PAG8	B1	68Ω	PAG8 PT 1 VALID B H
Z60(10)	PAG8	A6	68Ω	-PAG8 PT DIR CLR A H
Z25(8)	PAG8	A6	68Ω	-PAG8 PT DIR CLR B H
Z67(1)	PAG8	A6	68Ω	PAG8 SWEEP ALL H
Z54(10)	PAG9	A3	68Ω	-PAG9 PT 1 EVEN EN C H
Z18(8)	PAG9	A3	68Ω	-PAG9 PT 1 EVEN EN D H
Z2(1)	PAG9	D1	68Ω	PAG9 PT 1 MATCH H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z67(3)	PAG9	D1	68Ω	-PAG9 PT 1 MATCH H
Z67(6)	PAG9	D2	68Ω	PAG9 PT 1 NO MATCH IN A H
Z26(10)	PAG9	A3	68Ω	-PAG9 PT 1 ODD EN C H
Z18(10)	PAG9	A3	68Ω	-PAG9 PT 1 ODD EN D H
Z12(1)	PAG9	B2	68Ω	PAG9 PT 1 WR C H
Z56(5)	PAG9	B1	68Ω	-PAG9 PT 1 WR C H
Z56(8)	PAG9	B1	68Ω	-PAG9 PT 1 WR D H
Z11(8)	PAG9	B7	68Ω	PAG9 TB 1 DIR H
Z20(5)	PAG9	B7	68Ω	-PAG9 TB 1 DIR EN H
Z67(8)	PAG9	A4	68Ω	PAG9 TB 1 WR TWO H
Z7(10)	PAG2	D7	68Ω	PMA3 PA 14 H
Z6(10)	PAG2	D5	68Ω	PMA3 PA 15 H
Z6(5)	PAG2	D5	68Ω	PMA3 PA 16 H
Z34(10)	PAG2	D4	68Ω	PMA3 PA 17 H
Z45(3)	PAG2	D4	68Ω	PMA3 PA 18 H
Z45(8)	PAG2	D3	68Ω	PMA3 PA 19 H
Z9(8)	PAG7	D5	68Ω	PMA3 PA 20 H
Z41(3)	PAG7	D4	68Ω	PMA3 PA 21 H
Z34(5)	PAG7	D4	68Ω	PMA3 PA 22 H
Z42(10)	PAG7	D3	68Ω	PMA3 PA 23 H
Z37(6)	PAG7	D6	68Ω	PMA3 PA 24 H
Z37(10)	PAG7	D5	68Ω	PMA3 PA 25 H
Z26(6)	PAG1	C8	68Ω	PT IN 00 H
Z18(1)	PAG1	B8	68Ω	PT IN 01 H
Z26(1)	PAG1	C6	68Ω	PT IN 02 H
Z18(6)	PAG1	B6	68Ω	PT IN 03 H
Z28(10)	PAG1	C4	68Ω	PT IN 04 H
Z55(8)	PAG2	C7	68Ω	PT IN 05 H
Z64(10)	PAG2	B7	68Ω	PT IN 06 H
Z55(6)	PAG2	C5	68Ω	PT IN 07 H
Z28(1)	PAG2	B5	68Ω	PT IN 08 H
Z55(5)	PAG2	C2	68Ω	PT IN 09 H
Z55(1)	PAG2	B2	68Ω	PT IN 10 H
Z22(10)	PAG7	C7	68Ω	PT IN 11 H
Z57(10)	PAG7	B7	68Ω	PT IN 12 H
Z22(5)	PAG7	C5	68Ω	PT IN 13 H
Z57(8)	PAG7	B5	68Ω	PT IN 14 H
Z56(3)	PAG7	C2	68Ω	PT IN 15 H
Z30(6)	PAG7	B2	68Ω	PT IN 16 H
Z22(1)	PAG1	B3	68Ω	PT IN 17 H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C.KACZOR 02-AUG-84 | ENG. C.KACZOR 02-AUG-84

CHK'D D.DELLORCO 02-AUG-84 | BOARD LOCATION:

SHEET 2 OF 3

XTRA1:<MCA25.M8520.TAPE>M8552.DRW 02-AUG-84 12:15

NEXT HIGHER ASSEMBLY: D-DD-M855-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: MULTIWIRE PAGER TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-RES	A1

MRO

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z54(8)	PAG1	C8	68Ω	PT IN 18 H
Z50(1)	PAG1	A8	68Ω	PT IN 19 H
Z54(3)	PAG1	C6	68Ω	PT IN 20 H
Z62(1)	PAG1	A6	68Ω	PT IN 21 H
Z54(1)	PAG1	C4	68Ω	PT IN 22 H
Z55(10)	PAG2	C7	68Ω	PT IN 23 H
Z64(8)	PAG2	A7	68Ω	PT IN 24 H
Z28(5)	PAG2	B5	68Ω	PT IN 25 H
Z56(10)	PAG2	A5	68Ω	PT IN 26 H
Z55(3)	PAG2	C2	68Ω	PT IN 27 H
Z28(3)	PAG2	A2	68Ω	PT IN 28 H
Z70(1)	PAG7	C7	68Ω	PT IN 29 H
Z30(1)	PAG7	A7	68Ω	PT IN 30 H
Z22(6)	PAG7	C5	68Ω	PT IN 31 H
Z32(10)	PAG7	B5	68Ω	PT IN 32 H
Z30(5)	PAG7	C2	68Ω	PT IN 33 H
Z56(6)	PAG7	B2	68Ω	PT IN 34 H
Z46(3)	PAG1	A3	68Ω	PT IN 35 H
Z13(5)	PAG5	A4	68Ω	SH AR PAR ODD A H
Z20(3)	PAG3	C6	68Ω	VMA2 VMA 13 A H
Z70(10)	PAG3	C6	68Ω	VMA2 VMA 14 A H
Z70(8)	PAG3	C6	68Ω	VMA2 VMA 15 A H
Z19(3)	PAG3	D4	68Ω	VMA2 VMA 16 A H
Z70(3)	PAG3	B7	68Ω	VMA2 VMA 17 H
Z19(5)	PAG3	C4	68Ω	VMA2 VMA 17 A H
Z42(6)	PAG3	D8	68Ω	VMA2 VMA 18 H
Z69(1)	PAG3	B7	68Ω	VMA2 VMA 19 H
Z70(6)	PAG3	B7	68Ω	VMA2 VMA 20 H
Z42(5)	PAG3	D8	68Ω	VMA2 VMA 21 H
Z36(8)	PAG3	D8	68Ω	VMA2 VMA 22 H
Z42(3)	PAG3	C8	68Ω	VMA2 VMA 23 H
Z51(10)	PAG3	A5	68Ω	VMA2 VMA 24 H
Z51(6)	PAG3	A7	68Ω	VMA2 VMA 25 H
Z61(1)	PAG3	A7	68Ω	VMA2 VMA 26 H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND
   () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN: C.KACZOR DATE: 02-AUG-84 ENG: C.KACZOR DATE: 02-AUG-84
CHK'D: D.DELLORCO DATE: 02-AUG-84 GUARD LOCATION:
SHEET 3 OF 3
XTRA1:<MCA25.M8520.TAPE>M855.DRW 02-AUG-84 12:15 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MCA25 D-DD-M855-0

TITLE: MULTIWIRE PAGER TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-RES	A01

MEC

DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M855-00	MODULE REVISION	A2
D-UA-M855-0-0	2		2 WAY ASSOCIATIVE PAGER	B
K-PL-M855-0-DBP	2		PART LIST, M855	B
D-CS-M855-0-PAG1	1		PAGE TABLE DATA PT ACCESS-PT 17	B
D-CS-M855-0-PAG2	1		PAGE TABLE DATA PT 16 - PT 26	B
D-CS-M855-0-PAG3	1		PAGE TABLE DIRECTORY	B
D-CS-M855-0-PAG4	1		PAGE TABLE CONTROL LOGIC	B
D-CS-M855-0-PAG5	1		PAGE TABLE PARITY LOGIC	B
D-CS-M855-0-PAG6	1		PAGING KEEP BIT SELECTION	B
D-CS-M855-0-PAG7	1		PAGE TABLE DATA PT 20 - 25	B
D-CS-M855-0-PAG8	1		PAGE TABLE VALID BIT SELECTION	B
D-CS-M855-0-PAG9	1		PAGE TABLE 1 DIRECTORY	B
D-CS-M855-0-PAGA	1		PAGING BOARD POWER, GND, CAP	B
D-CS-M855-0-PAGB	1		PAGING BOARD GND	B
D-CS-M855-0-RES	3		PAG TERMINATORS	B
K-PC-M855-0-DBI	-		P.C. DESIGN DATA BASE TAPE	B
D-DD-5017661-0	2		DRAWING DIRECTORY, 5017661	REF

REVISIONS		
CHK	CHANGE NO.	REV

digital

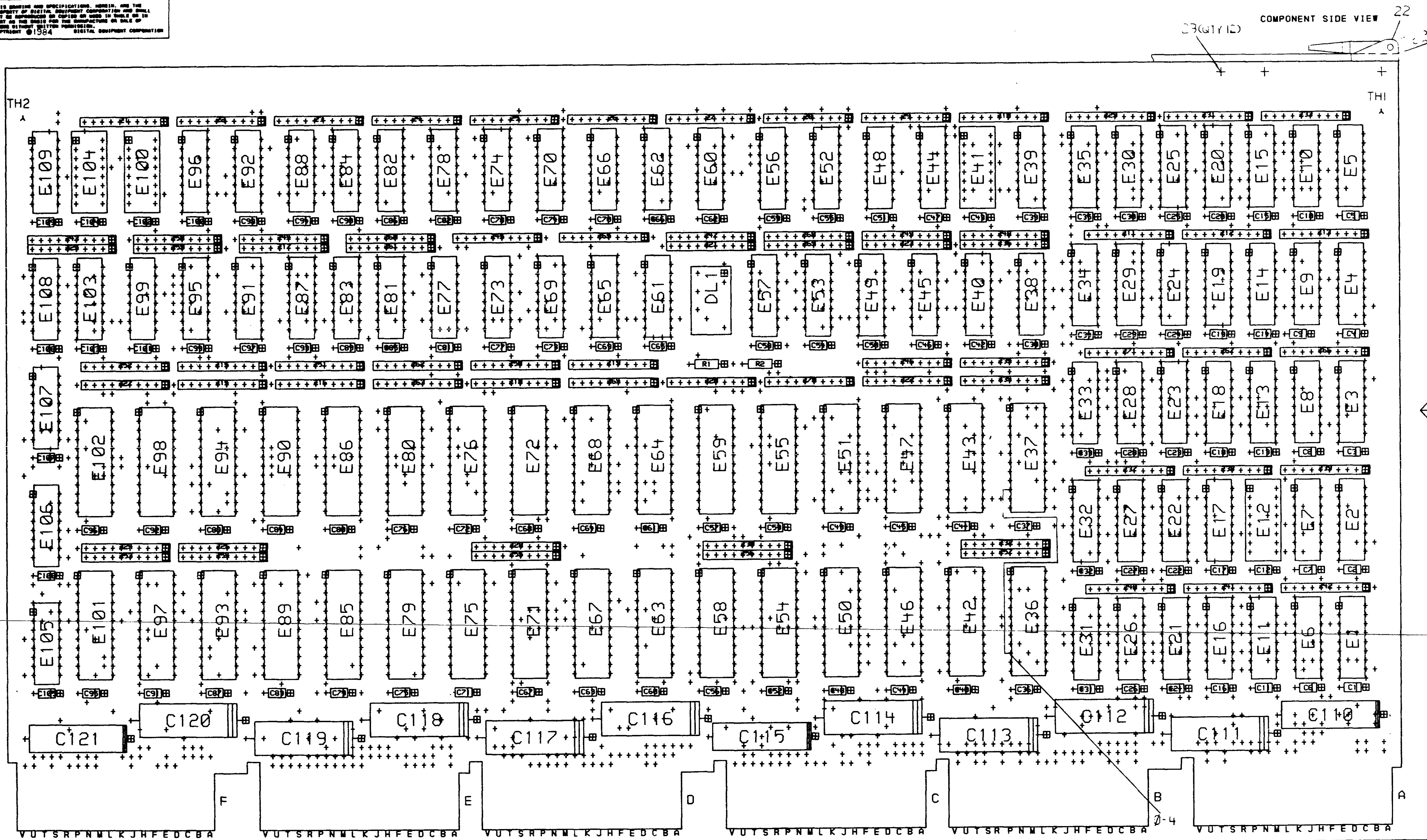
DRN. D. DELLORCO	DATE 20-JUL-84	ENG. C. KACZOR	DATE 20-JUL-84
CHK D. DELLORCO	DATE 20-JUL-84	BOARD LOCATION: N/A	
DSK:M855A2.T2PC[4,21]	20-JUL-84 08:02	SHEET 2 OF 2	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: KL10-PW	

TITLE: M855 DRAWING DIRECTORY

SIZE	CODE	NUMBER	REV.
D	DD	M855-0	A

MRO 1

COMPONENT SIDE VIEW


22
23(QTY 12)
TH1
TH2
E109 E104 E100 E96 E92 E88 E84 E82 E78 E74 E70 E66 E62 E60 E56 E52 E48 E44 E41 E39 E35 E30 E25 E20 E15 E10 E5
E108 E103 E99 E95 E91 E87 E83 E81 E77 E73 E69 E65 E61 DL1 E57 E53 E49 E45 E40 E38 E34 E29 E24 E19 E14 E9 E4
R1 R2
E107 E102 E98 E94 E90 E86 E80 E76 E72 E68 E64 E59 E55 E51 E47 E43 E37 E33 E28 E23 E18 E13 E8 E3
E106 E32 E27 E22 E17 E12 E7 E2
E105 E101 E97 E93 E89 E85 E79 E75 E71 E67 E63 E58 E54 E50 E46 E42 E36 E31 E26 E21 E16 E11 E6 E1
C121 C120 C119 C118 C117 C116 C115 C114 C113 C112 C111 C110
F E D C B A
Ø-4
V U T S R P N M L K J H F E D C B A

NOTES: 1. SPARE COMP. ARE: E12, E41, E100, E104.
2. THIS BOARD MUST MEET SAFETY REQ. FOR HPWR.

STEP & REPEAT	↑ Y AXIS Ø	STEP Ø TIMES
	→ X AXIS Ø	STEP Ø TIMES

REV	NO	CHANGE	CHK

ETCH REV. B1

SIGNATURES	DATE
DRN. J. MASON	4-10-84
CHK. D. [signature]	10-9-84
MECH. ENG. [signature]	
PROJ. ENG. [signature]	
PROD. D Foreman	26/6/84
SCALE 2/1	
SHT. 1 OF 2	

digital

TITLE 2 WAY ASSOCIATIVE PAGER

SIZE	CODE	NUMBER	REV
D	UA	M855-Ø-Ø	B

TCP DLC. NC: D-DD-M855-Ø

MRO 1 MS# 4106428

REWORK INSTRUCTIONS

NEW RELEASE

0-1 THRU 0-3 FOR ETCH CUTS REFER TO
D-EC-5017661-0-0

WIRE ADD, SIDE 1, AS SHWON, (P/N 9105740-55)
0-4 E36-10 TO E37-10

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN.	DATE 23-JUL-84	ENG.	DATE 7/25/84	TITLE: 2 WAY ASSOCIATIVE PAGER
CHK'D.	DATE	BOARD LOCATION:		
DSK:M8558.T2P[4,36] 23-JUL-84 14:27		SHEET 2 OF 2		
FIRST USED ON OPTION/MODEL: KL10-PW		NEXT HIGHER ASSEMBLY: D-DD-M855-0		

SIZE	CODE	NUMBER	REV.
D	UA	M855-0-0	B

MRO 1

PAG1 PT 1 ACCESS H
PAG1 PT 0 ACCESS H
10105 E99
PAG1 PT ACCESS L
PAG1 PT ACCESS H (DT2)

PAG1 PT 1 CACHE H
PAG1 PT 0 CACHE H
10105 E99
PAG1 PT CACHE L (FD2)
PT CACHE H (FA1)

PAG6 PT 0 KEEP H
PAG9 PT 1 MATCH H
10105 E35
PAG6 PT 1 KEEP H
-PAG9 PT 1 MATCH H
10105 E19
10105 E39
[B,PAG1 PT KEEP H,PAGED REF H] (CU2)

PAG1 PT 1 PUBLIC H
PAG1 PT 0 PUBLIC H
10105 E69
PT PUBLIC H (FE2)

PAG1 PT 1 WRITABLE H
PAG1 PT 0 WRITABLE H
10105 E77
PAG1 PT WRITEABLE H (FU2)

PAG1 PT 0 SOFTWARE H
PAG1 PT 1 SOFTWARE H
10105 E69
PAG1 PT SOFTWARE H (FV2)

PAG3 PT 0 MATCH L
(DE1) PMA3 PA 26 H
PAG3 PT EN B H
PAG1 PT 0 26 H
-PAG3 PT EN B H
PMA3 PA 26 H
PAG3 PT EN B H
PAG1 PT 1 26 H
-PAG3 PT EN B H
10117 E16
10117 E22
10117 E16
10105 E31
PAG1 PT 26 A H (BD1)
PAG1 PT 26 B H (FL1)
-PAG3 PT 0 MATCH L

256 X 4 10422 E93
(FR2) PT IN 00 H
PAG3 PT 0 EVEN EN A L
(FS1) PT IN 18 H
PAG3 PT 0 ODD EN A L
PT IN 00 H
PAG9 PT 1 EVEN EN C L
PT IN 18 H
PAG9 PT 1 ODD EN C L
-PAG5 PT ADR 18 A H
-PAG5 PT ADR 19 A H
-PAG5 PT ADR 20 A H
-PAG5 PT ADR 21 A H
-PAG5 PT ADR 22 A H
-PAG5 PT ADR 23 A H
-PAG5 PT ADR 24 A H
-PAG5 PT ADR 25 A H
PAG3 PT 0 WR A L
PAG1 PT 0 ACCESS H
PAG1 PT 1 ACCESS H

256 X 4 10422 E89
(FK2) PT IN 02 H
(FH2) PT IN 20 H
PT IN 02 H
PT IN 20 H
PAG1 PT 0 WRITABLE H
PAG1 PT 1 WRITABLE H

256 X 4 10422 E85
(ET2) PT IN 04 H
(EP2) PT IN 22 H
PT IN 04 H
PT IN 22 H
PAG1 PT 0 CACHE H
PAG1 PT 1 CACHE H

256 X 4 10422 E72
(FK1) PT IN 01 H
PAG3 PT 0 EVEN EN B L
(FF1) PT IN 19 H
PAG3 PT 0 ODD EN B L
PT IN 01 H
PAG9 PT 1 EVEN EN D L
PT IN 19 H
PAG9 PT 1 ODD EN D L
PAG5 PT ADR 20 B H
PAG5 PT ADR 19 B H
PAG5 PT ADR 18 B H
PAG5 PT ADR 21 B H
PAG5 PT ADR 22 B H
PAG5 PT ADR 23 B H
PAG5 PT ADR 24 B H
PAG5 PT ADR 25 B H
PAG3 PT 0 WR B L
PAG1 PT 0 PUBLIC H
PAG1 PT 1 PUBLIC H

256 X 4 10422 E76
(FE1) PT IN 03 H
(FC1) PT IN 21 H
PT IN 03 H
PT IN 21 H
PAG1 PT 0 SOFTWARE H
PAG1 PT 1 SOFTWARE H

-PAG3 PT ADR 26 H
PAG3 TB 0 WR TWO H
PAG3 PT ADR 26 H
PAG9 TB 1 WR TWO H
-PAG3 PT ADR 26 H
PAG3 PT ADR 26 H
10102 E8
10102 E8
10102 E13
10102 E13
(AF1) PT IN 17 H
(AF2) PT IN 35 H
PAG1 PT 1 EV EN 26 L
PAG1 PT 1 OD EN 26 L
PAG5 PT ADR 19 B H
PAG5 PT ADR 18 B H
PAG5 PT ADR 20 B H
PAG5 PT ADR 21 B H
PAG5 PT ADR 22 B H
PAG5 PT ADR 23 B H
PAG5 PT ADR 24 B H
PAG5 PT ADR 25 B H
PAG3 PT 0 WR 26 L

256 X 4 10422 E36
PAG1 PT 0 26 H
PAG1 PT 1 EV EN 26 L
PAG1 PT 1 OD EN 26 L
PAG5 PT ADR 25 D H
PAG3 PT 1 WR 26 L

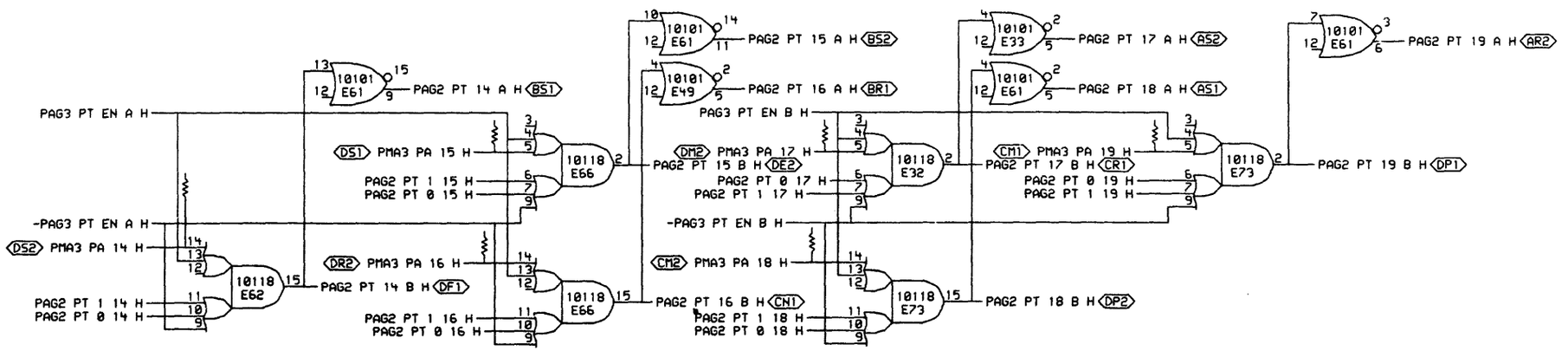
256 X 4 10422 E37
PAG1 PT 1 26 H

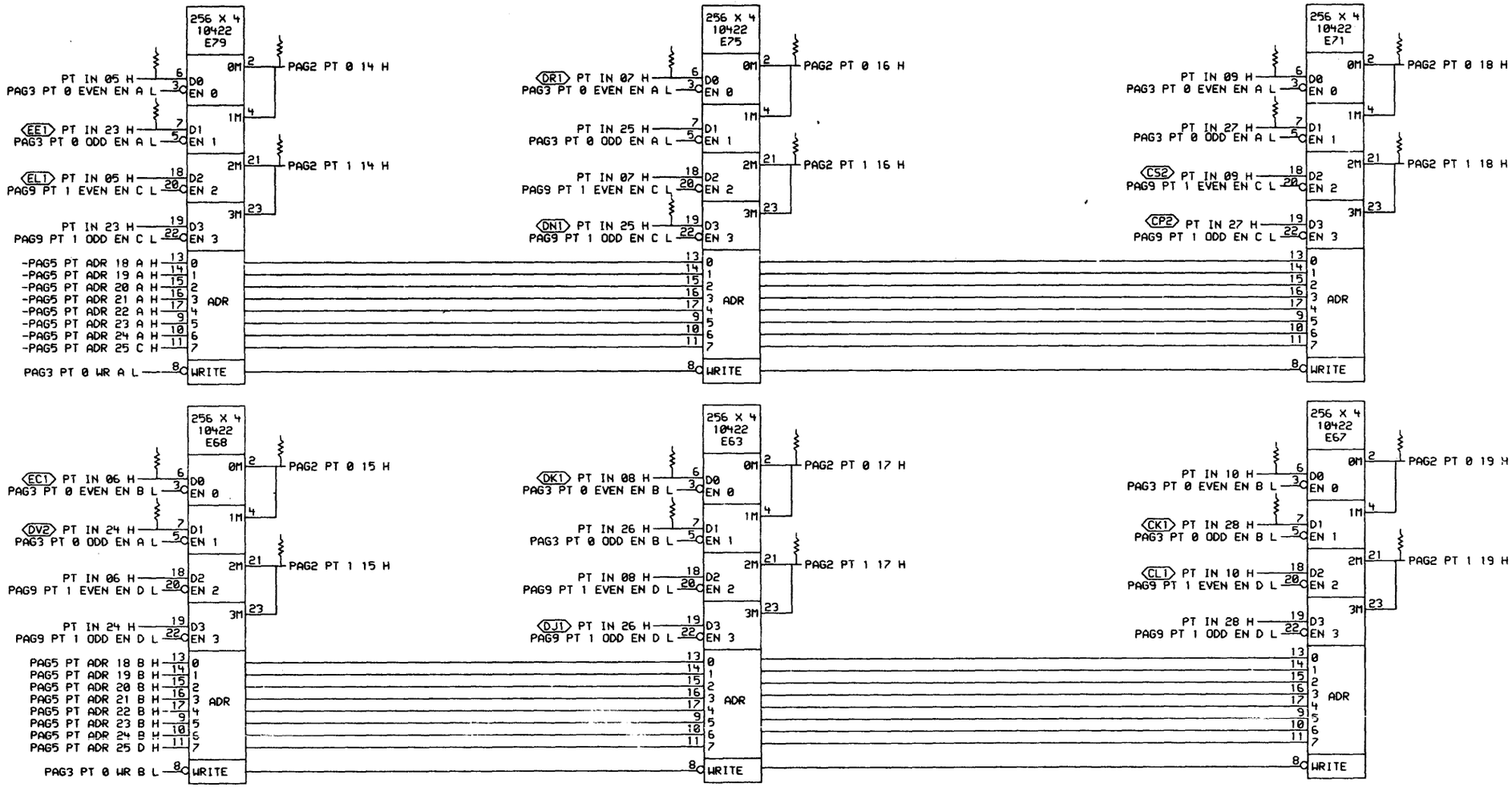
REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 20-JUL-84	ENG. C. KACZOR	DATE 20-JUL-84	TITLE: PAGE TABLE DATA PT ACCESS-PT 17	
CHK'D D. DELLORCO	DATE 20-JUL-84	BOARD LOCATION: 4AF30			
XTRA: <MCA25.M8520.REV0>PAG1EF.DRW 16-JUL-84 11:32		NEXT HIGHER ASSEMBLY: B-DD-M855-0		SIZE D	CODE CS	NUMBER M855-0-PAG1	REV. B
FIRST USED ON OPTION/MODEL: MCA25		SHEET 1 OF 1			

MRO 1





REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR — DATE 10-JUL-84
CHK'D. D. DELLORCO — DATE 10-JUL-84
ENG. C. KACZOR — DATE 10-JUL-84
BOARD LOCATION: 4AF30
SHEET 1 OF 1
XTRA1:(MCA25.M9308.REV0)PAGEF.DRW 10-JUL-84 10:10
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PAGE TABLE DATA PT 16 - PT 26

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG2	B

MRO 1

AE2 VMA2 VMA 18 H → 10101 E6 → PAG3 PT ADR 18 L, PAG3 PT ADR 18 H
AE1 VMA2 VMA 21 H → 10101 E6 → PAG3 PT ADR 21 L, PAG3 PT ADR 21 H
AD1 VMA2 VMA 22 H → 10101 E40 → PAG3 PT ADR 22 L, PAG3 PT ADR 22 H
AD2 VMA2 VMA 23 H → 10101 E6 → PAG3 PT ADR 23 L, PAG3 PT ADR 23 H

PAG3 PT DIR WR DLY L → 10105 E57 → PAG3 PT DIR WR DLY A L

FJ1 CSH6 MBOX PT DIR WR L, FF2 CLK2 PT DIR WR L → 10104 E56 → PAG3 PT DIR WR L
PAG3 PT DIR WR L → R1 100Ω DLi, 13N5 → 100Ω → PAG3 PT DIR WR DLY L

DF2 VMA2 VMA 19 H, AC1 MCL2 VMA EXEC H → 10107 E53 → PAG3 PT ADR 19 L, PAG3 PT ADR 19 H
DA1 VMA2 VMA 17 H, DC1 VMA2 VMA 20 H → 10107 E53 → PAG3 PT ADR 20 L, PAG3 PT ADR 20 H
EV2 APR5 WR PT SEL 1 H, EJ1 APR5 WR PT SEL 0 H → 10104 E83 → PAG3 PT ADR 26 A IN H
EA1 VMA2 VMA 26 H, PAG3 PT ADR 26 A IN H → 10105 E77 → PAG3 PT ADR 26 L, PAG3 PT ADR 26 H
EU2 VMA2 VMA 25 H → 10104 E87 → PAG3 PT ADR 25 A IN H
EN1 CSH1 PGRF CYC A H → 10101 E81
→ 10107 E4 → -PAG3 HI L

CL2 MCL VMA USER H, AR1 VMA2 VMA 13 A H, AP2 VMA2 VMA 14 A H, AP1 VMA2 VMA 15 A H, PAG3 TB 0 DIR EN L → 256 X 4 10422 E51 (D0 EN 0, D1 EN 1, D2 EN 2, D3 EN 3; 0M, 1M, 2M, 3M)
-PAG3 PT ADR 18 H, -PAG3 PT ADR 19 H, -PAG3 PT ADR 20 H, -PAG3 PT ADR 21 H, -PAG3 PT ADR 22 H, -PAG3 PT ADR 23 H, -PAG3 PT ADR 24 H, -PAG5 PT ADR 25 C H → ADR
PAG3 PT DIR WR DLY A L → WRITE

VMA2 VMA 13 A H → 10113 E23
MCL VMA USER H → 10113 E23
VMA2 VMA 15 A H → 10113 E23
-PAG8 PT 0 VALID H, -PAG3 TB 0 DIR EN H → 10105 E24

AM2 VMA2 VMA 16 A H, AM1 VMA2 VMA 17 A H, PAG3 SEL TB 0 H → 256 X 4 10422 E64 (D0 EN 0, D1 EN 1, D2 EN 2, D3 EN 3; 0M, 1M, 2M, 3M)
ADR, WRITE
-PAG3 PT 0 LRU H

PAG3 TB 0 DIR H, PAG3 PT EN A H → 10102 E30 → PAG3 TB 0 DIR EN L
PAG3 SEL TB 0 L, PAG3 PT WR BOTH HALVES L, -APR MBOX CTL 03 L, -PAG3 PT WR BOTH HALVES L → 10117 E20 → PAG3 TB 0 DIR H
EN1 CSH1 PGRF CYC A H, EJ1 APR5 WR PT SEL 0 H → 10105 E24 → PAG3 PT WR BOTH HALVES L, PAG3 PT WR BOTH HALVES H
CS1 CSH6 PAGE FAIL HOLD L, CON KI10 PAGING MODE L, CV2 APR5 WR PT SEL 1 L, EJ1 -APR5 WR PT SEL 0 L → 10117 E22 → PAG3 PT DIR CLR H, PAG3 PT DIR CLR L
ER1 MB SEL 1 H, EN1 CSH1 PGRF CYC A H → 10104 E87 → PAG3 PT ADR 25 B IN H
CR2 MB SEL 2 H, CP1 VMA2 VMA 24 H → 10117 E91 (246) → PAG3 PT ADR 24 L, PAG3 PT ADR 24 H

VMA2 VMA 16 A H → 10113 E23
VMA2 VMA 17 A H → 10113 E28
VMA2 VMA 14 A H → 10113 E28
→ 10105 E9 → -PAG3 PT 0 MATCH L, -PAG3 PT 0 MATCH H
PAG3 PT 0 NO MATCH IN A H
PAG9 PT 1 MATCH H

PAG3 PT 0 MATCH H, PAG9 PT 1 MATCH H → 10105 E92 → PAG3 PT MATCH L (FM1), PAG3 PT MATCH H

PAG9 PT 1 WR C H → 10117 E14 → PAG3 PT 0 WR 26 L
PAG3 PT 0 MATCH H, PAG3 TB 0 WR TWO H, PAG8 SWEEP ALL H
PAG9 PT 1 WR C H → 10117 E14 → PAG3 PT 1 WR 26 L
PAG9 PT 1 MATCH H, PAG9 TB 1 WR TWO H, PAG8 SWEEP ALL H

PAG4 FORCE TO TB 0 L → 10121 E10 → PAG3 PT 0 LRU L, -PAG8 PT 0 VALID L, PAG8 PT 1 VALID L, -PAG8 PT 0 VALID L, -PAG4 FORCE TO TB 1 L
PAG3 WR BOTH HALVES H → 10131 E15 → PAG3 SEL TB 0 H, PAG3 SEL TB 0 L

DH2 CLK2 PT WR L, DM1 CSH5 PAGE REFILL T12 L → 10104 E56 → PAG3 PT 0 WR A L, PAG3 PT 0 WR B L

PAG3 PT 0 MATCH L, -PAG3 PT ADR 26 L → 10102 E8
PAG3 PT 0 MATCH L, PAG3 PT ADR 26 L → 10102 E8
→ 10101 E3 → PAG3 PT 0 EVEN EN A L, PAG3 PT 0 EVEN EN B L, PAG3 PT 0 ODD EN A L, PAG3 PT 0 ODD EN B L
PAG3 PT WR BOTH HALVES H, PAG3 SEL TB 0 H → 10104 E25 → PAG3 TB 0 WR TWO H

CF1 CSH EBOX CYC A L, ED1 PMA5 EBOX PAGED L → 10105 E31 → PAG3 PT EN A H, PAG3 PT EN A L, PAG3 PT EN B H, PAG3 PT EN B L

REVISIONS

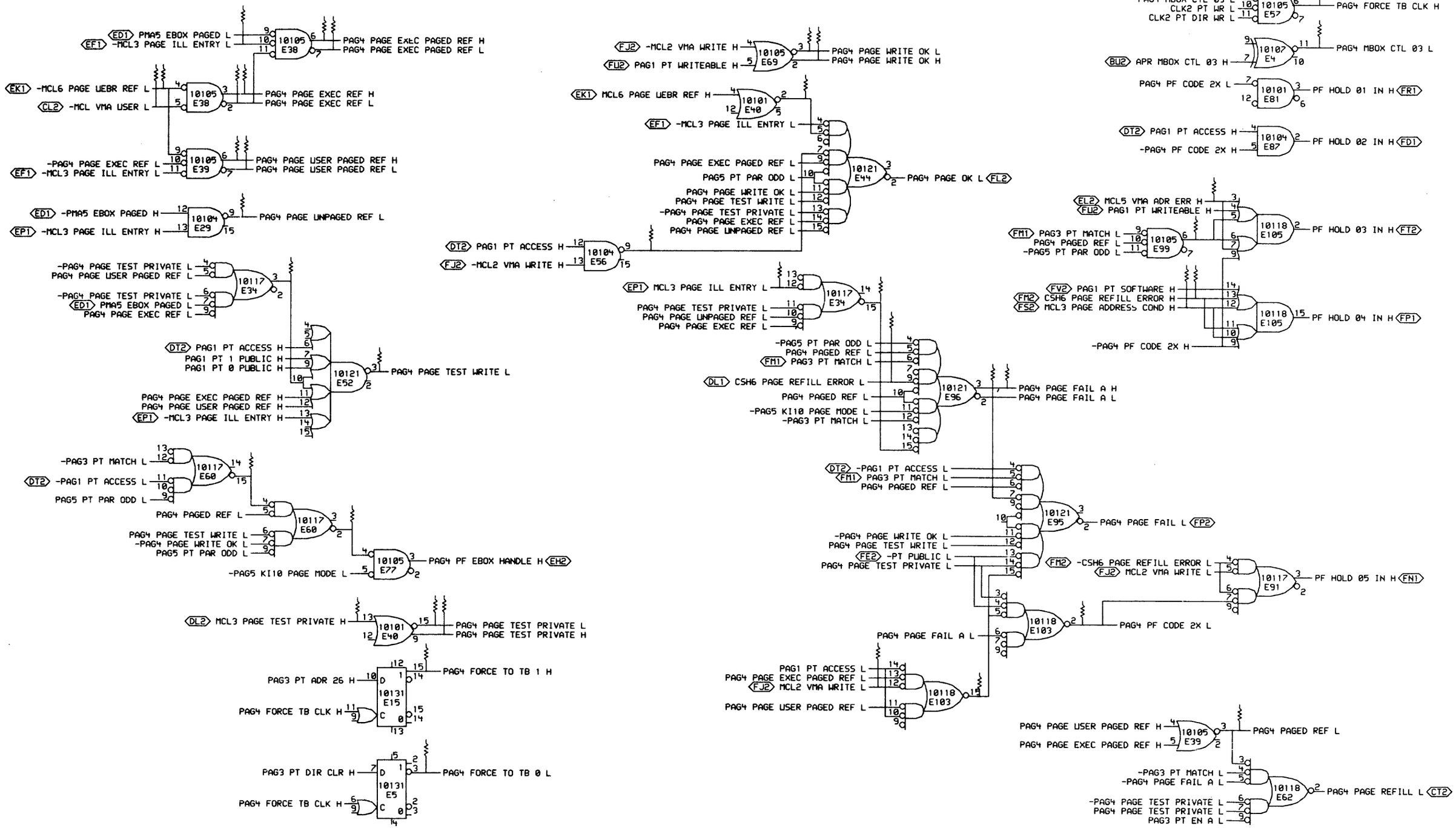
CHK	CHANGE NO.	REV

digital

DRN C. KACZOR — DATE 10-JUL-84 — ENG C. KACZOR — DATE 10-JUL-84
CHK D. DELLORCO — DATE 10-JUL-84 — BOARD LOCATION: 4AF30 — SHEET 1 OF 1
XTRA: (MCA25.M9520.REV8)PAG3EF.DRW 10-JUL-84 10:11 — NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MCA25 — D-DD-M855-0

TITLE: PAGE TABLE DIRECTORY

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG3	B



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 10-JUL-84	ENG. C. KACZOR	DATE 10-JUL-84	TITLE: PAGE TABLE CONTROL LOGIC	
CHK D. DELLORCO	DATE 10-JUL-84	BOARD LOCATION: 4AF30			
XTRA: <MCA25.M8528.REV8>PAGREF.DRW 10-JUL-84 10:11		SHEET 1 OF 1			
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0		SIZE D / CODE CS / NUMBER M855-0-PAG4 / REV. B	

BF1 MB 06-11 PAR ODD H
BE1 MB 00-05 PAR ODD H
AK1 MB 12-17 PAR ODD H
AL2 MB PAR H
10107 E2
10107 E7
PAG MB 18-35 PAR H BJ2

NOTE: THE ABOVE AND BELOW SIGNALS ARE CORRECT. DUE TO XORING IN MB PAR H

BA1 MB 24-29 PAR ODD H
BD2 MB 18-23 PAR ODD H
AJ1 MB 30-35 PAR ODD H
AL2 MB PAR H
10107 E7
10107 E2
PAG MB 00-17 PAR H BK2

PARITY 10160 E1
AL2 MB PAR H
BD2 MB 18-23 PAR ODD H
BA1 MB 24-29 PAR ODD H
AK1 MB 12-17 PAR ODD H
AJ1 MB 30-35 PAR ODD H
BE1 MB 00-05 PAR ODD H
BF1 MB 06-11 PAR ODD H
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11
ODD
MB PAR ODD H BC1

PARITY 10160 E65
FE2 PT PUBLIC H
DP1 PAG2 PT 19 B H
FW2 PAG1 PT WRITEABLE H
FA1 PT CACHE H
FV2 PAG1 PT SOFTWARE H
CR1 PAG2 PT 17 B H
DJ2 PAG7 PT 20 B H
DF1 PAG2 PT 14 B H
DE2 PAG2 PT 15 B H
DP2 PAG2 PT 18 B H
DT2 PAG1 PT ACCESS H
CN1 PAG2 PT 16 B H
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11
ODD

PARITY 10160 E26
PAG5 PT 1 OD PG PAR H
PAG5 PT 1 EV PG PAR H
PAG5 PT 0 OD PG PAR H
CU2 [B,PAG1 PT KEEP H,PAGED REF H]
ER2 PAG7 PT 23 B H
ED2 PAG7 PT 24 B H
EM2 PAG7 PT 25 B H
DK2 PAG7 PT 21 B H
ES1 PAG7 PT 22 B H
FL1 PAG1 PT 26 B H
PAG5 PT 0 EV PG PAR H
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11
ODD

10107 E53
PAG5 PT PAR ODD L
PAG5 PT PAR ODD H

PAG5 KI10 PAGE MODE H
CU2 [B,PAG1 PT KEEP H,PAGED REF H]
10104 E29

PAG3 PT ADR 18 H
10101 E33
PAG5 PT ADR 18 A L
PAG5 PT ADR 18 B H

PAG3 PT ADR 22 H
10101 E81
PAG5 PT ADR 22 A L
PAG5 PT ADR 22 B H

PAG3 PT ADR 19 H
10101 E40
PAG5 PT ADR 19 A L
PAG5 PT ADR 19 B H

PAG3 PT ADR 23 H
10101 E33
PAG5 PT ADR 23 A L
PAG5 PT ADR 23 B H

PAG3 PT ADR 20 H
10101 E49
PAG5 PT ADR 20 A L
PAG5 PT ADR 20 B H

PAG3 PT ADR 24 H
10101 E49
PAG5 PT ADR 24 A L
PAG5 PT ADR 24 B H

PAG3 PT ADR 21 H
10101 E33
PAG5 PT ADR 21 A L
PAG5 PT ADR 21 B H

PAG3 PT ADR 25 B IN H
PAG3 PT ADR 25 A IN H
10105 E92
PAG5 PT ADR 25 A L
PAG5 PT ADR 25 B H
10105 E92
PAG5 PT ADR 25 C L
PAG5 PT ADR 25 D H

DU2 CON KI10 PAGING MODE H
10101 E81
PAG5 KI10 PAGE MODE H

BK2 PAG MB 00-17 PAR H
BL2 -CON KI10 PAGING MODE H
10117 E17
PAG5 KI10 PAGE MODE H
BJ2 PAG MB 18-35 PAR H
10117 E17

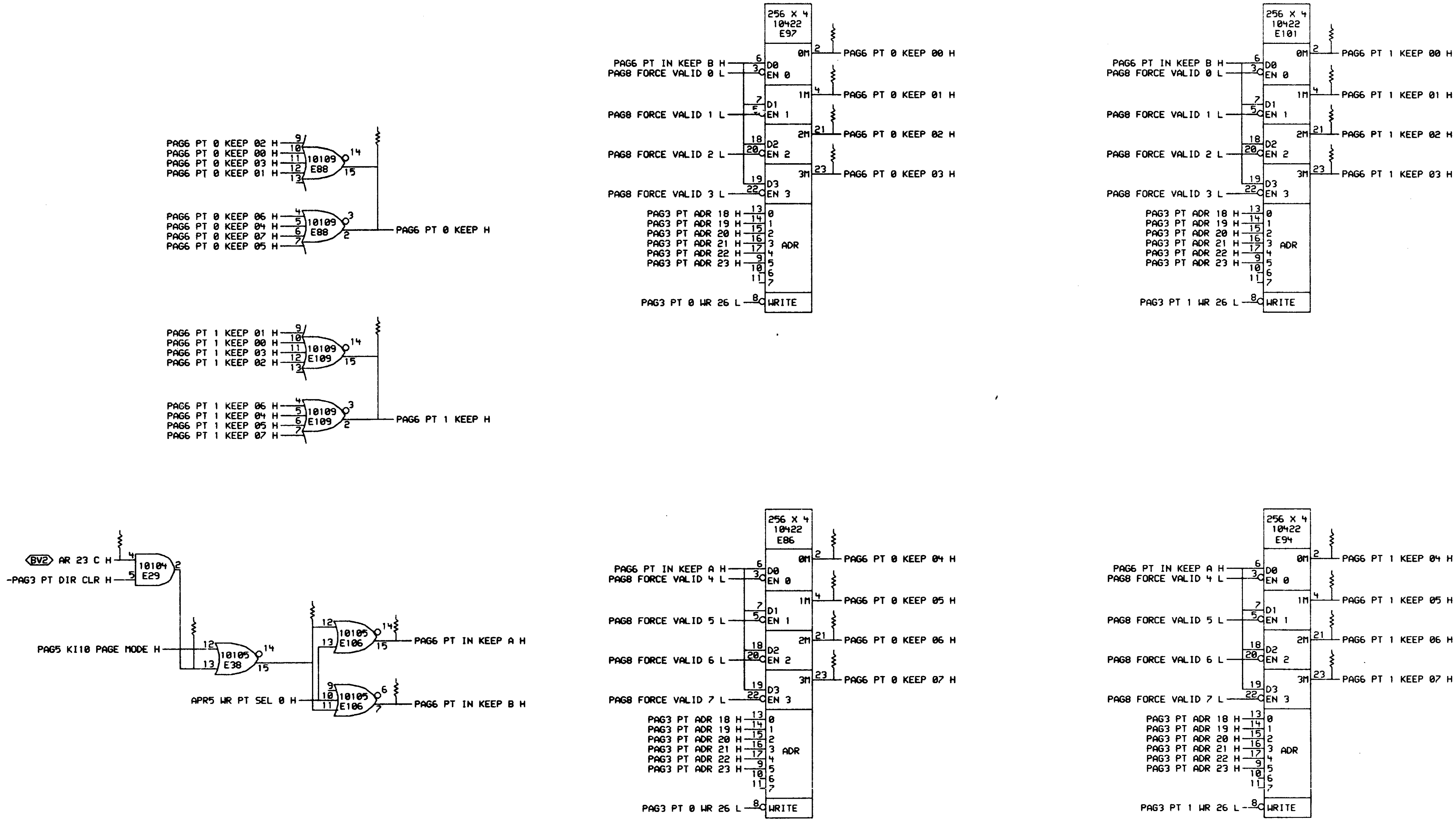
-PAG3 PT WR BOTH HALVES H
BL1 SH AR PAR ODD A H
10107 E4

256 X 4 10422 E50
PAG3 PT 0 EVEN EN A L
PAG3 PT 0 ODD EN B L
PAG9 PT 1 EVEN EN C L
PAG9 PT 1 ODD EN D L
0M D0 EN 0
1M D1 EN 1
2M D2 EN 2
3M D3 EN 3
PAG5 PT 0 EV PG PAR H
PAG5 PT 0 OD PG PAR H
PAG5 PT 1 EV PG PAR H
PAG5 PT 1 OD PG PAR H
-PAG3 PT ADR 18 H
-PAG5 PT ADR 19 A H
-PAG5 PT ADR 20 A H
-PAG5 PT ADR 21 A H
-PAG5 PT ADR 22 A H
-PAG5 PT ADR 23 A H
-PAG5 PT ADR 24 A H
-PAG5 PT ADR 25 C H
0 1 2 3 4 5 6 7 ADR
PAG9 PT 1 WR D L
WRITE

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN: C. KACZOR	DATE 20-JUL-84	ENG. C. KACZOR	DATE 20-JUL-84	TITLE: PAGE TABLE PARITY LOGIC	
CHK'D. D. DELLORCO	DATE 20-JUL-84	BOARD LOCATION: 4AF30			
XTRA1:<MCA25.M8520.REV8>PAG5EF.DAV 16-JUL-84 11:45		SHEET 1 OF 1			
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: B-DD-M855-0		SIZE D / CODE CS / NUMBER M855-0-PAG5 / REV. B	



REVISIONS		
CHK	CHANGE NO.	REV

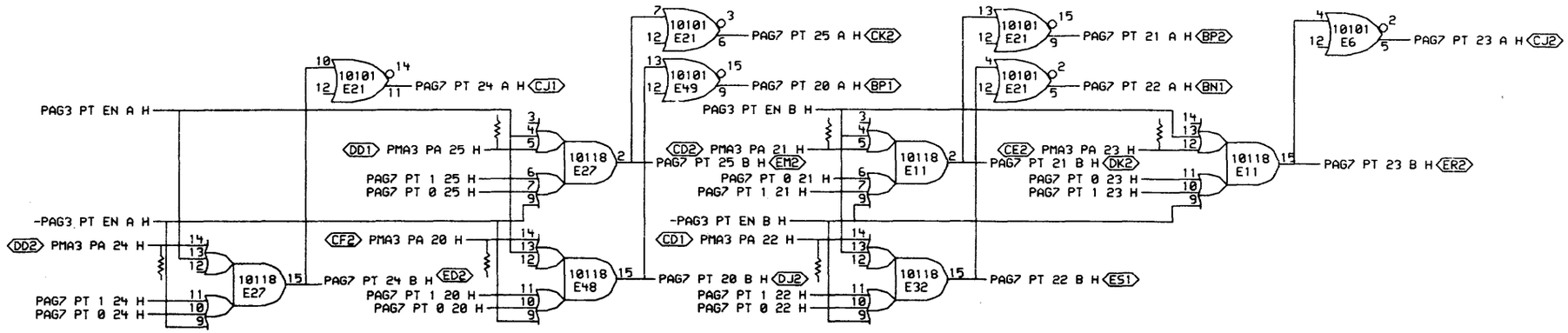
digital

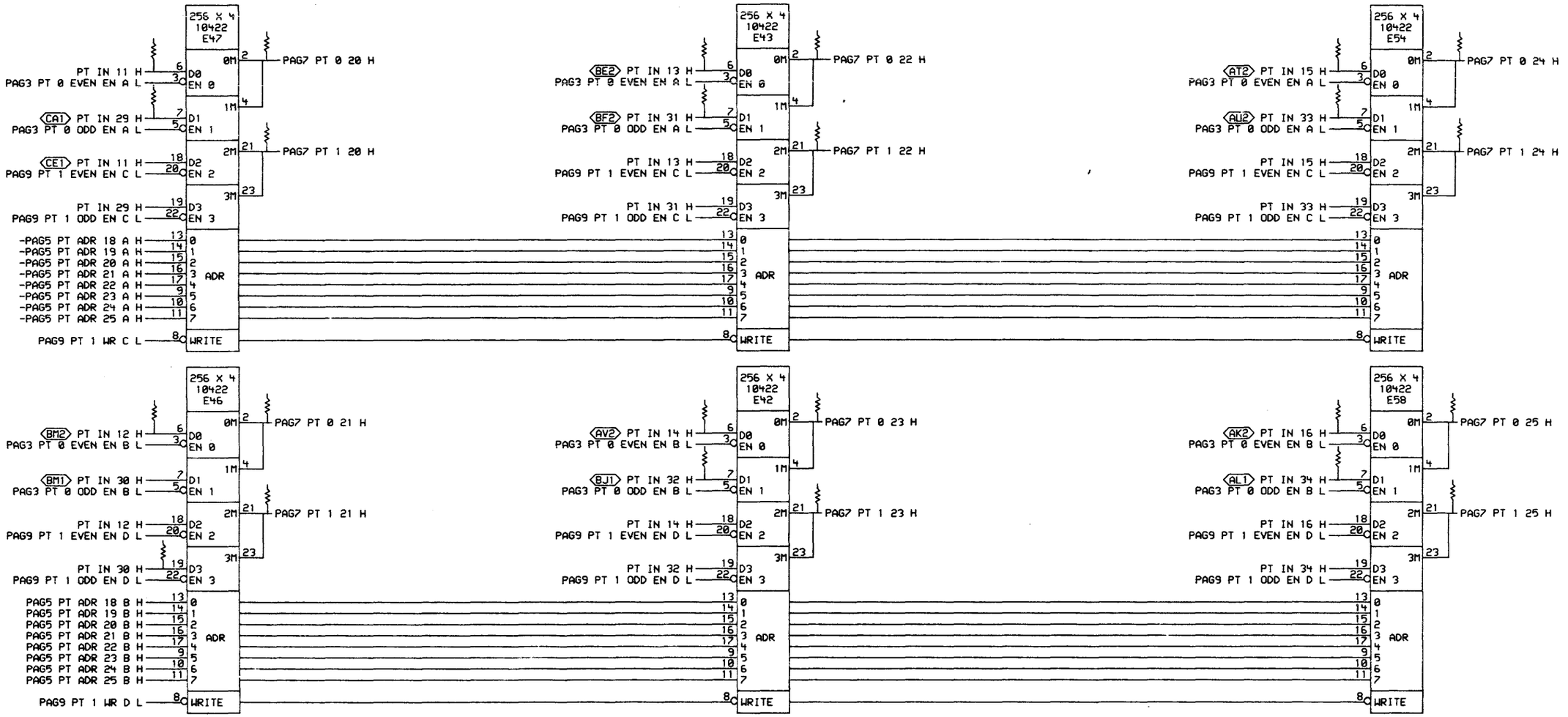
DRN. C. KACZOR	DATE 10-JUL-84	ENG. C. KACZOR	DATE 10-JUL-84
CHK'D. D. DELLORCO	DATE 10-JUL-84	BOARD LOCATION: 4AF30	
XTRA:<MCA25.M8520.REVB>PAG6EF.DRW 10-JUL-84 10:12		SHEET 1 OF 1	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0	

TITLE: PAGING KEEP BIT SELECTION

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG6	B

MRO 1





REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR | DATE 10-JUL-84 | ENG. C. KACZOR | DATE 10-JUL-84
CHK'D D. DELLORCO | DATE 10-JUL-84 | BOARD LOCATION: YAF30 | SHEET 1 OF 1
XTRA:\MCA25.M8520.REV8\PAG7EF.DRW | 10-JUL-84 10:12 | NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: PAGE TABLE DATA PT 20 - 25

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG7	B

MRO 1

APR MBOX CTL 03 H
PAG3 PT DIR CLR H
10105 E9
PAG8 CLR VALID H

PAG8 PT 0 VALID A H
PAG8 PT 0 VALID B H
PAG8 PT 1 VALID B H
PAG8 PT 1 VALID A H
10105 E24
10105 E106
PAG8 PT 0 VALID L
PAG8 PT 0 VALID H
PAG8 PT 1 VALID L

PAG8 CLR VALID H
10101 E82
10101 E78
10101 E82
10101 E82
PAG8 FORCE VALID 0 L
-PAG6 PT 0 KEEP 00 L
-PAG6 PT 0 KEEP 01 L
PAG8 FORCE VALID 1 L
-PAG6 PT 0 KEEP 02 L
PAG8 FORCE VALID 2 L
PAG8 PT DIR CLR A L
-PAG6 PT 0 KEEP 03 L
PAG8 FORCE VALID 3 L
10104 E84
10104 E84
10104 E87
10104 E84
256 X 4 10422 E98
D0 EN 0
D1 EN 1
D2 EN 2
D3 EN 3
0M
1M
2M
3M
PAG8 PT 0 VALID A H
PAG3 PT ADR 18 H
PAG3 PT ADR 19 H
PAG3 PT ADR 20 H
PAG3 PT ADR 21 H
PAG3 PT ADR 22 H
PAG3 PT ADR 23 H
ADR
WRITE

-PAG6 PT 1 KEEP 00 L
PAG8 PT DIR CLR B L
-PAG6 PT 1 KEEP 01 L
-PAG6 PT 1 KEEP 02 L
-PAG6 PT 1 KEEP 03 L
10104 E107
10104 E107
10104 E107
10104 E107
PAG8 FORCE VALID 0 L
PAG8 FORCE VALID 1 L
PAG8 FORCE VALID 2 L
PAG8 FORCE VALID 3 L
256 X 4 10422 E102
D0 EN 0
D1 EN 1
D2 EN 2
D3 EN 3
0M
1M
2M
3M
PAG8 PT 1 VALID A H
ADR
WRITE

PAG8 CLR VALID H
-PAG3 SEL TB 0 H
10102 E30
PAG3 PT DIR WR DLY A L
10105 E35

PAG3 SEL TB 0 H
PAG8 CLR VALID H
PAG3 PT DIR WR DLY A L
10102 E30
10105 E35

DECODER 10162 E74
PAG5 PT ADR 24 B H
PAG5 PT ADR 25 D H
-PAG3 PT ADR 26 H
2 SEL
AND EN

DECODER 10162 E70
PAG5 PT ADR 24 B H
PAG5 PT ADR 25 D H
PAG3 PT ADR 26 H
PAG3 PT WR BOTH HALVES L
2 SEL
AND EN

PAG8 CLR VALID H
10101 E78
10101 E82
10101 E78
10101 E78
-PAG6 PT 0 KEEP 04 L
PAG8 FORCE VALID 4 L
PAG8 FORCE VALID 5 L
-PAG6 PT 0 KEEP 05 L
-PAG6 PT 0 KEEP 06 L
PAG8 FORCE VALID 6 L
PAG8 PT DIR CLR A L
-PAG6 PT 0 KEEP 07 L
PAG8 FORCE VALID 7 L
10104 E83
10104 E83
10104 E84
10104 E83
256 X 4 10422 E80
D0 EN 0
D1 EN 1
D2 EN 2
D3 EN 3
0M
1M
2M
3M
PAG8 PT 0 VALID B H
PAG3 PT ADR 18 H
PAG3 PT ADR 19 H
PAG3 PT ADR 20 H
PAG3 PT ADR 21 H
PAG3 PT ADR 22 H
PAG3 PT ADR 23 H
ADR
WRITE

-PAG6 PT 1 KEEP 04 L
PAG8 PT DIR CLR B L
-PAG6 PT 1 KEEP 05 L
-PAG6 PT 1 KEEP 06 L
-PAG6 PT 1 KEEP 07 L
10104 E108
10104 E108
10104 E108
10104 E108
PAG8 FORCE VALID 4 L
PAG8 FORCE VALID 5 L
PAG8 FORCE VALID 6 L
PAG8 FORCE VALID 7 L
256 X 4 10422 E90
D0 EN 0
D1 EN 1
D2 EN 2
D3 EN 3
0M
1M
2M
3M
PAG8 PT 1 VALID B H
ADR
WRITE

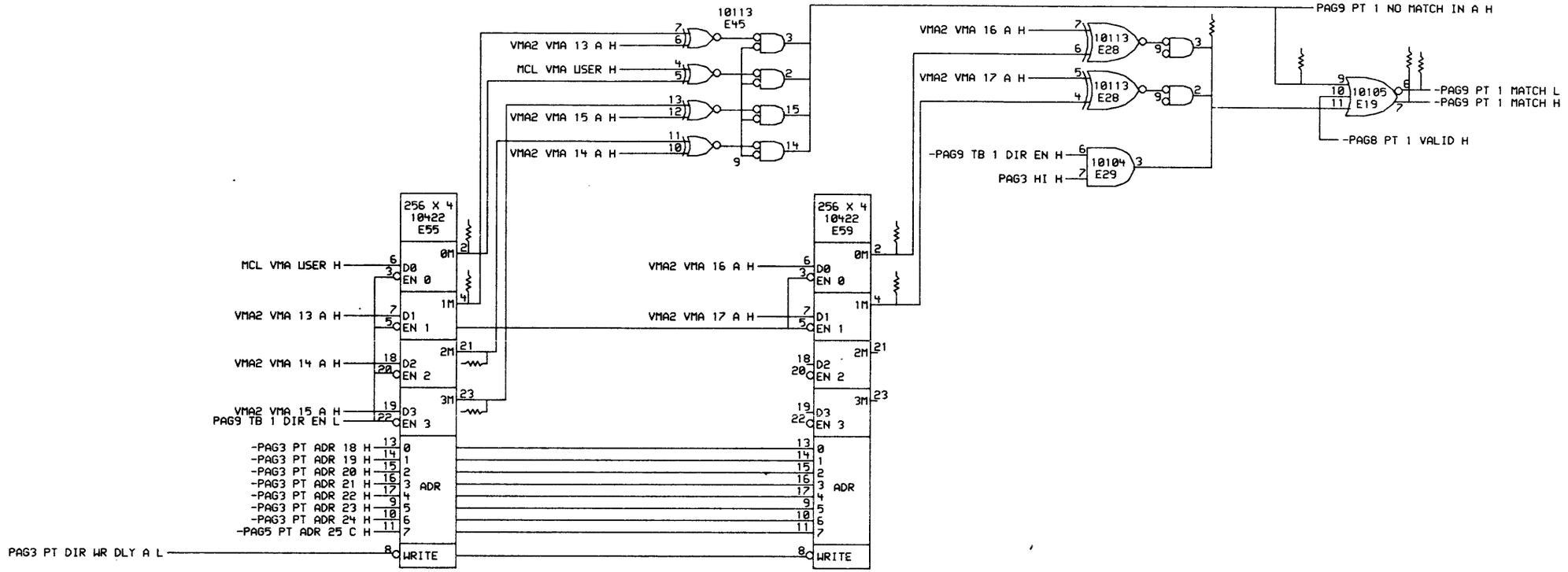
PAG3 PT DIR CLR L
-APR MBOX CTL 03 L
10105 E9
PAG8 SWEEP ALL H
PAG8 PT DIR CLR A L

PAG3 PT DIR CLR L
10105 E19
PAG8 PT DIR CLR B L

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 10-JUL-84	ENG. C. KACZOR	DATE 10-JUL-84	TITLE: PAGE TABLE VALID BIT SELECTION	
CHK D. DELLORCO	DATE 10-JUL-84	BOARD LOCATION: 4AF30			
XTRA:(MCA25.M9320.REV8)PAGBEF.DRW 10-JUL-84 10:12		SHEET 1 OF 1			
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0		SIZE D / CODE CS / NUMBER M855-0-PAG8 / REV. B	



REVISIONS		
CHK	CHANGE NO.	REV

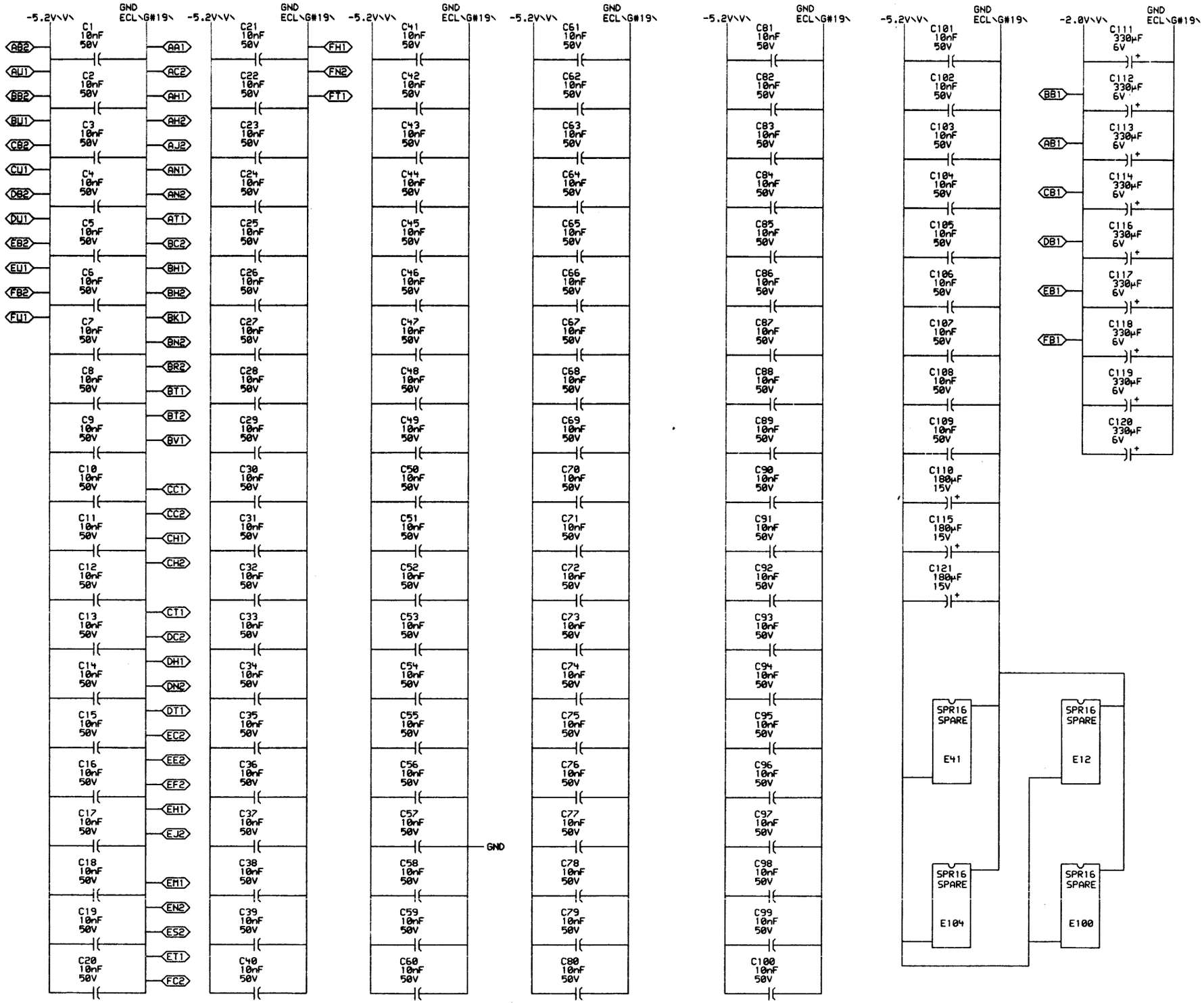
DRN. C. KACZOR	DATE 10-JUL-84	ENG. C. KACZOR	DATE 10-JUL-84
CHK D. DELLORCO	DATE 10-JUL-84	BOARD LOCATION: 4AF30	
XTRA:(MCA25.M9520.REV8)PAGSEF.DRW 10-JUL-84 10:13		SHEET 1 OF 1	
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0	

TITLE: PAGE TABLE 1 DIRECTORY

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAG9	B

MRO 1

REV. B | NUMBER M855-0-PAG9 | CODE CS | SIZE D



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REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR	DATE 10-JUL-84	ENG. C. KACZOR	DATE 10-JUL-84	TITLE: PAGING BOARD POWER, GND, CAP	
CHK D. DELLORCO	DATE 10-JUL-84	BOARD LOCATION: 4AF30			
XTRA: (MCA25.M8320.REV0)PAGEF.DRW	10-JUL-84 10:13	SHEET 1 OF 1			
FIRST USED ON OPTION/MODEL: MCA25		NEXT HIGHER ASSEMBLY: D-DD-M855-0		SIZE D / CODE CS / NUMBER M855-0-PAGA / REV. B	

MRO 1

[B,GND ECL, GND CLK\G#20\] —<CN2>

[B,NC,GND ECL\G#19\] —<AA2>

[B,NC,GND ECL\G#19\] —<AV1>

[B,NC,GND ECL\G#19\] —<BA2>

[B,NC,GND ECL\G#19\] —<CA2>

[B,NC,GND ECL\G#19\] —<CV1>

[B,NC,GND ECL\G#19\] —<DA2>

[B,NC,GND ECL\G#19\] —<DV1>

[B,NC,GND ECL\G#19\] —<EA2>

[B,NC,GND ECL\G#19\] —<EV1>

[B,NC,GND ECL\G#19\] —<FA2>

[B,NC,GND CLK TIEDOWN\G#20\] —<FV1>

[B,GND ECL\G#19\,NC] —<EK2>

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. C. KACZOR — DATE 10-JUL-84 — ENG. C. KACZOR — DATE 10-JUL-84

CHK D. DELLORCO — DATE 10-JUL-84 — BOARD LOCATION: 4AF30

XTRA1:<MCA25.MB30B.REV0>PAGBEF.DBU 10-JUL-84 10:13 — SHEET 1 OF 1

FIRST USED ON OPTION/MODEL: MCA25 — NEXT HIGHER ASSEMBLY: D-DD-M855-0

TITLE: PAGING BOARD GND

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-PAGB	B

MRO 1

SIZE D | CODE CS | NUMBER M855-0-PAGB | REV. B

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
212(3)	PAG3	C2	68Ω	%E10(3)
259(3)	PAG4	A3	68Ω	%E103(15)
252(5)	PAG8	C2	68Ω	%E107(14)
227(6)	PAG8	C3	68Ω	%E107(15)
227(10)	PAG8	D2	68Ω	%E107(2)
252(8)	PAG8	D2	68Ω	%E107(3)
216(5)	PAG8	B2	68Ω	%E108(14)
216(8)	PAG8	B2	68Ω	%E108(15)
216(6)	PAG8	B2	68Ω	%E108(2)
251(8)	PAG8	B2	68Ω	%E108(3)
267(10)	PAG9	A4	68Ω	%E13(2)
271(5)	PAG9	A4	68Ω	%E13(3)
241(10)	PAG1	D3	68Ω	%E16(14)
230(3)	PAG5	B3	68Ω	%E17(15)
256(1)	PAG5	B3	68Ω	%E17(2)
210(3)	PAG1	D3	68Ω	%E19(3)
238(1)	PAG5	C7	68Ω	%E2(10)
239(6)	PAG5	D7	68Ω	%E2(13)
239(8)	PAG5	D7	68Ω	%E2(3)
240(3)	PAG1	C3	68Ω	%E22(14)
266(6)	PAG3	D2	68Ω	%E23(3)
269(5)	PAG5	C2	68Ω	%E26(2)
212(5)	PAG9	D2	68Ω	%E28(2)
240(5)	PAG5	C3	68Ω	%E29(14)
236(3)	PAG6	B7	68Ω	%E29(2)
229(8)	PAG8	C6	68Ω	%E30(14)
211(10)	PAG8	C3	68Ω	%E30(15)
22(8)	PAG4	C4	68Ω	%E34(15)
260(1)	PAG4	C7	68Ω	%E34(3)
227(1)	PAG8	B5	68Ω	%E35(15)
210(1)	PAG1	D3	68Ω	%E35(3)
227(8)	PAG8	C3	68Ω	%E35(7)
224(10)	PAG6	B7	68Ω	%E38(15)
238(10)	PAG5	B4	68Ω	%E4(2)
29(6)	PAG4	D4	68Ω	%E40(2)
235(1)	PAG3	D5	68Ω	%E51(2)
235(3)	PAG3	C5	68Ω	%E51(21)
271(1)	PAG3	C5	68Ω	%E51(23)
271(6)	PAG3	C5	68Ω	%E51(4)
223(5)	PAG9	C5	68Ω	%E55(2)

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
223(1)	PAG9	C5	68Ω	%E55(21)
223(3)	PAG9	C5	68Ω	%E55(23)
246(6)	PAG9	C5	68Ω	%E55(4)
249(5)	PAG4	C5	68Ω	%E56(9)
234(3)	PAG9	C4	68Ω	%E59(2)
235(5)	PAG9	C4	68Ω	%E59(4)
27(6)	PAG4	B7	68Ω	%E60(15)
261(3)	PAG4	B6	68Ω	%E60(2)
235(6)	PAG3	D4	68Ω	%E64(2)
234(1)	PAG3	C4	68Ω	%E64(4)
221(1)	PAG5	C3	68Ω	%E65(2)
238(3)	PAG5	C7	68Ω	%E7(10)
260(3)	PAG8	A7	68Ω	%E70(10)
245(10)	PAG8	B7	68Ω	%E70(11)
260(5)	PAG8	B7	68Ω	%E70(12)
24(5)	PAG8	B6	68Ω	%E70(13)
24(10)	PAG8	C7	68Ω	%E70(3)
24(8)	PAG8	C7	68Ω	%E70(4)
24(1)	PAG8	C7	68Ω	%E70(5)
260(6)	PAG8	D7	68Ω	%E70(6)
266(1)	PAG3	B3	68Ω	%E8(14)
266(5)	PAG3	A3	68Ω	%E8(15)
257(3)	PAG1	B3	68Ω	%E8(2)
257(5)	PAG1	A3	68Ω	%E8(3)
244(10)	PAG3	A7	68Ω	%E81(2)
217(10)	PAG3	A7	68Ω	%E81(5)
263(6)	PAG8	B5	68Ω	%E83(15)
263(8)	PAG8	B5	68Ω	%E83(2)
263(10)	PAG8	B5	68Ω	%E83(3)
262(8)	PAG8	B5	68Ω	%E84(14)
215(10)	PAG8	C5	68Ω	%E84(15)
227(3)	PAG8	D5	68Ω	%E84(2)
252(3)	PAG8	D5	68Ω	%E84(3)
214(10)	PAG8	C5	68Ω	%E87(15)
253(8)	PAG4	C2	68Ω	%E99(6)
211(5)	PAG3	B7	68Ω	APR5 WR PT SEL 0 H
251(1)	PAG3	B7	68Ω	APR5 WR PT SEL 1 H
237(5)	PAG3	B5	68Ω	-APR5 WR PT SEL 1 H
236(1)	PAG6	B7	68Ω	AR 23 C H
247(1)	PAG3	C7	68Ω	-CLK2 PT DIR WR H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
212(8)	PAG3	B2	68Ω	-CLK2 PT WR H
238(6)	PAG5	B4	68Ω	-CON KI10 PAGING MODE H
211(3)	PAG3	B5	68Ω	CSH1 PGRF CYC A H
231(8)	PAG9	B2	68Ω	-CSH5 PAGE REFILL T12 H
27(3)	PAG3	C7	68Ω	-CSH6 MBOX PT DIR WR H
237(3)	PAG3	B5	68Ω	-CSH6 PAGE FAIL HOLD H
258(1)	PAG4	C2	68Ω	CSH6 PAGE REFILL ERROR H
258(3)	PAG4	C4	68Ω	-CSH6 PAGE REFILL ERROR H
239(1)	PAG5	D8	68Ω	MB 00-05 PAR ODD H
239(3)	PAG5	D7	68Ω	MB 06-11 PAR ODD H
239(5)	PAG5	D8	68Ω	MB 12-17 PAR ODD H
238(5)	PAG5	C8	68Ω	MB 18-23 PAR ODD H
239(10)	PAG5	C7	68Ω	MB 24-29 PAR ODD H
242(1)	PAG5	C7	68Ω	MB 30-35 PAR ODD H
251(5)	PAG3	A5	68Ω	MB SEL 1 H
217(8)	PAG3	A5	68Ω	MB SEL 2 H
271(8)	PAG4	D8	68Ω	MCL VMA USER H
269(3)	PAG3	B7	68Ω	MCL2 VMA EXEC H
27(1)	PAG4	A4	68Ω	-MCL2 VMA WRITE H
224(6)	PAG4	C2	68Ω	MCL3 PAGE ADDRESS COND H
29(5)	PAG4	D7	68Ω	MCL3 PAGE ILL ENTRY H
211(6)	PAG4	C4	68Ω	-MCL3 PAGE ILL ENTRY H
236(6)	PAG4	B6	68Ω	MCL3 PAGE TEST PRIVATE H
253(10)	PAG4	C2	68Ω	MCL5 VMA ADR ERR H
248(1)	PAG4	D7	68Ω	MCL6 PAGE UEBR REF H
241(8)	PAG1	B2	68Ω	PAG1 PT 0 26 H
243(1)	PAG1	C7	68Ω	PAG1 PT 0 ACCESS H
259(8)	PAG1	C3	68Ω	PAG1 PT 0 CACHE H
268(3)	PAG1	B7	68Ω	PAG1 PT 0 PUBLIC H
219(10)	PAG1	B5	68Ω	PAG1 PT 0 SOFTWARE H
262(5)	PAG1	C5	68Ω	PAG1 PT 0 WRITABLE H
237(1)	PAG1	B1	68Ω	PAG1 PT 1 26 H
259(10)	PAG1	C7	68Ω	PAG1 PT 1 ACCESS H
259(6)	PAG1	C3	68Ω	PAG1 PT 1 CACHE H
235(10)	PAG1	A3	68Ω	-PAG1 PT 1 EV EN 26 H
246(1)	PAG1	A3	68Ω	-PAG1 PT 1 OD EN 26 H
268(6)	PAG1	A7	68Ω	PAG1 PT 1 PUBLIC H
219(8)	PAG1	A5	68Ω	PAG1 PT 1 SOFTWARE H
262(3)	PAG1	C5	68Ω	PAG1 PT 1 WRITABLE H
243(3)	PAG1	D7	68Ω	-PAG1 PT ACCESS H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
247(10)	PAG2	C6	68Ω	PAG2 PT 0 14 H
265(8)	PAG2	B6	68Ω	PAG2 PT 0 15 H
265(6)	PAG2	C4	68Ω	PAG2 PT 0 16 H
232(8)	PAG2	B4	68Ω	PAG2 PT 0 17 H
250(5)	PAG2	C2	68Ω	PAG2 PT 0 18 H
250(10)	PAG2	B2	68Ω	PAG2 PT 0 19 H
27(8)	PAG2	C6	68Ω	PAG2 PT 1 14 H
265(10)	PAG2	A6	68Ω	PAG2 PT 1 15 H
26(6)	PAG2	C4	68Ω	PAG2 PT 1 16 H
232(1)	PAG2	A4	68Ω	PAG2 PT 1 17 H
250(3)	PAG2	C2	68Ω	PAG2 PT 1 18 H
250(8)	PAG2	A2	68Ω	PAG2 PT 1 19 H
271(10)	PAG3	A7	68Ω	PAG3 HI H
214(5)	PAG3	B2	68Ω	-PAG3 PT 0 EVEN EN A H
263(1)	PAG3	B2	68Ω	-PAG3 PT 0 EVEN EN B H
213(6)	PAG3	C4	68Ω	-PAG3 PT 0 LRU H
244(8)	PAG3	D1	68Ω	PAG3 PT 0 MATCH H
240(1)	PAG3	D1	68Ω	-PAG3 PT 0 MATCH H
266(10)	PAG3	D2	68Ω	PAG3 PT 0 NO MATCH IN A H
215(3)	PAG3	A2	68Ω	-PAG3 PT 0 ODD EN A H
263(3)	PAG3	A2	68Ω	-PAG3 PT 0 ODD EN B H
216(3)	PAG3	D2	68Ω	-PAG3 PT 0 WR 26 H
214(1)	PAG3	B1	68Ω	-PAG3 PT 0 WR A H
263(5)	PAG3	B1	68Ω	-PAG3 PT 0 WR B H
253(6)	PAG3	C2	68Ω	-PAG3 PT 1 WR 26 H
214(6)	PAG3	D7	68Ω	PAG3 PT ADR 18 H
230(10)	PAG3	D7	68Ω	-PAG3 PT ADR 18 H
224(3)	PAG3	B7	68Ω	PAG3 PT ADR 19 H
230(8)	PAG3	B7	68Ω	-PAG3 PT ADR 19 H
214(8)	PAG3	B7	68Ω	PAG3 PT ADR 20 H
220(6)	PAG3	B7	68Ω	-PAG3 PT ADR 20 H
215(8)	PAG3	D7	68Ω	PAG3 PT ADR 21 H
264(1)	PAG3	D7	68Ω	-PAG3 PT ADR 21 H
227(5)	PAG3	D7	68Ω	PAG3 PT ADR 22 H
220(8)	PAG3	D7	68Ω	-PAG3 PT ADR 22 H
253(5)	PAG3	C7	68Ω	PAG3 PT ADR 23 H
264(5)	PAG3	C7	68Ω	-PAG3 PT ADR 23 H
246(8)	PAG3	A5	68Ω	PAG3 PT ADR 24 H
270(5)	PAG3	A5	68Ω	-PAG3 PT ADR 24 H
22(3)	PAG5	B6	68Ω	PAG3 PT ADR 25 A IN H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS — CHK | CHANGE NO. | REV

digital — DRN. (signature) DATE 06-AUG-84 — ENG. C. KACZOR DATE 06-AUG-84 — CHK'D. D. DELLORCO DATE 06-AUG-84 — BOARD LOCATION: 4AF30 — SHEET 1 OF 3

XTRA:<MCA25.M8520.REVB>M8551.DRW 24-JUL-84 11:46 — NEXT HIGHER ASSEMBLY: D-DD-M855-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: ETCH PAGER TERMINATORS

SIZE D | CODE CS | NUMBER M855-0-RES | REV. B

MRO 1

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z22(5)	PAG3	A5	68Ω	PAG3 PT ADR 25 B IN H
Z67(5)	PAG3	A7	68Ω	PAG3 PT ADR 26 H
Z66(8)	PAG3	A7	68Ω	-PAG3 PT ADR 26 H
Z60(1)	PAG3	B7	68Ω	PAG3 PT ADR 26 A IN H
Z13(3)	PAG3	B5	68Ω	PAG3 PT DIR CLR H
Z13(10)	PAG3	B5	68Ω	-PAG3 PT DIR CLR H
R2(1)	PAG3	B7	100Ω	-PAG3 PT DIR WR H
R1(1)	PAG3	B7	100Ω	-PAG3 PT DIR WR DLY H
Z29(6)	PAG3	C7	68Ω	-PAG3 PT DIR WR DLY A H
Z6(8)	PAG3	A1	68Ω	PAG3 PT EN A H
Z65(5)	PAG3	A1	68Ω	-PAG3 PT EN A H
Z45(6)	PAG3	A1	68Ω	PAG3 PT EN B H
Z50(6)	PAG3	A1	68Ω	-PAG3 PT EN B H
Z7(5)	PAG3	D2	68Ω	PAG3 PT MATCH H
Z31(1)	PAG3	B5	68Ω	PAG3 PT WR BOTH HALVES H
Z5(1)	PAG3	B5	68Ω	-PAG3 PT WR BOTH HALVES H
Z20(10)	PAG3	C1	68Ω	PAG3 SEL TB 0 H
Z29(3)	PAG3	C1	68Ω	-PAG3 SEL TB 0 H
Z29(5)	PAG3	B5	68Ω	PAG3 TB 0 DIR H
Z64(3)	PAG3	B5	68Ω	-PAG3 TB 0 DIR EN H
Z66(3)	PAG3	A2	68Ω	PAG3 TB 0 WR TWO H
Z33(1)	PAG4	D1	68Ω	PAG4 FORCE TB CLK H
Z33(8)	PAG4	A6	68Ω	-PAG4 FORCE TO TB 0 H
Z33(3)	PAG4	A6	68Ω	PAG4 FORCE TO TB 1 H
Z28(1)	PAG4	D1	68Ω	-PAG4 MBOX CTL 03 H
Z68(5)	PAG4	D7	68Ω	PAG4 PAGE EXEC PAGED REF H
Z25(3)	PAG4	D7	68Ω	-PAG4 PAGE EXEC PAGED REF H
Z48(3)	PAG4	D7	68Ω	PAG4 PAGE EXEC REF H
Z9(1)	PAG4	D7	68Ω	-PAG4 PAGE EXEC REF H
Z6(1)	PAG4	C3	68Ω	PAG4 PAGE FAIL A H
Z25(6)	PAG4	C3	68Ω	-PAG4 PAGE FAIL A H
Z65(3)	PAG4	B6	68Ω	PAG4 PAGE TEST PRIVATE H
Z25(5)	PAG4	B6	68Ω	-PAG4 PAGE TEST PRIVATE H
Z59(1)	PAG4	C6	68Ω	-PAG4 PAGE TEST WRITE H
Z9(3)	PAG4	C7	68Ω	-PAG4 PAGE UNPAGED REF H
Z8(3)	PAG4	D7	68Ω	PAG4 PAGE USER PAGED REF H
Z25(1)	PAG4	D7	68Ω	-PAG4 PAGE USER PAGED REF H
Z59(5)	PAG4	D4	68Ω	PAG4 PAGE WRITE OK H
Z49(1)	PAG4	D4	68Ω	-PAG4 PAGE WRITE OK H
Z52(1)	PAG4	A2	68Ω	-PAG4 PAGED REF H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z62(10)	PAG4	B3	68Ω	-PAG4 PF CODE 2X H
Z38(8)	PAG5	A7	68Ω	PAG5 KI10 PAGE MODE H
Z40(6)	PAG5	B1	68Ω	PAG5 PT 0 EV PG PAR H
Z57(1)	PAG5	B1	68Ω	PAG5 PT 0 OD PG PAR H
Z40(10)	PAG5	B1	68Ω	PAG5 PT 1 EV PG PAR H
Z40(8)	PAG5	B1	68Ω	PAG5 PT 1 OD PG PAR H
Z26(3)	PAG5	C7	68Ω	-PAG5 PT ADR 18 A H
Z18(3)	PAG5	C7	68Ω	PAG5 PT ADR 18 B H
Z54(5)	PAG5	B7	68Ω	-PAG5 PT ADR 19 A H
Z28(6)	PAG5	B7	68Ω	PAG5 PT ADR 19 B H
Z26(5)	PAG5	B7	68Ω	-PAG5 PT ADR 20 A H
Z28(8)	PAG5	B7	68Ω	PAG5 PT ADR 20 B H
Z54(6)	PAG5	B7	68Ω	-PAG5 PT ADR 21 A H
Z18(5)	PAG5	B7	68Ω	PAG5 PT ADR 21 B H
Z46(5)	PAG5	C5	68Ω	-PAG5 PT ADR 22 A H
Z34(8)	PAG5	C5	68Ω	PAG5 PT ADR 22 B H
Z16(10)	PAG5	B5	68Ω	-PAG5 PT ADR 23 A H
Z62(6)	PAG5	B5	68Ω	PAG5 PT ADR 23 B H
Z26(8)	PAG5	B5	68Ω	-PAG5 PT ADR 24 A H
Z5(3)	PAG5	B5	68Ω	PAG5 PT ADR 24 B H
Z22(8)	PAG5	B5	68Ω	-PAG5 PT ADR 25 A H
Z57(6)	PAG5	B5	68Ω	PAG5 PT ADR 25 B H
Z64(6)	PAG5	A5	68Ω	-PAG5 PT ADR 25 C H
Z22(3)	PAG5	A5	68Ω	PAG5 PT ADR 25 D H
Z2(10)	PAG5	C1	68Ω	PAG5 PT PAR ODD H
Z49(3)	PAG5	C1	68Ω	-PAG5 PT PAR ODD H
Z29(10)	PAG6	D6	68Ω	PAG6 PT 0 KEEP H
Z44(1)	PAG6	D4	68Ω	PAG6 PT 0 KEEP 00 H
Z3(5)	PAG6	D4	68Ω	PAG6 PT 0 KEEP 01 H
Z44(3)	PAG6	D4	68Ω	PAG6 PT 0 KEEP 02 H
Z3(1)	PAG6	C4	68Ω	PAG6 PT 0 KEEP 03 H
Z3(10)	PAG6	B4	68Ω	PAG6 PT 0 KEEP 04 H
Z44(5)	PAG6	B4	68Ω	PAG6 PT 0 KEEP 05 H
Z3(8)	PAG6	B4	68Ω	PAG6 PT 0 KEEP 06 H
Z44(6)	PAG6	A4	68Ω	PAG6 PT 0 KEEP 07 H
Z12(6)	PAG6	C6	68Ω	PAG6 PT 1 KEEP H
Z43(8)	PAG6	D1	68Ω	PAG6 PT 1 KEEP 00 H
Z43(6)	PAG6	D1	68Ω	PAG6 PT 1 KEEP 01 H
Z1(6)	PAG6	D1	68Ω	PAG6 PT 1 KEEP 02 H
Z43(5)	PAG6	C1	68Ω	PAG6 PT 1 KEEP 03 H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z1(8)	PAG6	B1	68Ω	PAG6 PT 1 KEEP 04 H
Z25(10)	PAG6	B1	68Ω	PAG6 PT 1 KEEP 05 H
Z1(10)	PAG6	B1	68Ω	PAG6 PT 1 KEEP 06 H
Z43(10)	PAG6	A1	68Ω	PAG6 PT 1 KEEP 07 H
Z16(1)	PAG6	B6	68Ω	PAG6 PT IN KEEP A H
Z53(1)	PAG6	A6	68Ω	PAG6 PT IN KEEP B H
Z49(8)	PAG7	C7	68Ω	PAG7 PT 0 20 H
Z41(5)	PAG7	B7	68Ω	PAG7 PT 0 21 H
Z32(5)	PAG7	C4	68Ω	PAG7 PT 0 22 H
Z41(1)	PAG7	B4	68Ω	PAG7 PT 0 23 H
Z32(3)	PAG7	C1	68Ω	PAG7 PT 0 24 H
Z32(6)	PAG7	B2	68Ω	PAG7 PT 0 25 H
Z23(8)	PAG7	C7	68Ω	PAG7 PT 1 20 H
Z41(6)	PAG7	A7	68Ω	PAG7 PT 1 21 H
Z35(8)	PAG7	C4	68Ω	PAG7 PT 1 22 H
Z42(8)	PAG7	A4	68Ω	PAG7 PT 1 23 H
Z37(8)	PAG7	C1	68Ω	PAG7 PT 1 24 H
Z34(6)	PAG7	A2	68Ω	PAG7 PT 1 25 H
Z4(6)	PAG8	D4	68Ω	PAG8 CLR VALID H
Z24(5)	PAG8	D6	68Ω	-PAG8 FORCE VALID 0 H
Z53(3)	PAG8	D6	68Ω	-PAG8 FORCE VALID 1 H
Z24(1)	PAG8	C6	68Ω	-PAG8 FORCE VALID 2 H
Z52(6)	PAG8	C6	68Ω	-PAG8 FORCE VALID 3 H
Z15(6)	PAG8	B6	68Ω	-PAG8 FORCE VALID 4 H
Z15(5)	PAG8	B6	68Ω	-PAG8 FORCE VALID 5 H
Z15(1)	PAG8	B6	68Ω	-PAG8 FORCE VALID 6 H
Z14(3)	PAG8	A6	68Ω	-PAG8 FORCE VALID 7 H
Z33(5)	PAG8	D2	68Ω	PAG8 PT 0 VALID H
Z71(3)	PAG8	D2	68Ω	-PAG8 PT 0 VALID H
Z11(1)	PAG8	D4	68Ω	PAG8 PT 0 VALID A H
Z12(10)	PAG8	B4	68Ω	PAG8 PT 0 VALID B H
Z33(6)	PAG8	D2	68Ω	-PAG8 PT 1 VALID H
Z24(8)	PAG8	D1	68Ω	PAG8 PT 1 VALID A H
Z52(10)	PAG8	B1	68Ω	PAG8 PT 1 VALID B H
Z60(10)	PAG8	A6	68Ω	-PAG8 PT DIR CLR A H
Z25(8)	PAG8	A6	68Ω	-PAG8 PT DIR CLR B H
Z67(1)	PAG8	A6	68Ω	PAG8 SWEEP ALL H
Z54(10)	PAG9	A3	68Ω	-PAG9 PT 1 EVEN EN C H
Z18(8)	PAG9	A3	68Ω	-PAG9 PT 1 EVEN EN D H
Z2(1)	PAG9	D1	68Ω	PAG9 PT 1 MATCH H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
Z67(3)	PAG9	D1	68Ω	-PAG9 PT 1 MATCH H
Z67(6)	PAG9	D2	68Ω	PAG9 PT 1 NO MATCH IN A H
Z26(10)	PAG9	A3	68Ω	-PAG9 PT 1 ODD EN C H
Z18(10)	PAG9	A3	68Ω	-PAG9 PT 1 ODD EN D H
Z12(1)	PAG9	B2	68Ω	PAG9 PT 1 WR C H
Z56(5)	PAG9	B1	68Ω	-PAG9 PT 1 WR C H
Z56(8)	PAG9	B1	68Ω	-PAG9 PT 1 WR D H
Z11(8)	PAG9	B7	68Ω	PAG9 TB 1 DIR H
Z20(5)	PAG9	B7	68Ω	-PAG9 TB 1 DIR EN H
Z67(8)	PAG9	A4	68Ω	PAG9 TB 1 WR TWO H
Z7(10)	PAG2	D7	68Ω	PMA3 PA 14 H
Z6(10)	PAG2	D5	68Ω	PMA3 PA 15 H
Z6(5)	PAG2	D5	68Ω	PMA3 PA 16 H
Z34(10)	PAG2	D4	68Ω	PMA3 PA 17 H
Z45(3)	PAG2	D4	68Ω	PMA3 PA 18 H
Z45(8)	PAG2	D3	68Ω	PMA3 PA 19 H
Z9(8)	PAG7	D5	68Ω	PMA3 PA 20 H
Z41(3)	PAG7	D4	68Ω	PMA3 PA 21 H
Z34(5)	PAG7	D4	68Ω	PMA3 PA 22 H
Z42(10)	PAG7	D3	68Ω	PMA3 PA 23 H
Z37(6)	PAG7	D6	68Ω	PMA3 PA 24 H
Z37(10)	PAG7	D5	68Ω	PMA3 PA 25 H
Z26(6)	PAG1	C8	68Ω	PT IN 00 H
Z18(1)	PAG1	B8	68Ω	PT IN 01 H
Z26(1)	PAG1	C6	68Ω	PT IN 02 H
Z18(6)	PAG1	B6	68Ω	PT IN 03 H
Z28(10)	PAG1	C4	68Ω	PT IN 04 H
Z55(8)	PAG2	C7	68Ω	PT IN 05 H
Z64(10)	PAG2	B7	68Ω	PT IN 06 H
Z55(6)	PAG2	C5	68Ω	PT IN 07 H
Z28(1)	PAG2	B5	68Ω	PT IN 08 H
Z55(5)	PAG2	C2	68Ω	PT IN 09 H
Z55(1)	PAG2	B2	68Ω	PT IN 10 H
Z22(10)	PAG7	C7	68Ω	PT IN 11 H
Z57(10)	PAG7	B7	68Ω	PT IN 12 H
Z22(5)	PAG7	C5	68Ω	PT IN 13 H
Z57(8)	PAG7	B5	68Ω	PT IN 14 H
Z56(3)	PAG7	C2	68Ω	PT IN 15 H
Z30(6)	PAG7	B2	68Ω	PT IN 16 H
Z22(1)	PAG1	B3	68Ω	PT IN 17 H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. S. Toomey
CHK D. DELLORCO
DATE 06-AUG-84
ENG. C. KACZOR
DATE 06-AUG-84
DATE 06-AUG-84
BOARD LOCATION: 4AF30
SHEET 2 OF 3
XTRA1:<MCA25.M9520.REV8>M9552.DRW 24-JUL-84 11:47
NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: ETCH PAGER TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-RES	B

MRO 1

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
Z54(8)	PAG1	C8	68Ω	PT IN 18 H
Z50(1)	PAG1	A8	68Ω	PT IN 19 H
Z54(3)	PAG1	C6	68Ω	PT IN 20 H
Z62(1)	PAG1	A6	68Ω	PT IN 21 H
Z54(1)	PAG1	C4	68Ω	PT IN 22 H
Z55(10)	PAG2	C7	68Ω	PT IN 23 H
Z64(8)	PAG2	A7	68Ω	PT IN 24 H
Z28(5)	PAG2	B5	68Ω	PT IN 25 H
Z56(10)	PAG2	A5	68Ω	PT IN 26 H
Z55(3)	PAG2	C2	68Ω	PT IN 27 H
Z28(3)	PAG2	A2	68Ω	PT IN 28 H
Z70(1)	PAG7	C7	68Ω	PT IN 29 H
Z30(1)	PAG7	A7	68Ω	PT IN 30 H
Z22(6)	PAG7	C5	68Ω	PT IN 31 H
Z32(10)	PAG7	B5	68Ω	PT IN 32 H
Z30(5)	PAG7	C2	68Ω	PT IN 33 H
Z56(6)	PAG7	B2	68Ω	PT IN 34 H
Z46(3)	PAG1	A3	68Ω	PT IN 35 H
Z13(5)	PAG5	A4	68Ω	SH AR PAR ODD A H
Z20(3)	PAG3	C6	68Ω	VMA2 VMA 13 A H
Z70(10)	PAG3	C6	68Ω	VMA2 VMA 14 A H
Z70(8)	PAG3	C6	68Ω	VMA2 VMA 15 A H
Z19(3)	PAG3	D4	68Ω	VMA2 VMA 16 A H
Z70(3)	PAG3	B7	68Ω	VMA2 VMA 17 H
Z19(5)	PAG3	C4	68Ω	VMA2 VMA 17 A H
Z42(6)	PAG3	D8	68Ω	VMA2 VMA 18 H
Z69(1)	PAG3	B7	68Ω	VMA2 VMA 19 H
Z70(6)	PAG3	B7	68Ω	VMA2 VMA 20 H
Z42(5)	PAG3	D8	68Ω	VMA2 VMA 21 H
Z36(8)	PAG3	D8	68Ω	VMA2 VMA 22 H
Z42(3)	PAG3	C8	68Ω	VMA2 VMA 23 H
Z51(10)	PAG3	A5	68Ω	VMA2 VMA 24 H
Z51(6)	PAG3	A7	68Ω	VMA2 VMA 25 H
Z61(1)	PAG3	A7	68Ω	VMA2 VMA 26 H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. S. Toomey DATE 06-AUG-84 ENG. C. KACZOR DATE 06-AUG-84
CHK D. DELLORCO DATE 06-AUG-84 BOARD LOCATION: 4AF30
SHEET 3 OF 3
XTRA:<MCA25.M9320.REV8>M8553.DAT 24-JUL-84 11:49 NEXT HIGHER ASSEMBLY: D-DD-M855-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: ETCH PAGER TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M855-0-RES	B

MRO 1

DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M856-00	MODULE REVISION	A1
E-UA-M856-0-0	2		CHD	A
K-PL-M856-0-DBP	2		PART LIST, M856	A
D-CS-M856-0-CHD1	1		CACHE DATA BITS [N+00],[N+01]	A
D-CS-M856-0-CHD2	1		CACHE DATA BITS [N+02],[N+03]	A
D-CS-M856-0-CHD3	1		CACHE DATA BITS [N+04],[N+05]	A
D-CS-M856-0-CHD4	1		CACHE DATA BITS [N+06],[N+07]	A
D-CS-M856-0-CHD5	1		CACHE DATA BIT [N+08]	A
D-CS-M856-0-CHD6	1		CACHE DATA ADDRESSING LOGIC	A
D-CS-M856-0-CHD7	1		CACHE SEL LOGIC TERMINATORS	A
D-CS-M856-0-CHD8	1		CACHE DATA TERMINATORS	A
D-CS-M856-0-RES	1		CACHE DATA TERMINATORS	A
D-CS-M856-0-RES	1		CACHE DATA TERMINATORS	A
K-PC-M856-0-DBI	-		P.C. DESIGN DATA BASE TAPE	A
D-DD-5017662-0	1		DRAWING DIRECTORY, 5017662	REF

REVISIONS — CHK | CHANGE NO. | REV

digital — DRN. D. Toomby, DATE 13-SEP-84; CHK'D. D. DELLORCO, DATE 13-SEP-84; ENG. C.A. JENS, DATE 13-SEP-84; BOARD LOCATION: N/A; SHEET 1 OF 1

DSK:M856A.T2P[4,21] 13-SEP-84 14:24; NEXT HIGHER ASSEMBLY: MCA25

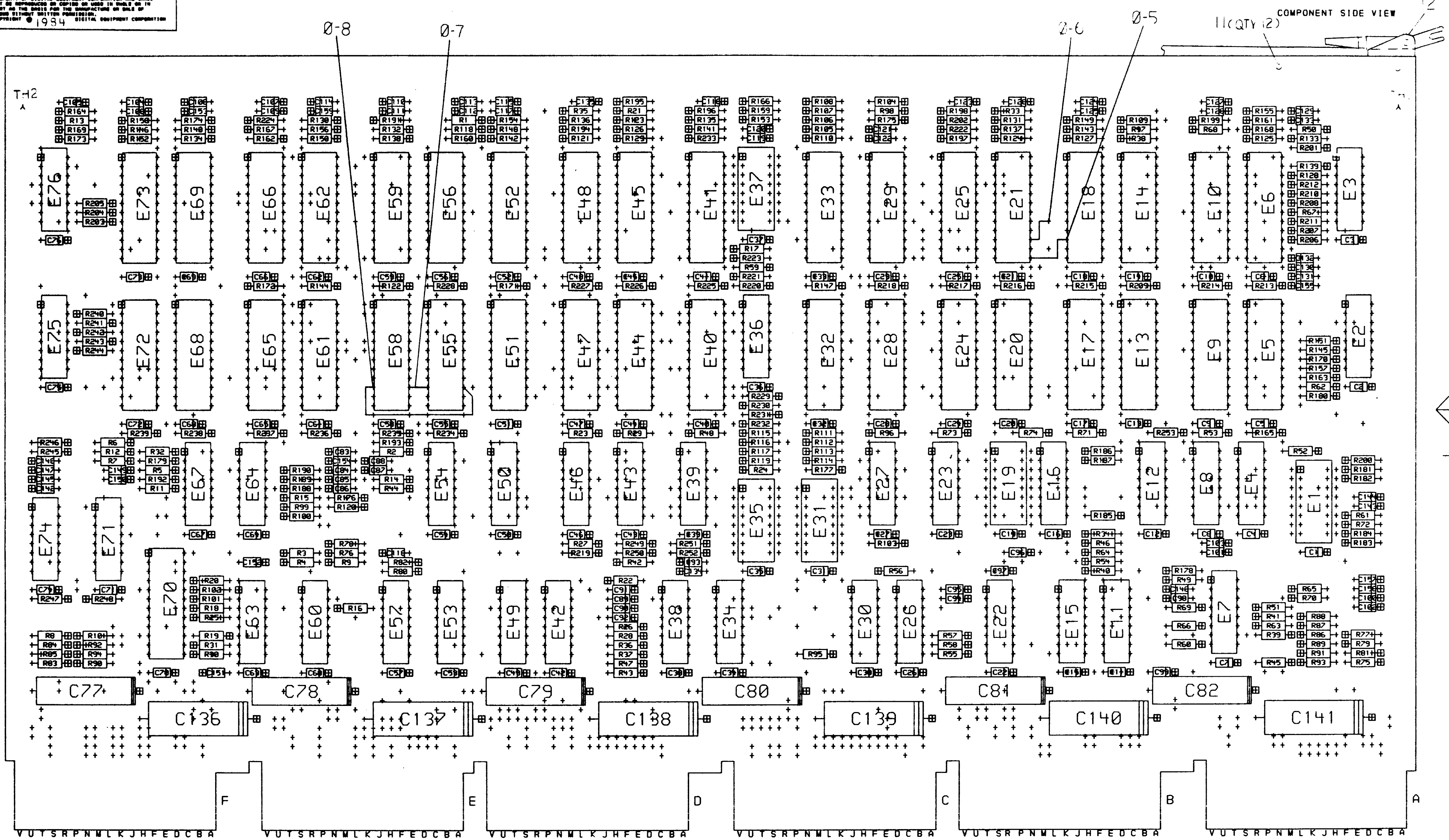
FIRST USED ON OPTION/MODEL: KL10-PW

TITLE: M856 DRAWING DIRECTORY

SIZE D | CODE DD | NUMBER M856-0 | REV. A

1 MFU

COMPONENT SIDE VIEW



NOTES 1. SPARES ARE: E1, E19, E31, E35, E37.

STEP & REPEAT		
STEP &	↑ Y AXIS Ø	STEP Ø TIMES
REPEAT	→ X AXIS Ø	STEP Ø TIMES

ETCH REV. A1

SIGNATURES	DATE
DRN. D.E.OLSON	19MAR84
CHK D. KW Caunter	21May84
MECH.ENG.	
PROJ.ENG.	
PROD. Bruce Klein	13 Jul84
SCALE 2/1	
SHT. 1 OF 2	

digital

TITLE CHD

SIZE	CODE	NUMBER	REV
D	UA	M856-0-0	A

TOP LOC. D-DD-M856-Ø

1 MS# 112600A

REWORK INSTRUCTIONS

FIRST RELEASE

0-1 THRU 0-4 FOR ETCH CUTS REFER TO
D-EC-5017662-0-0

WIRE ADDS, SIDE 1, AS SHOWN (P/N 9105740-55)
0-5 E21(13) TO E18(10)
0-6 E21(15) TO PTH RIGHT OF E21(17)
0-7 E58(15) TO E55(10)
0-8 E58(10) TO E55(15)

REVISIONS		
CHK	CHANGE NO.	REV

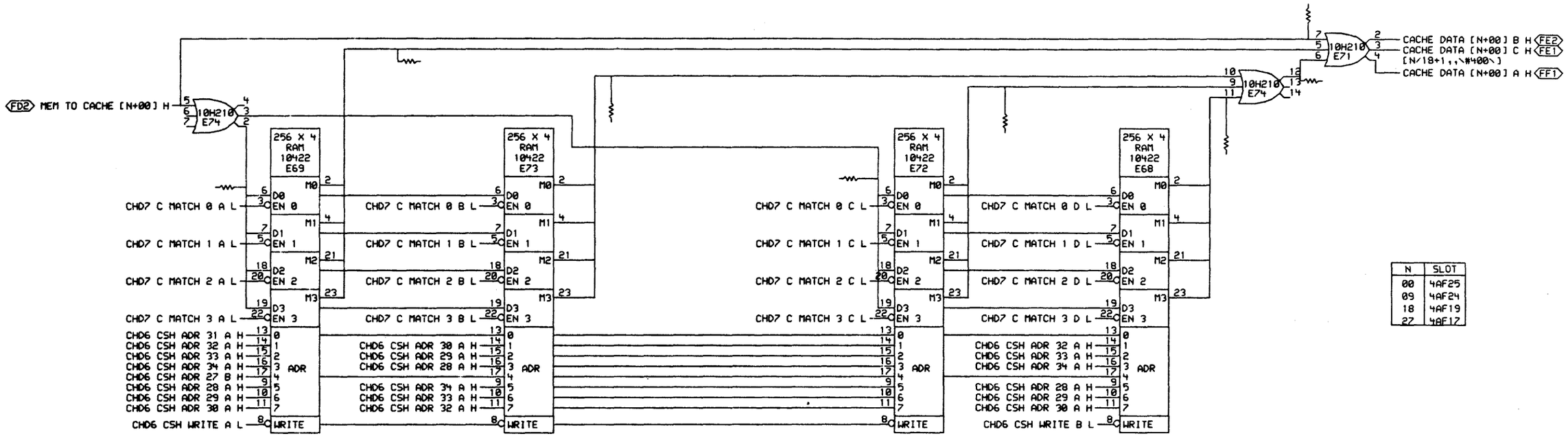
digital

DRN. S. Toomey DATE 02-MAY-84 ENG. Carl DATE 3-Sep-84
CHK D. DATE BOARD LOCATION:
SHEET 2 OF 2
DSK:M856A,T2P(4,36) 02-MAY-84 22:44 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: D-DD-M856-0

TITLE: CHD

SIZE	CODE	NUMBER	REV.
D	UA	M856-0-0	A

MRO



N	SLOT
00	4AF25
09	4AF24
18	4AF19
27	4AF17

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. T. Toomby
CHK'D. D. DELLORCO

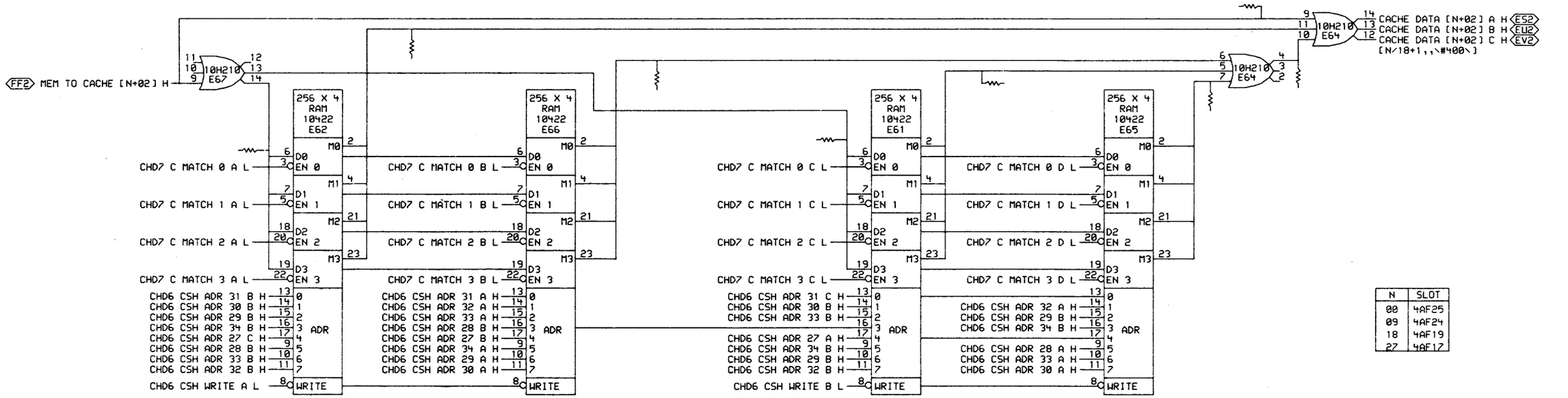
DATE	ENG.	DATE
06-AUG-84	C. A. JENS	06-AUG-84
DATE	BOARD LOCATION:	
06-AUG-84	SHEET 1 OF 1	

XTRA1:<MCA25.M9521.REV8>PCHDA.DRW 23-JUL-84 14:09 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MCA25 D-DD-M856-0

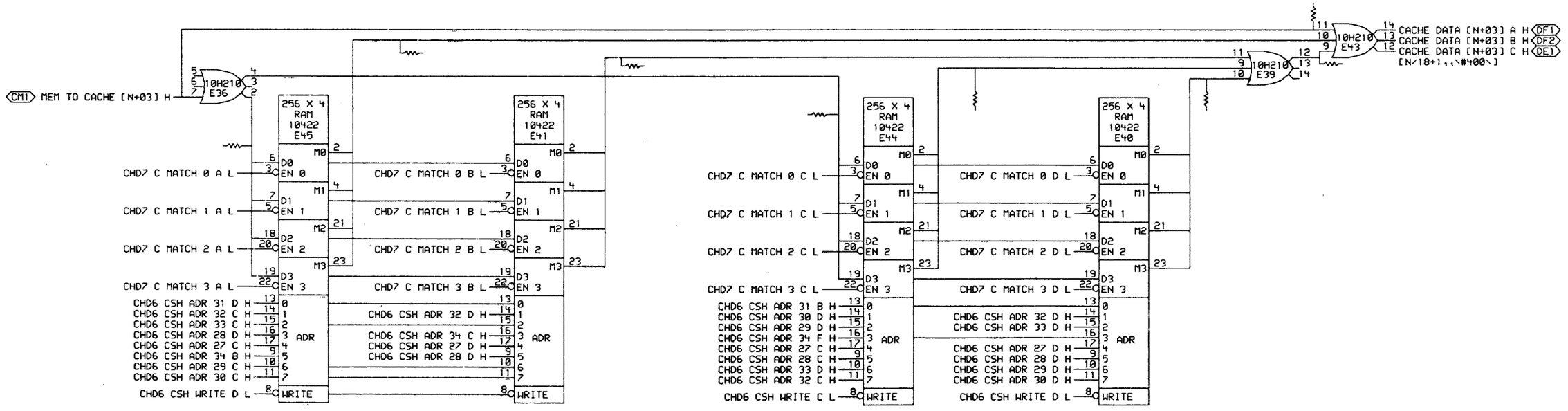
TITLE: CACHE DATA BITS [N+00],[N+01]

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD1	A

MRO



N	SLOT
00	4AF25
09	4AF24
18	4AF19
27	4AF17



REVISIONS		
CHK	CHANGE NO.	REV

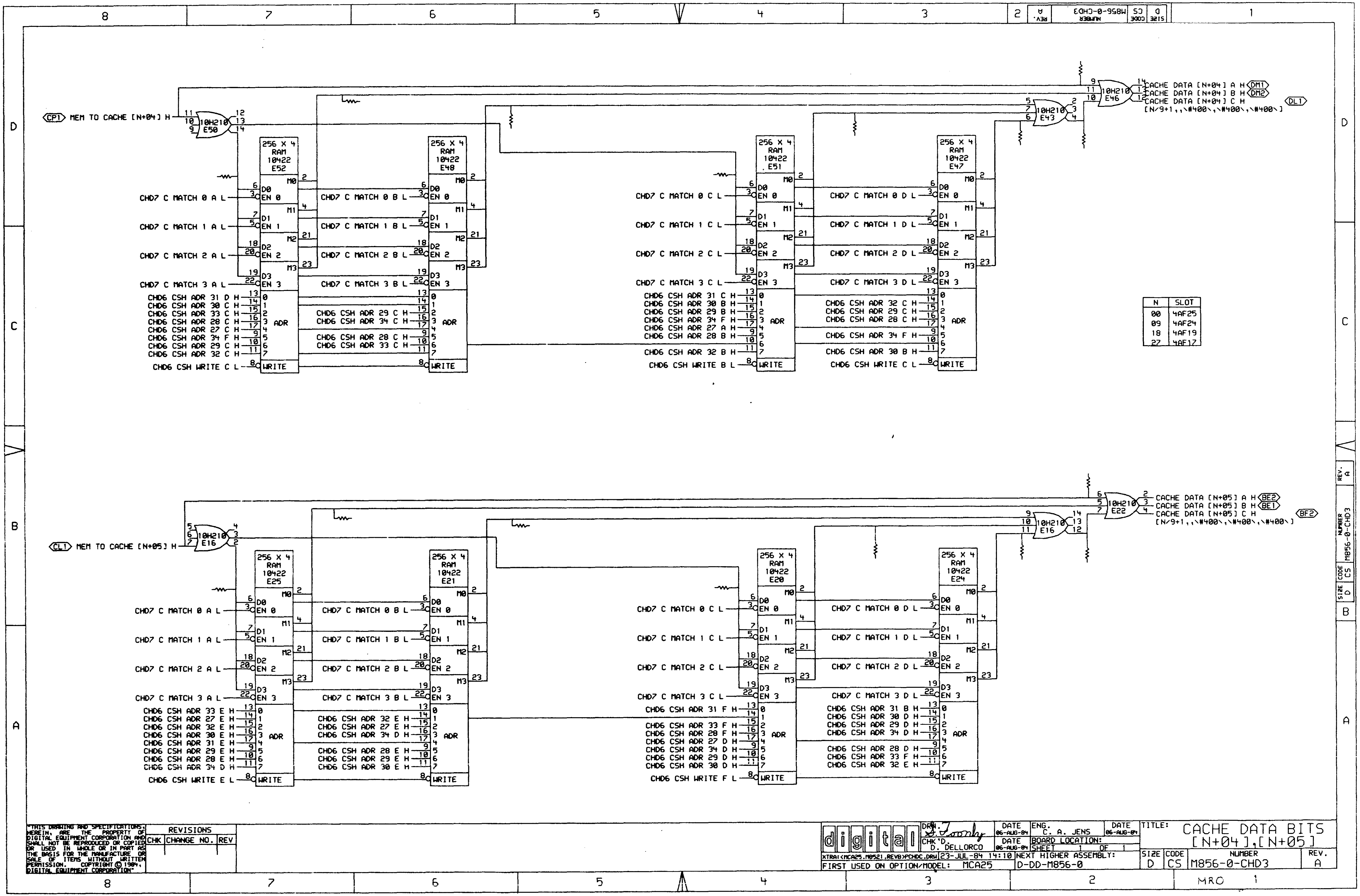
digital

DRN. J. Toomy 06-AUG-84 | ENG. C. A. JENS 06-AUG-84
CHK D. DELLORCO 06-AUG-84 | BOARD LOCATION:
XTRA:<MCA25.M8521.REVB>PCHDB.DRW 23-JUL-84 14:09 | SHEET 1 OF 1
FIRST USED ON OPTION/MODEL: MCA25 | NEXT HIGHER ASSEMBLY: D-DD-M856-0

TITLE: CACHE DATA BITS [N+02],[N+03]

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD2	A

MRO 1



CP1 MEM TO CACHE [N+04] H
10H210 E50
256 X 4 RAM 10422 E52
256 X 4 RAM 10422 E48
256 X 4 RAM 10422 E51
256 X 4 RAM 10422 E47
10H210 E46
10H210 E43
CACHE DATA [N+04] A H DM1
CACHE DATA [N+04] B H DM2
CACHE DATA [N+04] C H DL1
[N/9+1,,\#400\,\#400\,\#400\]
CHD7 C MATCH 0 A L
CHD7 C MATCH 1 A L
CHD7 C MATCH 2 A L
CHD7 C MATCH 3 A L
CHD7 C MATCH 0 B L
CHD7 C MATCH 1 B L
CHD7 C MATCH 2 B L
CHD7 C MATCH 3 B L
CHD7 C MATCH 0 C L
CHD7 C MATCH 1 C L
CHD7 C MATCH 2 C L
CHD7 C MATCH 3 C L
CHD7 C MATCH 0 D L
CHD7 C MATCH 1 D L
CHD7 C MATCH 2 D L
CHD7 C MATCH 3 D L
CHD6 CSH ADR 31 D H
CHD6 CSH ADR 30 C H
CHD6 CSH ADR 33 C H
CHD6 CSH ADR 28 C H
CHD6 CSH ADR 27 C H
CHD6 CSH ADR 34 F H
CHD6 CSH ADR 29 C H
CHD6 CSH ADR 32 C H
CHD6 CSH WRITE C L
CHD6 CSH ADR 29 C H
CHD6 CSH ADR 34 C H
CHD6 CSH ADR 28 C H
CHD6 CSH ADR 33 C H
CHD6 CSH ADR 31 C H
CHD6 CSH ADR 30 B H
CHD6 CSH ADR 29 B H
CHD6 CSH ADR 34 F H
CHD6 CSH ADR 27 A H
CHD6 CSH ADR 28 B H
CHD6 CSH ADR 32 B H
CHD6 CSH WRITE B L
CHD6 CSH ADR 32 C H
CHD6 CSH ADR 29 C H
CHD6 CSH ADR 28 C H
CHD6 CSH ADR 34 F H
CHD6 CSH ADR 30 B H
CHD6 CSH WRITE C L
N SLOT
00 4AF25
09 4AF24
18 4AF19
27 4AF17
CL1 MEM TO CACHE [N+05] H
10H210 E16
256 X 4 RAM 10422 E25
256 X 4 RAM 10422 E21
256 X 4 RAM 10422 E20
256 X 4 RAM 10422 E24
10H210 E22
CACHE DATA [N+05] A H BE2
CACHE DATA [N+05] B H BE1
CACHE DATA [N+05] C H BF2
[N/9+1,,\#400\,\#400\,\#400\]
CHD6 CSH ADR 33 E H
CHD6 CSH ADR 27 E H
CHD6 CSH ADR 32 E H
CHD6 CSH ADR 30 E H
CHD6 CSH ADR 31 E H
CHD6 CSH ADR 29 E H
CHD6 CSH ADR 28 E H
CHD6 CSH ADR 34 D H
CHD6 CSH WRITE E L
CHD6 CSH ADR 32 E H
CHD6 CSH ADR 27 E H
CHD6 CSH ADR 34 D H
CHD6 CSH ADR 28 E H
CHD6 CSH ADR 29 E H
CHD6 CSH ADR 30 E H
CHD6 CSH ADR 31 F H
CHD6 CSH ADR 33 F H
CHD6 CSH ADR 28 F H
CHD6 CSH ADR 27 D H
CHD6 CSH ADR 34 D H
CHD6 CSH ADR 29 D H
CHD6 CSH ADR 30 D H
CHD6 CSH WRITE F L
CHD6 CSH ADR 31 B H
CHD6 CSH ADR 30 D H
CHD6 CSH ADR 29 D H
CHD6 CSH ADR 34 D H
CHD6 CSH ADR 28 D H
CHD6 CSH ADR 33 F H
CHD6 CSH ADR 32 E H
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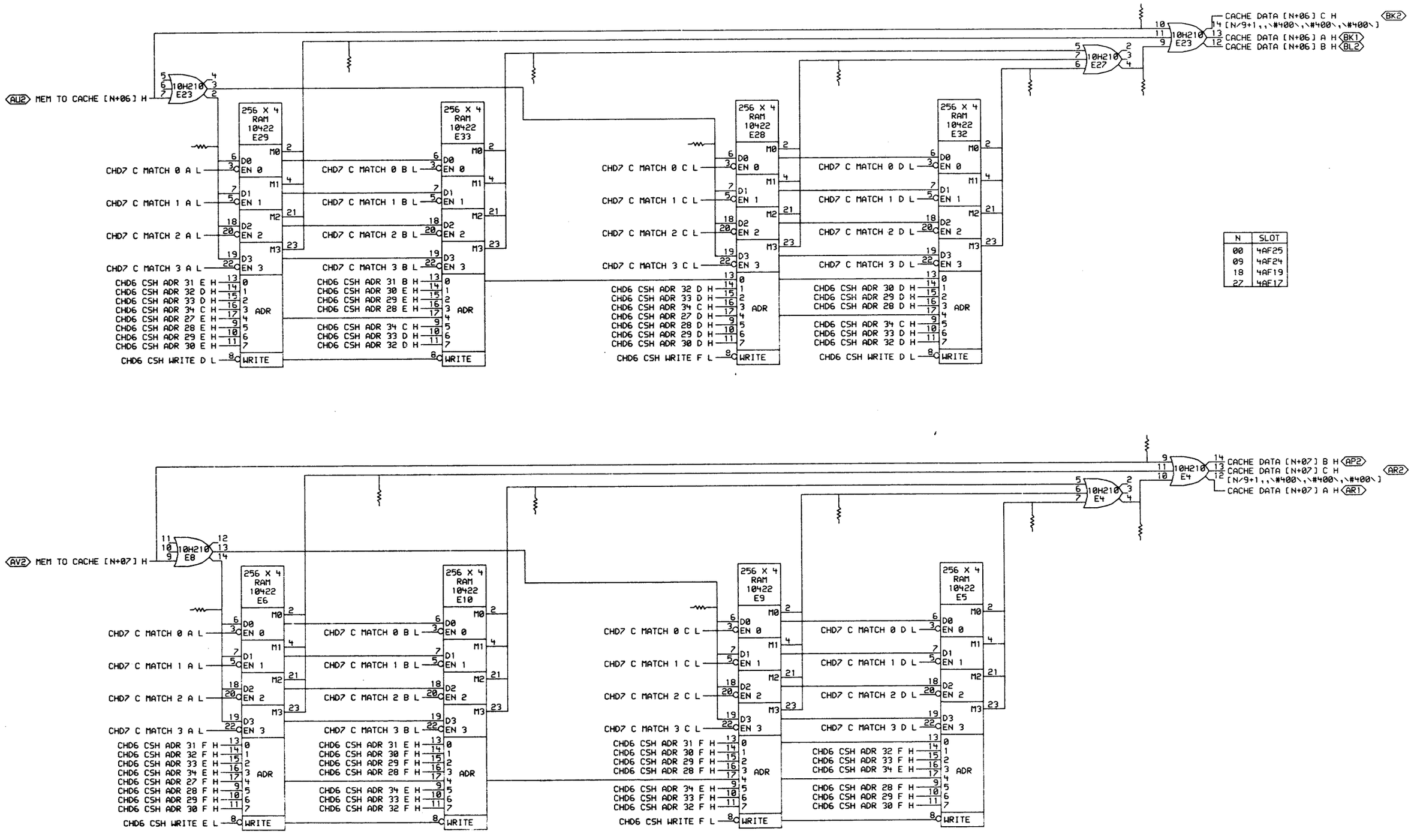
REVISIONS
CHK CHANGE NO. REV
digital
DRN. DATE 06-AUG-84
CHK'D. D. DELLORCO DATE 06-AUG-84
ENG. C. A. JENS DATE 06-AUG-84
BOARD LOCATION:
SHEET 1 OF 1
XTRA:<MCA25.M8521.REVB>PCHDC.DRW 23-JUL-84 14:10
NEXT HIGHER ASSEMBLY: D-DD-M856-0
FIRST USED ON OPTION/MODEL: MCA25
TITLE: CACHE DATA BITS [N+04],[N+05]
SIZE D CODE CS NUMBER M856-0-CHD3 REV. A
MRO 1



N	SLOT
00	4AF25
09	4AF24
18	4AF19
27	4AF17

REVISIONS		
CHK	CHANGE NO.	REV

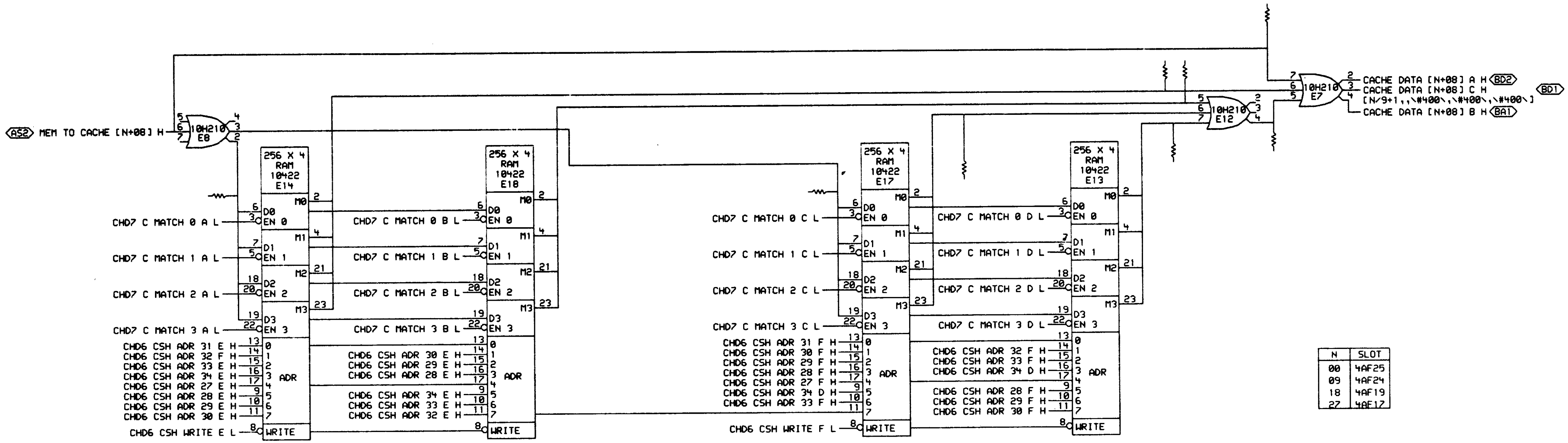
digital

DRN. Toomy | DATE 06-AUG-84 | ENG. C. A. JENS | DATE 06-AUG-84
CHK 'D. D. DELLORCO | DATE 06-AUG-84 | BOARD LOCATION:
XTRA1:<MCA25.M8521.REVB>PCHDD.DRW 23-JUL-84 14:11 | SHEET 1 OF 1 | NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MCA25 | D-DD-M856-0

TITLE: CACHE DATA BITS [N+06],[N+07]

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD4	A

MRO 1



N	SLOT
00	4AF25
09	4AF24
18	4AF19
27	4AF17

REVISIONS		
CHK	CHANGE NO.	REV

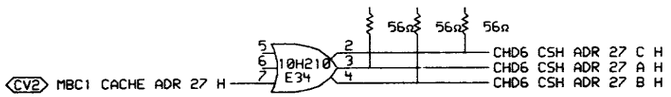
digital

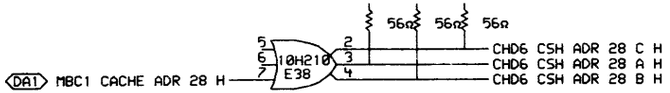
DRN. (signature) DATE 06-AUG-84
CHK'D. D. DELLORCO DATE 06-AUG-84
ENG. C. A. JENS DATE 06-AUG-84
BOARD LOCATION:
SHEET 1 OF 1
XTRA:<MCA25.M8521.REVB>PCHDE.DRW 23-JUL-84 14:11
NEXT HIGHER ASSEMBLY: D-DD-M856-0
FIRST USED ON OPTION/MODEL: MCA25

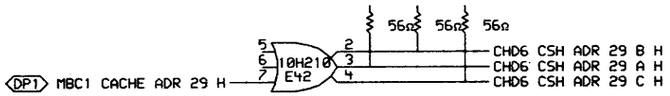
TITLE: CACHE DATA BIT [N+08]

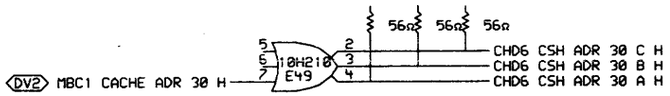
SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD5	A

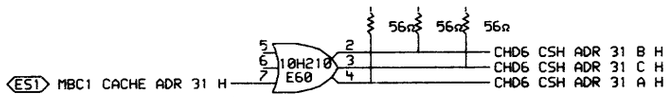
MRO 1











N	SLOT
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09	4AF24
18	4AF19
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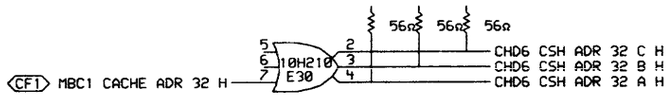
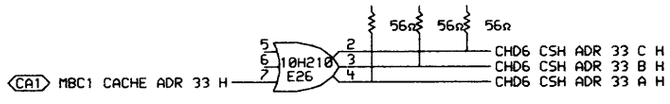
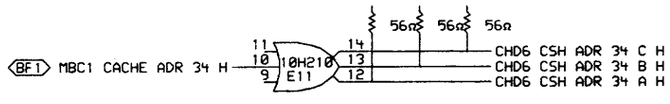
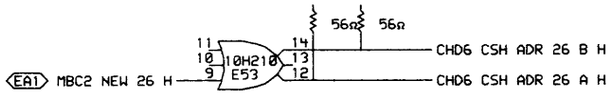
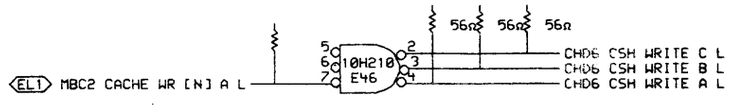
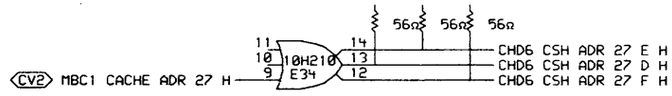


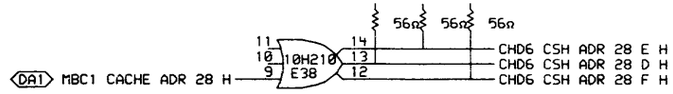


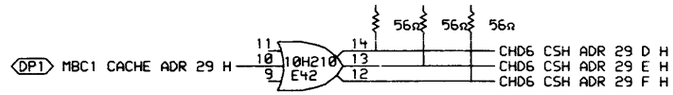


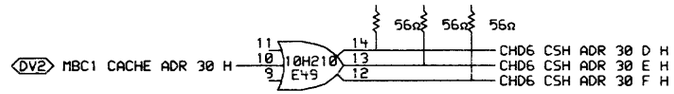


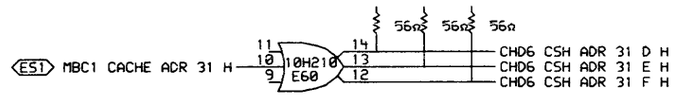


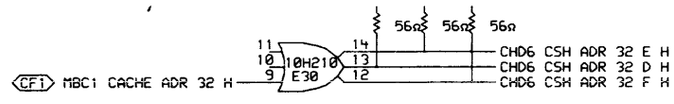


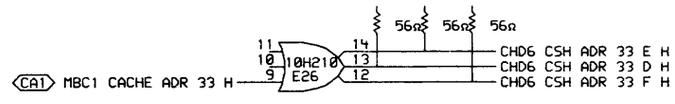


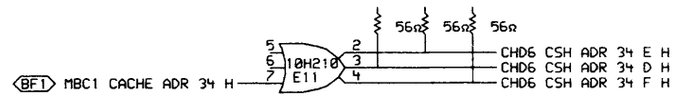


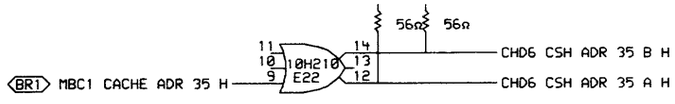


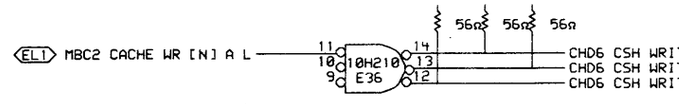












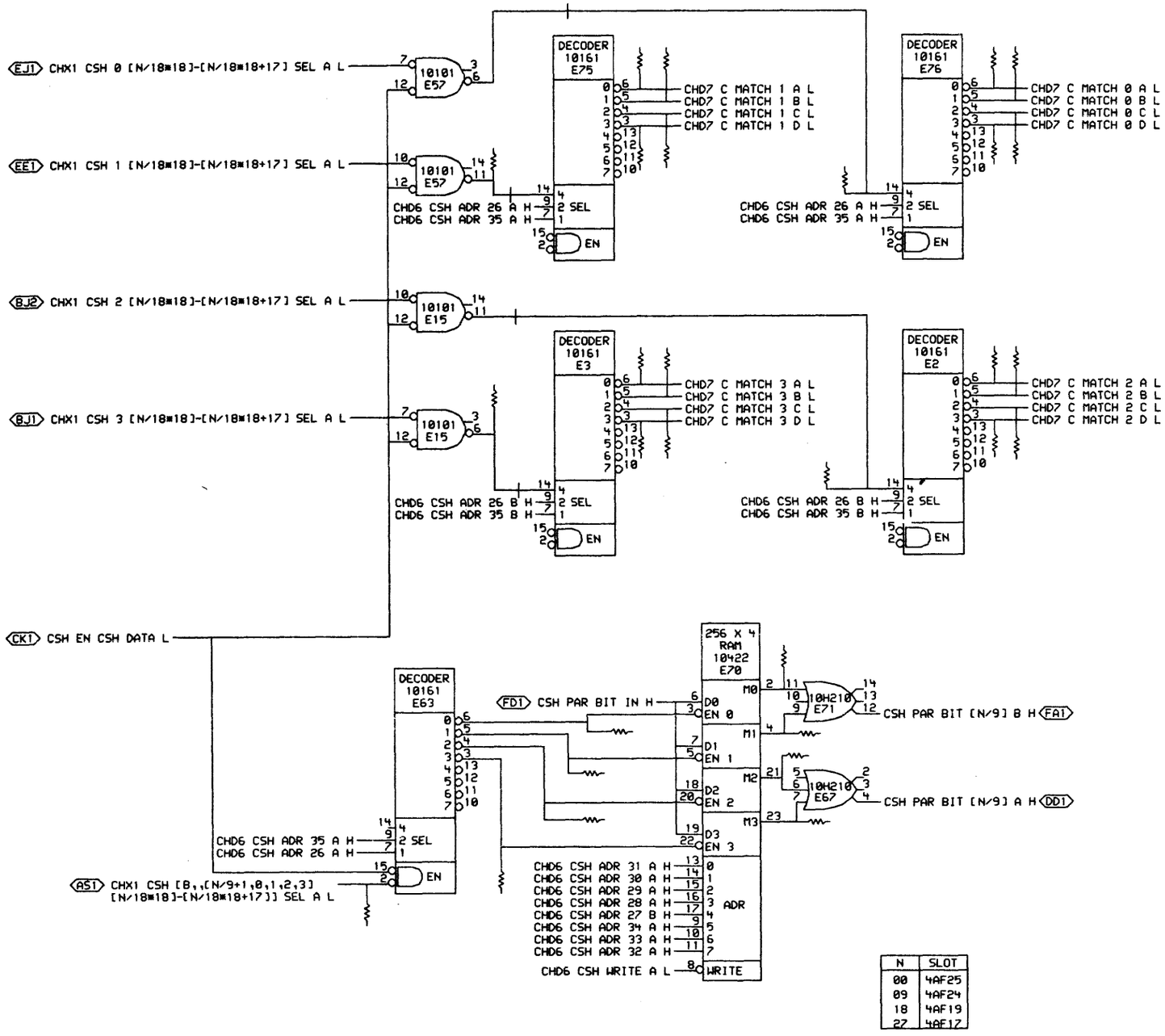
REVISIONS		
CHK	CHANGE NO.	REV

DRN J.Toomy	DATE 06-AUG-84	ENG. C. A. JENS	DATE 06-AUG-84
CHK D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION:	
		SHEET 1 OF 1	
XTRA:<MCA25.M9521.REVB>PCHDF.DRW 23-JUL-84 14:12		NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL: MCA25		D-DD-M856-0	

TITLE: CACHE DATA ADDRESSING LOGIC

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD6	A

REV. A | NUMBER M856-0-CHD6 | CODE CS | SIZE D



N	SLOT
00	4AF25
09	4AF24
18	4AF19
27	4AF17

CF2 [B,CHD7 TERM 00 [N] H, [N/27+1,CHD7 TERM 00 [N] H\#400\, MBC2 NEW 26 H]]

FP2 [B,CHD7 TERM 01 H,[N/9+1,CHD7 TERM 01 00 H\#400\, CHD7 TERM 01 09 H\#400\,CCW BUF ADR 0 H, MBC1 CACHE ADR 28 H]]

AF1 [B,CHD7 TERM 02 [N] H,[N/9+1, CHD7 TERM 02 00 H\#400\,CHX1 CSH 3 00-17 SEL A L, CHD7 TERM 02 18 H\#400\,MBC1 CACHE ADR 32 H]]

FP1 [B,CHD7 TERM 03 [N] H,[N/9+1,CSH PAR BIT IN H, CHD7 TERM 03 09 H\#400\, CCW BUF ADR 1 H,MBC1 CACHE ADR 29 H]]

AF2 [B,CHD7 TERM 04 [N] H,[N/27+1, CHD7 TERM 04 [N] H\#400\,MBC1 CACHE ADR 33 H]]

FR1 [B,CHD7 TERM 05 [N] H,[N/27+1, CHD7 TERM 05 [N] H\#400\,MBC1 CACHE ADR 30 H]]

AL1 [B,CHD7 TERM 06 [N] H,[N/9+1, CHD7 TERM 06 00 H\#400\,CHD7 TERM 06 09 H\#400\, PMA 34 H,MBC1 CACHE ADR 34 H]]

AM1 [B,CHD7 TERM 07 [N] H,[N/27+1, CHD7 TERM 07 [N] H\#400\,MBC1 CACHE ADR 35 H]]

AM2 [B,CHD7 TERM 08 [N] H,[N/27+1, CHD7 TERM 08 [N] H\#400\, MBC1 CACHE ADR 35 L]]

AL2 CHD7 TERM 09 [N] H\#400\

FS1 [B,CHD7 TERM 10 [N] H,[N/27+1, CHD7 TERM 10 [N] H\#400\, MBC1 CACHE ADR 31 H]]

FS2 [B,CHD7 TERM 11 [N] H,[N/9+1, CHD7 TERM 11 00 H\#400\,CHD7 TERM 11 09 H\#400\, CACHE EXISTS L,CHX1 CSH 0 18-35 SEL A L]]

FR2 [B,CHD7 TERM 12 [N] H,[N/9+1,PMA5 EBOX PAGED H, CHD7 TERM 12 09 H\#400\,CHX1 CSH 1 18-35 SEL A L, CCW BUF ADR 2 H]]

AD2 CHD7 TERM 13 [N] H\#400\

AE2 [B,CHD7 TERM 14 [N] H,[N/27+1, CHD7 TERM 14 [N] H\#400\, CCL CH BUF EN L]]

AE1 CHD7 TERM 15 [N] H\#400\

AD1 CHD7 TERM 16 [N] H\#400\

AP1 [B,CHD7 TERM 17 H,[N/9+1, CSH EN CSH DATA L, CHX1 CSH 2 00-17 SEL A L, PMA 35 H,MBC1 CACHE ADR 27 H]]

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Toomey | DATE 06-AUG-84 | ENG. C. A. JENS | DATE 06-AUG-84

CHK D. DELLORCO | DATE 06-AUG-84 | BOARD LOCATION: | SHEET 1 OF 1

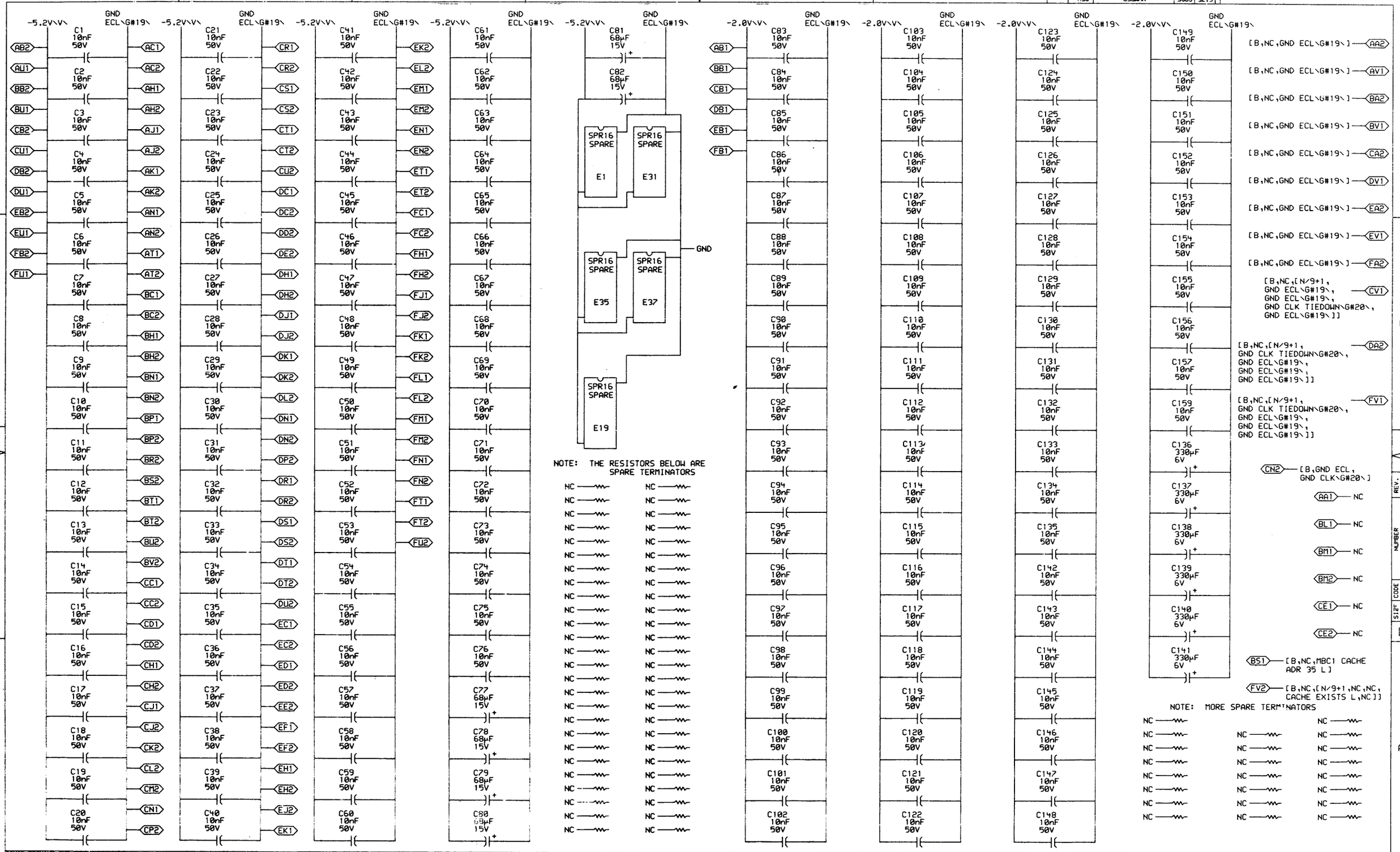
XTRA:<MCA25.M8521.REVB>PCHDG.DRW 23-JUL-84 14:13 | NEXT HIGHER ASSEMBLY: D-DD-M856-0

FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE SEL LOGIC TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD7	A

MRO 1



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REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Toomey — DATE 06-AUG-84 — ENG. C. A. JENS — DATE 06-AUG-84

CHK'D. D. DELLORCO — DATE 06-AUG-84 — BOARD LOCATION:

XTRA:<MCA25.M8521.REV8>PCHDH.DRW 23-JUL-84 14:14 — SHEET 1 OF 1

FIRST USED ON OPTION/MODEL: MCA25 — NEXT HIGHER ASSEMBLY: D-DD-M856-0

TITLE: CACHE DATA POWER, GND, CAP

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-CHD8	A

4RO 1

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R52(1)	CHD4	B5	68Ω	%E10(2)
R69(1)	CHD5	C2	68Ω	%E12(4)
R178(1)	CHD5	C3	68Ω	%E13(2)
R66(1)	CHD5	C3	68Ω	%E14(2)
R151(1)	CHD7	C5	68Ω	%E15(11)
R50(1)	CHD7	C6	68Ω	%E15(6)
R55(1)	CHD3	B2	68Ω	%E16(12)
R197(1)	CHD3	B7	68Ω	%E16(2)
R218(1)	CHD3	B4	68Ω	%E16(3)
R185(1)	CHD5	C4	68Ω	%E17(2)
R186(1)	CHD5	C3	68Ω	%E18(2)
R34(1)	CHD3	B3	68Ω	%E20(2)
R46(1)	CHD3	B5	68Ω	%E21(2)
R110(1)	CHD4	D7	68Ω	%E23(2)
R229(1)	CHD4	D4	68Ω	%E23(3)
R187(1)	CHD3	B2	68Ω	%E24(2)
R58(1)	CHD3	B7	68Ω	%E25(2)
R57(1)	CHD4	D2	68Ω	%E27(4)
R114(1)	CHD4	D4	68Ω	%E28(2)
R103(1)	CHD4	D6	68Ω	%E29(2)
R113(1)	CHD4	D3	68Ω	%E32(2)
R177(1)	CHD4	D5	68Ω	%E33(2)
R129(1)	CHD2	B7	68Ω	%E36(2)
R227(1)	CHD2	B4	68Ω	%E36(4)
R250(1)	CHD2	B2	68Ω	%E39(12)
R61(1)	CHD4	B2	68Ω	%E4(4)
R251(1)	CHD2	B2	68Ω	%E40(2)
R24(1)	CHD2	B5	68Ω	%E41(2)
R27(1)	CHD3	D2	68Ω	%E43(4)
R252(1)	CHD2	B4	68Ω	%E44(2)
R249(1)	CHD2	B6	68Ω	%E45(2)
R26(1)	CHD3	D2	68Ω	%E47(2)
R29(1)	CHD3	D5	68Ω	%E48(2)
R51(1)	CHD4	B3	68Ω	%E5(2)
R23(1)	CHD3	D4	68Ω	%E50(13)
R126(1)	CHD3	D7	68Ω	%E50(14)
R235(1)	CHD1	B4	68Ω	%E50(2)
R142(1)	CHD1	B7	68Ω	%E50(3)
R42(1)	CHD3	D3	68Ω	%E51(2)
R22(1)	CHD3	D7	68Ω	%E52(2)

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R82(1)	CHD1	B2	68Ω	%E54(4)
R14(1)	CHD1	B3	68Ω	%E55(2)
R2(1)	CHD1	B6	68Ω	%E56(2)
R242(1)	CHD7	D6	68Ω	%E57(11)
R173(1)	CHD7	D5	68Ω	%E57(6)
R44(1)	CHD1	B2	68Ω	%E58(2)
R120(1)	CHD1	B5	68Ω	%E59(2)
R182(1)	CHD4	B6	68Ω	%E6(2)
R190(1)	CHD2	D4	68Ω	%E61(2)
R188(1)	CHD2	D6	68Ω	%E62(2)
R20(1)	CHD7	A6	68Ω	%E63(3)
R101(1)	CHD7	B6	68Ω	%E63(4)
R18(1)	CHD7	B6	68Ω	%E63(5)
R102(1)	CHD7	B6	68Ω	%E63(6)
R99(1)	CHD2	D2	68Ω	%E64(4)
R15(1)	CHD2	D2	68Ω	%E65(2)
R189(1)	CHD2	D5	68Ω	%E66(2)
R236(1)	CHD2	D4	68Ω	%E67(13)
R150(1)	CHD2	D7	68Ω	%E67(14)
R245(1)	CHD1	D2	68Ω	%E68(2)
R12(1)	CHD1	D6	68Ω	%E69(2)
R7(1)	CHD7	B5	68Ω	%E70(2)
R192(1)	CHD7	B5	68Ω	%E70(21)
R11(1)	CHD7	B5	68Ω	%E70(23)
R10(1)	CHD7	B5	68Ω	%E70(4)
R8(1)	CHD1	D3	68Ω	%E72(2)
R247(1)	CHD1	D5	68Ω	%E73(2)
R248(1)	CHD1	D2	68Ω	%E74(12)
R174(1)	CHD1	D7	68Ω	%E74(2)
R239(1)	CHD1	D4	68Ω	%E74(3)
R157(1)	CHD4	B4	68Ω	%E8(13)
R210(1)	CHD4	B7	68Ω	%E8(14)
R143(1)	CHD5	C7	68Ω	%E8(2)
R217(1)	CHD5	C4	68Ω	%E8(3)
R181(1)	CHD4	B4	68Ω	%E9(2)
R240(1)	CHD6	A6	56Ω	CHD6 CSH ADR 26 A H
R201(1)	CHD6	A6	56Ω	CHD6 CSH ADR 26 B H
R238(1)	CHD6	D6	56Ω	CHD6 CSH ADR 27 A H
R31(1)	CHD6	D6	56Ω	CHD6 CSH ADR 27 B H
R156(1)	CHD6	D6	56Ω	CHD6 CSH ADR 27 C H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R221(1)	CHD6	D2	56Ω	CHD6 CSH ADR 27 D H
R109(1)	CHD6	D2	56Ω	CHD6 CSH ADR 27 E H
R214(1)	CHD6	D2	56Ω	CHD6 CSH ADR 27 F H
R30(1)	CHD6	D6	56Ω	CHD6 CSH ADR 28 A H
R167(1)	CHD6	D6	56Ω	CHD6 CSH ADR 28 B H
R138(1)	CHD6	D6	56Ω	CHD6 CSH ADR 28 C H
R233(1)	CHD6	D2	56Ω	CHD6 CSH ADR 28 D H
R216(1)	CHD6	D2	56Ω	CHD6 CSH ADR 28 E H
R213(1)	CHD6	D2	56Ω	CHD6 CSH ADR 28 F H
R152(1)	CHD6	C6	56Ω	CHD6 CSH ADR 29 A H
R162(1)	CHD6	C6	56Ω	CHD6 CSH ADR 29 B H
R122(1)	CHD6	C6	56Ω	CHD6 CSH ADR 29 C H
R73(1)	CHD6	C2	56Ω	CHD6 CSH ADR 29 D H
R97(1)	CHD6	C2	56Ω	CHD6 CSH ADR 29 E H
R211(1)	CHD6	C2	56Ω	CHD6 CSH ADR 29 F H
R172(1)	CHD6	C6	56Ω	CHD6 CSH ADR 30 A H
R144(1)	CHD6	C6	56Ω	CHD6 CSH ADR 30 B H
R132(1)	CHD6	C6	56Ω	CHD6 CSH ADR 30 C H
R74(1)	CHD6	C2	56Ω	CHD6 CSH ADR 30 D H
R38(1)	CHD6	C2	56Ω	CHD6 CSH ADR 30 E H
R212(1)	CHD6	C2	56Ω	CHD6 CSH ADR 30 F H
R224(1)	CHD6	C6	56Ω	CHD6 CSH ADR 31 A H
R96(1)	CHD6	C6	56Ω	CHD6 CSH ADR 31 B H
R219(1)	CHD6	C6	56Ω	CHD6 CSH ADR 31 C H
R226(1)	CHD6	C2	56Ω	CHD6 CSH ADR 31 D H
R168(1)	CHD6	C2	56Ω	CHD6 CSH ADR 31 E H
R206(1)	CHD6	C2	56Ω	CHD6 CSH ADR 31 F H
R204(1)	CHD6	B6	56Ω	CHD6 CSH ADR 32 A H
R191(1)	CHD6	B6	56Ω	CHD6 CSH ADR 32 B H
R228(1)	CHD6	B6	56Ω	CHD6 CSH ADR 32 C H
R232(1)	CHD6	B2	56Ω	CHD6 CSH ADR 32 D H
R137(1)	CHD6	B2	56Ω	CHD6 CSH ADR 32 E H
R215(1)	CHD6	B2	56Ω	CHD6 CSH ADR 32 F H
R203(1)	CHD6	B6	56Ω	CHD6 CSH ADR 33 A H
R160(1)	CHD6	B6	56Ω	CHD6 CSH ADR 33 B H
R223(1)	CHD6	B6	56Ω	CHD6 CSH ADR 33 C H
R48(1)	CHD6	B2	56Ω	CHD6 CSH ADR 33 D H
R207(1)	CHD6	B2	56Ω	CHD6 CSH ADR 33 E H
R180(1)	CHD6	B2	56Ω	CHD6 CSH ADR 33 F H
R6(1)	CHD6	B6	56Ω	CHD6 CSH ADR 34 A H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R237(1)	CHD6	B6	56Ω	CHD6 CSH ADR 34 B H
R171(1)	CHD6	B6	56Ω	CHD6 CSH ADR 34 C H
R222(1)	CHD6	B2	56Ω	CHD6 CSH ADR 34 D H
R67(1)	CHD6	B2	56Ω	CHD6 CSH ADR 34 E H
R118(1)	CHD6	B2	56Ω	CHD6 CSH ADR 34 F H
R205(1)	CHD6	A2	56Ω	CHD6 CSH ADR 35 A H
R139(1)	CHD6	A2	56Ω	CHD6 CSH ADR 35 B H
R25(1)	CHD6	A6	56Ω	-CHD6 CSH WRITE A H
R32(1)	CHD6	A6	56Ω	-CHD6 CSH WRITE B H
R121(1)	CHD6	A6	56Ω	-CHD6 CSH WRITE C H
R194(1)	CHD6	A2	56Ω	-CHD6 CSH WRITE D H
R208(1)	CHD6	A2	56Ω	-CHD6 CSH WRITE E H
R53(1)	CHD6	A2	56Ω	-CHD6 CSH WRITE F H
R125(1)	CHD7	D4	68Ω	-CHD7 C MATCH 0 A H
R199(1)	CHD7	D4	68Ω	-CHD7 C MATCH 0 B H
R209(1)	CHD7	D4	68Ω	-CHD7 C MATCH 0 C H
R145(1)	CHD7	D4	68Ω	-CHD7 C MATCH 0 D H
R128(1)	CHD7	D5	68Ω	-CHD7 C MATCH 1 A H
R68(1)	CHD7	D5	68Ω	-CHD7 C MATCH 1 B H
R253(1)	CHD7	D5	68Ω	-CHD7 C MATCH 1 C H
R170(1)	CHD7	D5	68Ω	-CHD7 C MATCH 1 D H
R140(1)	CHD7	C4	68Ω	-CHD7 C MATCH 2 A H
R146(1)	CHD7	C4	68Ω	-CHD7 C MATCH 2 B H
R244(1)	CHD7	C4	68Ω	-CHD7 C MATCH 2 C H
R179(1)	CHD7	C4	68Ω	-CHD7 C MATCH 2 D H
R134(1)	CHD7	C5	68Ω	-CHD7 C MATCH 3 A H
R158(1)	CHD7	C5	68Ω	-CHD7 C MATCH 3 B H
R241(1)	CHD7	C5	68Ω	-CHD7 C MATCH 3 C H
R243(1)	CHD7	C5	68Ω	-CHD7 C MATCH 3 D H
R91(1)	CHD7	B1	68Ω	CHD7 TERM 09 [N] H\#400\
R81(1)	CHD7	B1	68Ω	CHD7 TERM 13 [N] H\#400\
R79(1)	CHD7	A1	68Ω	CHD7 TERM 15 [N] H\#400\
R75(1)	CHD7	A1	68Ω	CHD7 TERM 16 [N] H\#400\
R19(1)	CHD7	A6	68Ω	-CHX1 CSH [B,,[N/9+1,0,1,2,3] [N/18*18]-[N/18*18+17]] SEL A H
R220(1)	CHD6	A7	68Ω	-MBC2 CACHE WR [N] A H
R246(1)	CHD1	D2	68Ω	MEM TO CACHE [N+00] H
R193(1)	CHD1	B2	68Ω	MEM TO CACHE [N+01] H
R100(1)	CHD2	D2	68Ω	MEM TO CACHE [N+02] H
R230(1)	CHD2	B2	68Ω	MEM TO CACHE [N+03] H
R234(1)	CHD3	D2	68Ω	MEM TO CACHE [N+04] H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Toomey 06-AUG-84
CHK D. DELLORCO 06-AUG-84
ENG. C. A. JENS 06-AUG-84
BOARD LOCATION:
SHEET 1 OF 2
XTRA1:<MCA25.M8521.REVB>M8561.DRW 24-JUL-84 12:09
NEXT HIGHER ASSEMBLY: D-DD-M856-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: CACHE DATA TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-RES	A

MRO

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R64(1)	CHD3	B2	68Ω	MEM TO CACHE [N+05] H
R56(1)	CHD4	D2	68Ω	MEM TO CACHE [N+06] H
R72(1)	CHD4	B2	68Ω	MEM TO CACHE [N+07] H
R71(1)	CHD5	C2	68Ω	MEM TO CACHE [N+08] H
R1(1)	CHD8	B5	68Ω	NC
R3(1)	CHD8	B5	68Ω	NC
R4(1)	CHD8	B5	68Ω	NC
R5(1)	CHD8	B5	68Ω	NC
R9(1)	CHD8	B5	68Ω	NC
R13(1)	CHD8	B5	68Ω	NC
R16(1)	CHD8	B5	68Ω	NC
R17(1)	CHD8	B5	68Ω	NC
R21(1)	CHD8	B5	68Ω	NC
R28(1)	CHD8	B5	68Ω	NC
R33(1)	CHD8	A5	68Ω	NC
R35(1)	CHD8	B5	68Ω	NC
R36(1)	CHD8	B5	68Ω	NC
R37(1)	CHD8	B5	68Ω	NC
R40(1)	CHD8	B5	68Ω	NC
R41(1)	CHD8	B5	68Ω	NC
R43(1)	CHD8	B5	68Ω	NC
R47(1)	CHD8	B5	68Ω	NC
R49(1)	CHD8	B5	68Ω	NC
R54(1)	CHD8	B5	68Ω	NC
R59(1)	CHD8	B5	68Ω	NC
R60(1)	CHD8	A5	68Ω	NC
R62(1)	CHD8	B5	68Ω	NC
R63(1)	CHD8	B5	68Ω	NC
R65(1)	CHD8	B5	68Ω	NC
R70(1)	CHD8	B5	68Ω	NC
R76(1)	CHD8	A5	68Ω	NC
R78(1)	CHD8	A5	68Ω	NC
R80(1)	CHD8	A5	68Ω	NC
R88(1)	CHD8	A5	68Ω	NC
R98(1)	CHD8	A5	68Ω	NC
R104(1)	CHD8	A5	68Ω	NC
R105(1)	CHD8	A5	68Ω	NC
R106(1)	CHD8	A5	68Ω	NC
R107(1)	CHD8	A5	68Ω	NC
R108(1)	CHD8	A5	68Ω	NC

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R111(1)	CHD8	A5	68Ω	NC
R112(1)	CHD8	A5	68Ω	NC
R115(1)	CHD8	A5	68Ω	NC
R116(1)	CHD8	A5	68Ω	NC
R117(1)	CHD8	A5	68Ω	NC
R119(1)	CHD8	A5	68Ω	NC
R123(1)	CHD8	A5	68Ω	NC
R124(1)	CHD8	A5	68Ω	NC
R127(1)	CHD8	A5	68Ω	NC
R130(1)	CHD8	A5	68Ω	NC
R131(1)	CHD8	A5	68Ω	NC
R133(1)	CHD8	A5	68Ω	NC
R135(1)	CHD8	A5	68Ω	NC
R136(1)	CHD8	A5	68Ω	NC
R141(1)	CHD8	A1	68Ω	NC
R147(1)	CHD8	A1	68Ω	NC
R148(1)	CHD8	A1	68Ω	NC
R149(1)	CHD8	A1	68Ω	NC
R153(1)	CHD8	A1	68Ω	NC
R154(1)	CHD8	A1	68Ω	NC
R155(1)	CHD8	A1	68Ω	NC
R159(1)	CHD8	A5	68Ω	NC
R161(1)	CHD8	A5	68Ω	NC
R163(1)	CHD8	A1	68Ω	NC
R164(1)	CHD8	A1	68Ω	NC
R165(1)	CHD8	A1	68Ω	NC
R166(1)	CHD8	A1	68Ω	NC
R169(1)	CHD8	A1	68Ω	NC
R175(1)	CHD8	A1	68Ω	NC
R176(1)	CHD8	A1	68Ω	NC
R183(1)	CHD8	A1	68Ω	NC
R184(1)	CHD8	A2	68Ω	NC
R195(1)	CHD8	A2	68Ω	NC
R196(1)	CHD8	A2	68Ω	NC
R198(1)	CHD8	A2	68Ω	NC
R200(1)	CHD8	A2	68Ω	NC
R202(1)	CHD8	A2	68Ω	NC
R225(1)	CHD8	A2	68Ω	NC
R231(1)	CHD8	A2	68Ω	NC
R95(1)	CHD7	D1	68Ω	[B,CHD7 TERM 00 [N] H, [N/27+1,CHD7 TERM 00 [N] H\#400\, MBC2 NEW 26 H]]

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R94(1)	CHD7	D1	68Ω	[B,CHD7 TERM 01 H, [N/9+1,CHD7 TERM 01 00 H\#400\, CHD7 TERM 01 09 H\#400\,CCW BUF ADR 0 H, MBC1 CACHE ADR 28 H]]
R86(1)	CHD7	D1	68Ω	[B,CHD7 TERM 02 [N] H, [N/9+1, CHD7 TERM 02 00 H\#400\,CHX1 CSH 3 00-17 SEL A L, CHD7 TERM 02 18 H\#400\,MBC1 CACHE ADR 32 H]]
R90(1)	CHD7	D1	68Ω	[B,CHD7 TERM 03 [N] H, [N/9+1,CSH PAR BIT IN H, CHD7 TERM 03 09 H\#400\, CCW BUF ADR 1 H,MBC1 CACHE ADR 29 H]]
R87(1)	CHD7	C1	68Ω	[B,CHD7 TERM 04 [N] H, [N/27+1, CHD7 TERM 04 [N] H\#400\,MBC1 CACHE ADR 33 H]]
R92(1)	CHD7	C1	68Ω	[B,CHD7 TERM 05 [N] H, [N/27+1, CHD7 TERM 05 [N] H\#400\,MBC1 CACHE ADR 30 H]]
R93(1)	CHD7	C1	68Ω	[B,CHD7 TERM 06 [N] H, [N/9+1, CHD7 TERM 06 00 H\#400\,CHD7 TERM 06 09 H\#400\, PMA 34 H,MBC1 CACHE ADR 34 H]]
R45(1)	CHD7	C1	68Ω	[B,CHD7 TERM 07 [N] H, [N/27+1, CHD7 TERM 07 [N] H\#400\,MBC1 CACHE ADR 35 H]]
R89(1)	CHD7	C1	68Ω	[B,CHD7 TERM 08 [N] H, [N/27+1, CHD7 TERM 08 [N] H\#400\, MBC1 CACHE ADR 35 L]]
R85(1)	CHD7	B1	68Ω	[B,CHD7 TERM 10 [N] H, [N/27+1, CHD7 TERM 10 [N] H\#400\, MBC1 CACHE ADR 31 H]]
R84(1)	CHD7	B1	68Ω	[B,CHD7 TERM 11 [N] H, [N/9+1, CHD7 TERM 11 00 H\#400\,CHD7 TERM 11 09 H\#400\, CACHE EXISTS L,CHX1 CSH 0 18-35 SEL A L]]
R83(1)	CHD7	B1	68Ω	[B,CHD7 TERM 12 [N] H, [N/9+1,PMA5 EBOX PAGED H, CHD7 TERM 12 09 H\#400\,CHX1 CSH 1 18-35 SEL A L, CCW BUF ADR 2 H]]
R77(1)	CHD7	A1	68Ω	[B,CHD7 TERM 14 [N] H, [N/27+1, CHD7 TERM 14 [N] H\#400\, CCL CH BUF EN L]]
R39(1)	CHD7	A1	68Ω	[B,CHD7 TERM 17 H, [N/9+1, CSH EN CSH DATA L, CHX1 CSH 2 00-17 SEL A L, PMA 35 H,MBC1 CACHE ADR 27 H]]

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND ( ) INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

DRW. S. Toomy	DATE 06-AUG-84	ENG. C. A. JENS	DATE 06-AUG-84
CHK D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION:	
		SHEET 2 OF 2	
XTRA:<MCA25.M952!.REVB>M8562.DRW 24-JUL-84 12:49		NEXT HIGHER ASSEMBLY: D-DD-M856-0	
FIRST USED ON OPTION/MODEL: MCA25			

TITLE: CACHE DATA TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M856-0-RES	A

MRO 1

DRAWING NUMBER	NO.OF SHT	PART NUMBER	DESCRIPTION	REVISION
		M857-00	MODULE REVISION	A1
D-UA-M857-0-0	1		MBOX CONTROL #3	A
K-PL-M857-0-DBP	2		PART LIST, M857	A
D-CS-M857-0-MBC1	1		CSH ADR MIX, EBUS & PMA HOLD REG	A
D-CS-M857-0-MBC2	1		FORCE VAL MATCH & MBC DIAG MIX	A
D-CS-M857-0-MBC3	1		DATA VAL OUT, CLK, PHS, MEM START	A
D-CS-M857-0-MBC4	1		MEM REQUESTS, ACK & DAT VAL CTRS	A
D-CS-M857-0-MBC5	1		FORCE VAL MATCH & MBC DIAG MIX	A
D-CS-M857-0-MBC6	1		MBC MBOX CONTROL PWR, GND, CAPS	A
D-CS-M857-0-RES	2		MBOX CONTROL 3 TERMINATORS	A
K-PC-M857-0-DBI	-		P.C. DESIGN DATA BASE TAPE	A
D-DD-5017663-0	1		DRAWING DIRECTORY, 5017663	REF

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. D. Williams DATE 28-AUG-84
CHK'D. D. Williams DATE 28-AUG-84
ENG. C. Kagan DATE 28-AUG-84
BOARD LOCATION: N/A
SHEET 1 OF 1
DSK:M857A.T2P[4,105] 28-AUG-84 11:01
NEXT HIGHER ASSEMBLY: MCA25
FIRST USED ON OPTION/MODEL: KL10-PW

TITLE: M857 DRAWING DIRECTORY

SIZE	CODE	NUMBER	REV.
D	DD	M857-0	A

MRO 1

22 (QTY 12) COMPONENT SIDE VIEW

NOTES:

STEP E	↑ Y AXIS 0 STEP 0 TIMES
REPEAT	→ X AXIS 0 STEP 0 TIMES

CHK	CHANGE NO	REV

ETCH REV. A1

SIGNATURES	DATE
DRN.	4/19/84
CHK'D.	30-Nov-84
MECH.ENG.	7-Jun-84
PROJ.ENG.	7-Jun-84
PROD.	27-Aug-84
SCALE 2/1	
SHT. 1 OF 1	
TOP DOC. NO: D-DD-M857-0	

digital

TITLE MBOX CONTROL 3

SIZE	CODE	NUMBER	REV
D	UA	M857-0-0	A

MRO 1 WO#410668 A

SHFT REG 10141 E6
SHFT 0IN
AJ2 MBC1 CACHE ADR 27 H — D0 — Q0 — MBC1 EBUS REG 27 H
AK1 MBC1 CACHE ADR 28 H — D1 — Q1 — MBC1 EBUS REG 28 H
AK2 MBC1 CACHE ADR 29 H — D2 — Q2 — MBC1 EBUS REG 29 H
AM2 MBC1 CACHE ADR 30 H — D3 — Q3 — MBC1 EBUS REG 30 H
SHFT 3IN
AE2 LOAD EBUS REG L — 3=LOAD 2 2=0IN→0 1 1=3IN→3 0=HOLD
MBC1 CLK D H — CLK

SHFT REG 10141 E1
SHFT 0IN
AA1 MBC1 CACHE ADR 31 H — D0 — Q0 — MBC1 EBUS REG 31 H
AC1 MBC1 CACHE ADR 32 H — D1 — Q1 — MBC1 EBUS REG 32 H
AD2 MBC1 CACHE ADR 33 H — D2 — Q2 — MBC1 EBUS REG 33 H
D3 — Q3
SHFT 3IN
3=LOAD 2 2=0IN→0 1 1=3IN→3 0=HOLD
MBC1 CLK D H — CLK

SHFT REG 10141 E4
SHFT 0IN
BD2 PMA3 PA 27 H — D0 — Q0 — MBC1 PMA HOLD 27 H
AR1 PMA3 PA 28 H — D1 — Q1 — MBC1 PMA HOLD 28 H
AS2 PMA3 PA 29 H — D2 — Q2 — MBC1 PMA HOLD 29 H
AF1 PMA3 PA 30 H — D3 — Q3 — MBC1 PMA HOLD 30 H
SHFT 3IN
CD1 MBX3 REFILL HOLD H TIME CRITICAL — 0=LOAD 2 1=0IN→0 1 2=3IN→3 3=HOLD
MBC1 CLK E H — CLK

SHFT REG 10141 E10
SHFT 0IN
AL2 PMA3 PA 31 H — D0 — Q0 — MBC1 PMA HOLD 31 H
AH2 PMA4 PA 32 H — D1 — Q1 — MBC1 PMA HOLD 32 H
AE1 PMA4 PA 33 H — D2 — Q2 — MBC1 PMA HOLD 33 H
AP1 PMA3 PA 26 H — D3 — Q3 — MBC1 PMA HOLD 26 H
SHFT 3IN
0=LOAD 2 1=0IN→0 1 2=3IN→3 3=HOLD
MBC1 CLK E H — CLK

CP1 PMA4 34 B H — 10101 E27 — MBC1 PMA 34 A L / MBC1 PMA 34 A H
DE2 PMA4 35 B H — 10101 E17 — MBC1 PMA 35 A L / MBC1 PMA 35 A H

CLK MBC DELAYED H — 10210 E39 — MBC1 CLK A H / MBC1 CLK B H / MBC1 CLK C H
CR2 CLK1 MBC H — 10210 E39 — SEE NOTE 1 — MBC1 CLK D H / MBC1 CLK E H / MBC1 CLK F H
FACTORY ADJUSTMENT ONLY

NOTE 1 REPLACEMENT OF 10210 REQUIRES FACTORY DESKEW ADJUSTMENT

SHFT REG 10141 E18
SHFT 0IN
BE2 CSH3 MATCH HOLD 2 IN H — D0 — Q0 — MBC1 MATCH HOLD 2 H
BF1 CSH3 MATCH HOLD 1 IN H — D1 — Q1 — MBC1 MATCH HOLD 1 H
MBC1 PMA 34 A H — D2 — Q2 — MBC1 PMA HOLD 34 H
MBC1 PMA 35 A H — D3 — Q3 — MBC1 PMA HOLD 35 H
SHFT 3IN
CD1 MBX3 REFILL HOLD H — 0=LOAD 2 1=0IN→0 1 2=3IN→3 3=HOLD
MBC1 CLK D H — CLK

10101 E17 — MBC1 CAM SEL 2 H BJ2
10101 E27 — MBC1 CAM SEL 1 H CS2

2X4 MIX 10174 E13
BD2 PMA3 PA 27 H / MBC1 PMA HOLD 27 H — D00 — B0 — MBC1 MBX CSH ADR 27 H AV2
AS2 PMA3 PA 29 H / MBC1 PMA HOLD 29 H — D01 — MBC1 MBX CSH ADR 29 H AR2
AL2 PMA3 PA 31 H / MBC1 PMA HOLD 31 H — D02 — MBC1 MBX CSH ADR 31 H AL1
AE1 PMA4 PA 33 H / MBC1 PMA HOLD 33 H — D03 — MBC1 MBX CSH ADR 33 H AD1 TIME CRITICAL
AR1 PMA3 PA 28 H / MBC1 PMA HOLD 28 H — D10 — B1 — MBC1 MBX CSH ADR 28 H AP2
AF1 PMA3 PA 30 H / MBC1 PMA HOLD 30 H — D11 — MBC1 MBX CSH ADR 30 H AN1
AH2 PMA4 PA 32 H / MBC1 PMA HOLD 32 H — D12 — MBC1 MBX CSH ADR 32 H AF2
AP1 PMA3 PA 26 H / MBC1 PMA HOLD 26 H — D13 — MBX CSH ADR 26 H
AJ1 MBX1 REFILL ADR EN H — 2 SEL 1
AM1 CSH3 ADR PMA EN H — EN

2X4 MIX 10174 E14
2X4 MIX 10174 E7
2X4 MIX 10174 E2

CE2 MR RESET 06 H — 10101 E34 — MBC1 RESET L / MBC1 RESET H

AP1 PMA3 PA 26 H / MBC1 PMA HOLD 26 H — 10113 E15
10113 E9
BD2 PMA3 PA 27 H / MBC1 PMA HOLD 27 H
AR1 PMA3 PA 28 H / MBC1 PMA HOLD 28 H
AS2 PMA3 PA 29 H / MBC1 PMA HOLD 29 H
AF1 PMA3 PA 30 H / MBC1 PMA HOLD 30 H
10105 E41 — MBC1 WRITE OK L / MBC1 WRITE OK H EE2
NOTE: WIRE OR MBC1 WRITE OK IN A H
AL2 PMA3 PA 31 H / MBC1 PMA HOLD 31 H — 10113 E5
AH2 PMA4 PA 32 H / MBC1 PMA HOLD 32 H — 10113 E5
CM2 DA1 AE1 PMA4 PA 33 H / MBC1 PMA HOLD 33 H — 10113 E5
NOTE: WIRE OR MBC1 WRITE OK IN B H
CD1 -MBX3 REFILL HOLD L TIME CRITICAL — 10101 E17

4X2 MIX LATCH 10173 E8
BD2 PMA3 PA 27 H / MBC1 PMA HOLD 27 H — D00 — R0 — MBC1 CACHE ADR 27 H AJ2
AR1 PMA3 PA 28 H / MBC1 PMA HOLD 28 H — D01 — R1 — MBC1 CACHE ADR 28 H AK1
AS2 PMA3 PA 29 H / MBC1 PMA HOLD 29 H — D10 — R2 — MBC1 CACHE ADR 29 H AK2
AF1 PMA3 PA 30 H / MBC1 PMA HOLD 30 H — D11 — R3 — MBC1 CACHE ADR 30 H AM2
AJ1 MBX1 REFILL ADR EN H — D20 — 1 SEL HOLD
D21 — D30 — D31

4X2 MIX LATCH 10173 E3
AL2 PMA3 PA 31 H / MBC1 PMA HOLD 31 H — D00 — R0 — MBC1 CACHE ADR 31 H AA1
AH2 PMA4 PA 32 H / MBC1 PMA HOLD 32 H — D01 — R1 — MBC1 CACHE ADR 32 H AC1
AE1 PMA4 PA 33 H / MBC1 PMA HOLD 33 H — D10 — R2 — MBC1 CACHE ADR 33 H AD2
D11 — D20 — D21
1 SEL HOLD — D30 — D31 — R3 — MBC1 CACHE ADR 30 H AM2

2X4 MIX 10174 E23
MBC1 PMA 34 A H / MBC1 PMA HOLD 34 H / CE1 MB SEL 2 H — D00 — B0 — MBC1 CACHE ADR 34 H CF1
D01
MBC1 PMA 35 A H / MBC1 PMA HOLD 35 H / BS1 MB SEL 1 H — D02 — B1 — MBC1 CACHE ADR 35 L CM2 / MBC1 CACHE ADR 35 H DA1
D03
AJ1 MBX1 REFILL ADR EN H / -MBC3 FIRST WD ADR SEL H — D10 — 2 SEL 1 — EN
D11
D12
D13

1 OF 6

REVISIONS

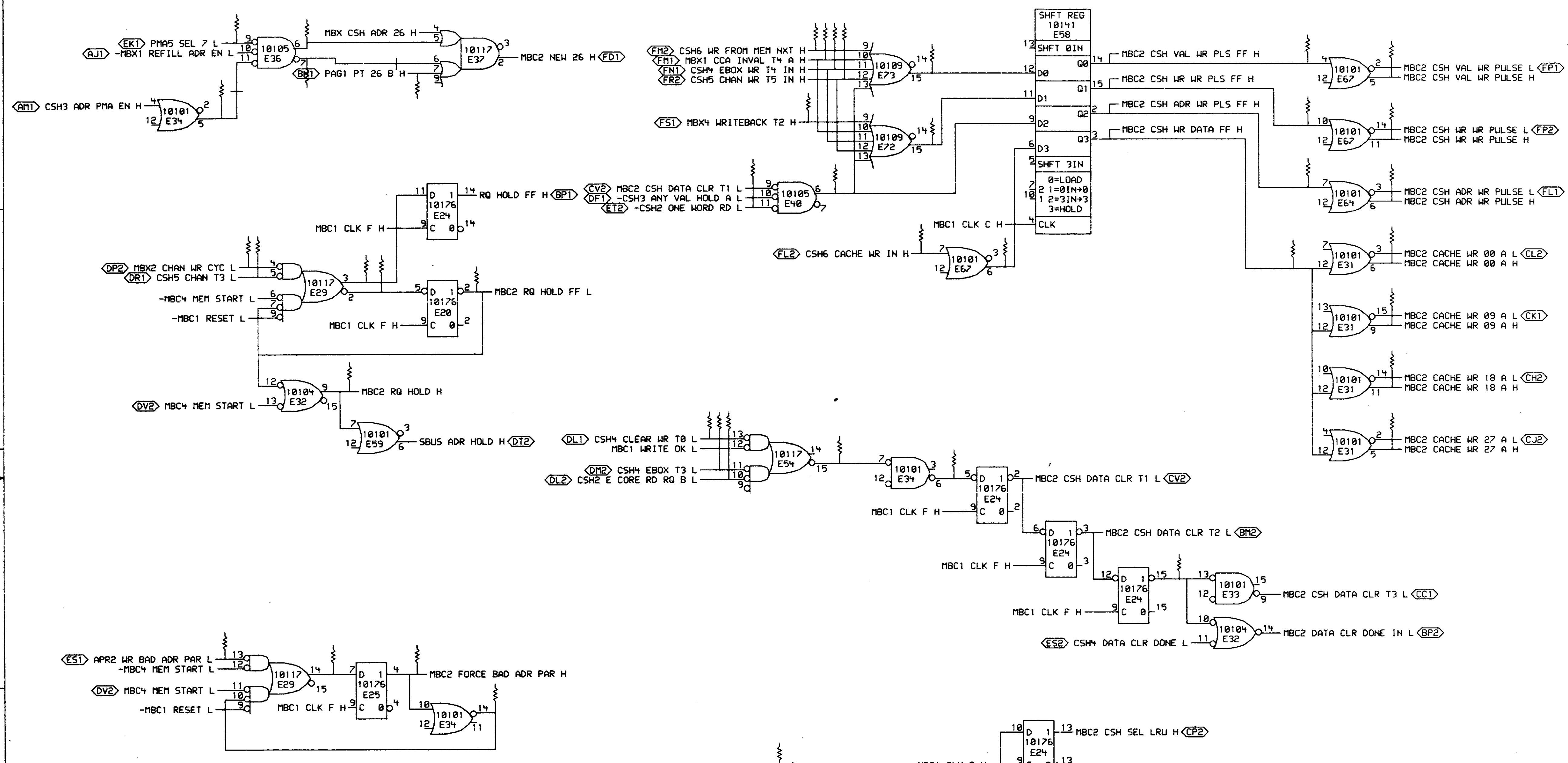
CHK	CHANGE NO.	REV

digital
XTRA1(MCA25.M8531)PMBC1.BRV 06-AUG-84 09:18
FIRST USED ON OPTION/MODEL: MCA25

DRN. D. Toomey — DATE 06-AUG-84
CHK D. DELLORCO — DATE 06-AUG-84
ENG. C.A. JENS — DATE 06-AUG-84
BOARD LOCATION: 4AF22
SHEET 1 OF 1
NEXT HIGHER ASSEMBLY: D-DD-M857-0

TITLE: CSH ADR MIX, EBUS & PMA HOLD REG

SIZE	CODE	NUMBER	REV.
D	CS	M857-0-MBC1	A


EK1 PMA5 SEL 7 L
AJ1 -MBX1 REFILL ADR EN L
10105 E36
MBX CSH ADR 26 H
10117 E37
MBC2 NEW 26 H FD1
BM1 PAG1 PT 26 B H
AM1 CSH3 ADR PMA EN H
10101 E34
FM2 CSH6 WR FROM MEM NXT H
FM1 MBX1 CCA INVAL T4 A H
FN1 CSH4 EBOX WR T4 IN H
FR2 CSH5 CHAN WR T5 IN H
10109 E73
FS1 MBX4 WRITEBACK T2 H
10109 E72
SHFT REG 10141 E58
SHFT 0IN
D0
D1
D2
D3
SHFT 3IN
0=LOAD
1=0IN→0
2=3IN→3
3=HOLD
CLK
Q0
Q1
Q2
Q3
MBC2 CSH VAL WR PLS FF H
MBC2 CSH WR WR PLS FF H
MBC2 CSH ADR WR PLS FF H
MBC2 CSH WR DATA FF H
10101 E67
MBC2 CSH VAL WR PULSE L FP1
MBC2 CSH VAL WR PULSE H
MBC2 CSH WR WR PULSE L FP2
MBC2 CSH WR WR PULSE H
10101 E64
MBC2 CSH ADR WR PULSE L FL1
MBC2 CSH ADR WR PULSE H
10101 E31
MBC2 CACHE WR 00 A L CL2
MBC2 CACHE WR 00 A H
MBC2 CACHE WR 09 A L CK1
MBC2 CACHE WR 09 A H
MBC2 CACHE WR 18 A L CH2
MBC2 CACHE WR 18 A H
MBC2 CACHE WR 27 A L CJ2
MBC2 CACHE WR 27 A H
MBC1 CLK C H
FL2 CSH6 CACHE WR IN H
CV2 MBC2 CSH DATA CLR T1 L
DF1 -CSH3 ANY VAL HOLD A L
ET2 -CSH2 ONE WORD RD L
10105 E40
RQ HOLD FF H BP1
10176 E24
MBC1 CLK F H
DP2 MBX2 CHAN WR CYC L
DR1 CSH5 CHAN T3 L
-MBC4 MEM START L
-MBC1 RESET L
10117 E29
10176 E20
MBC2 RQ HOLD FF L
10104 E32
MBC2 RQ HOLD H
DV2 MBC4 MEM START L
10101 E59
SBUS ADR HOLD H DT2
DL1 CSH4 CLEAR WR T0 L
MBC1 WRITE OK L
DM2 CSH4 EBOX T3 L
DL2 CSH2 E CORE RD RQ B L
10117 E54
10101 E34
MBC2 CSH DATA CLR T1 L CV2
MBC2 CSH DATA CLR T2 L BM2
10101 E33
MBC2 CSH DATA CLR T3 L CC1
MBC2 DATA CLR DONE IN L BP2
ES2 CSH4 DATA CLR DONE L
ES1 APR2 WR BAD ADR PAR L
10176 E25
MBC2 FORCE BAD ADR PAR H
MBC2 CSH SEL LRU H CP2
CV2 MBC2 CSH DATA CLR T1 L
DF1 -CSH3 ANY VAL HOLD A L
BM2 MBC2 CSH DATA CLR T2 L
10117 E28
10101 E27
MBC2 CSH SEL LRU L DM1

2 OF 6

REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN.	DATE 06-AUG-84	ENG. C.A. JENS	DATE 06-AUG-84
CHK'D. D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION: 4AF22	SHEET 1 OF 1
XTRA:<MCA25.M8531>MBC2.DRW 06-AUG-84 09:19		NEXT HIGHER ASSEMBLY: D-DD-M857-0	
FIRST USED ON OPTION/MODEL: MCA25			

TITLE: FORCE VAL MATCH & MBC DIAG MIX

SIZE	CODE	NUMBER	REV.
D	CS	M857-0-MBC2	A

MRO 1

MBC3 A CHANGE COMING A L <EF2>
MBC1 CLK F H
MBC3 A CHANGE COMING L
MBC1 CLK A H
MBC3 A CHANGE COMING B L
MBC1 CLK A H
<EN1> -PHASE CHANGE COMING H
MBC3 CLK A PHASE COMING H
A CHANGE COMING IN L <EV2>
MBC3 A CHANGE COMING A H
MBC1 CLK A H
MBC3 B CHANGE COMING H
MBC1 CLK A H
-MBC3 PHASE CHANGE COMING L
-MBC3 CLK A PHASE COMING L
MBC3 B CHANGE COMING L
MBC1 CLK A H
MBC3 B CHANGE COMING A L
MBC1 CLK A H

MBC1 RESET L
MBC1 CLK A H
-MBC1 RESET L
-MBC3 A PHASE L
MBC1 CLK F H
-PHASE CHANGE COMING H <EN1>
MBC1 CLK F H
-MBC3 PHASE CHANGE COMING L
MBC3 A PHASE COMING L <DK2>
MBC3 CLK A PHASE COMING H
MBC3 A PHASE H
MBC1 CLK A H

<EN1> <DV2> MBC4 MEM START L
PHASE CHANGE COMING L
MBC4 LAST ACKN SEEN L
MBC3 A CHANGE COMING L
MBC4 MEM START A L
MBC4 LAST ACKN L
MBC3 B CHANGE COMING L
MBC4 MEM START B L
MBC1 RESET L
MBC3 MEM START CLR H

TIME CRITICAL
<DL2> CSH2 E CORE RD RQ B L
-MBC2 CSH VAL WR PULSE L
-MBC1 RESET L
MBC1 CLK F H
MBC3 INH 1ST MB REQ L
MBC3 INH 1ST MB REQ H <BJ1>
MBC3 FIRST WD ADR SEL L
MBC1 CLK F H

TIME CRITICAL
<DL2> CSH2 E CORE RD RQ B L
<DS1> -CORE BUSY L
<DS2> PMA5 CSH WRITEBACK CYC L
<DN1> MBX4 CACHE TO MB T4 A L
-MBC3 CORE BUSY L
<EU2> E CACHE WR CYC L
TIME CRITICAL
MBC3 MEM START SET L

<DF2> CCL START MEM L
<CR1> CSH5 CHAN RD T5 L
MBC3 ANY SBUS RQ IN L
<DE1> CSH5 PAGE REFILL T9 L
<DF2> CCL START MEM L

<EL1> CSH2 RD PAUSE 2ND HALF L
MBC3 RD PAUSE 2ND HALF H

MBC3 A CHANGE COMING A H
-MBC3 A CHANGE COMING H
MBC1 CLK F H
DATA VALID A OUT H <BR2>

MBC3 B CHANGE COMING H
-MBC3 B CHANGE COMING H
MBC1 CLK F H
DATA VALID B OUT H <DH2>

<EM1> MBX4 CACHE TO MB T2 L
<EL1> CSH2 RD PAUSE 2ND HALF L

-MBC4 CORE DATA VALID A H
-MBC1 RESET H
MBC1 CLK A H
MBC3 CORE BUSY H
CORE BUST A H <EE1>

<BS2> MEM TO C EN L
MBC3 CSH VAL WR DATA H <CN1>
<BS2> -MEM TO C EN H
<EP1> -CSH6 CHAN WR CACHE H
MBC3 CSH VAL SEL ALL H <CD2>
<ES2> CSH4 DATA CLR DONE L
<EU2> E CACHE WR CYC L
MBC3 CSH WR WR DATA H <EK2>
MBC3 CSH WR WR DATA L <EM2>
<EP1> -CSH6 CHAN WR CACHE H
MBC3 CSH WR SEL ALL H <DJ2>
<ES2> CSH4 DATA CLR DONE L
<FC1> MBX5 MEM TO C EN L
MEM TO C EN L <BS2>
<FV2> MBX5 RQ 0 IN H
<FU2> MBX5 RQ 1 IN H
<FT2> MBX5 RQ 2 IN H
<FS2> MBX5 RQ 3 IN H
MBC3 ANY SBUS RQ IN L

3 OF 6

REVISIONS

CHK	CHANGE NO.	REV

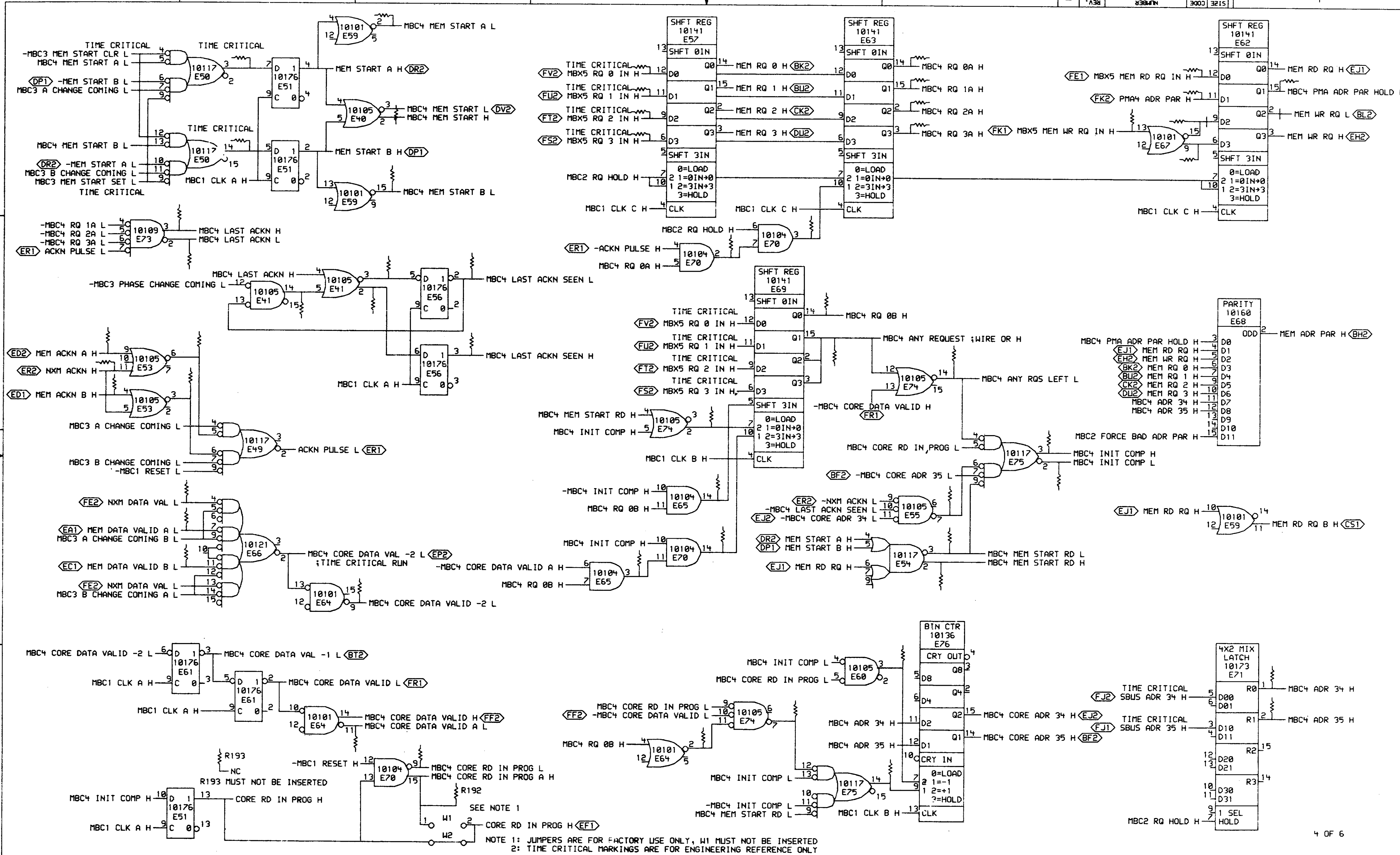
digital

DRN. J. Toomey | DATE 06-AUG-84 | ENG. C.A. JENS | DATE 06-AUG-84
CHK D. D. DELLORCO | DATE 06-AUG-84 | BOARD LOCATION: 4AF22 | SHEET 1 OF 1
XTRA1<MCA25.M8531>PMBC3.DRW | 06-AUG-84 09:19 | NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MCA25 | D-DD-M857-0

TITLE: DATA VAL OUT, CLK, PHS, MEM START

SIZE	CODE	NUMBER	REV.
D	CS	M857-0-MBC3	A

MRO 1



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN	DATE 06-AUG-84	ENG. C.A. JENS	DATE 06-AUG-84
CHK'D. D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION: 4AF22	
		SHEET 1 OF 1	

XTRA:<MCA25.M8531>PMBC4.DRW 06-AUG-84 09:20 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION MODEL: MCA25 D-DD-M857-0

TITLE: MEM REQUESTS, ACK & DAT VAL CTRS

SIZE	CODE	NUMBER	REV.
D	CS	M857-0-MBC4	A

MRO 1

8 MIX 10164 E38
CU2 MBC5 FORCE VAL MATCH 0 H
CV2 -MBC2 CSH DATA CLR T1 H
MBC2 CACHE WR 00 A H
-MBC3 B CHANGE COMING H
DH2 DATA VALID B OUT H
CS2 MBC1 CAM SEL 1 H
CS1 MEM RD RQ B H
MBC1 EBUS REG 27 H
MBC5 DIAG 04 H
MBC5 DIAG 05 H
MBC5 DIAG 06 H
MBC5 DIAG READ FUNC 16X L
EBUS D27 E H CJ1

8 MIX 10164 E16
BM1 MBC5 FORCE VAL MATCH 1 H
BM2 -MBC2 CSH DATA CLR T2 H
MBC2 CACHE WR 09 A H
MBC5 CORE BUSY B H
BJ1 MBC3 INH 1ST MB REQ H
BJ2 MBC1 CAM SEL 2 H
BK2 MEM RQ 0 H
MBC1 EBUS REG 28 H
EBUS D28 E H CL1

8 MIX 10164 E30
CA1 MBC5 FORCE VAL MATCH 2 H
CC1 -MBC2 CSH DATA CLR T3 H
MBC2 CACHE WR 18 A H
CD2 MBC3 CSH VAL SEL ALL H
BS2 -MEM TO C EN H
BT2 -MBC4 CORE DATA VAL -1 H
BU2 MEM RQ 1 H
MBC1 EBUS REG 29 H
EBUS D29 E H CT2

8 MIX 10164 E35
CM1 MBC5 FORCE VAL MATCH 3 H
CP2 MBC2 CSH SEL LRU H
MBC2 CACHE WR 27 A H
CN1 MBC3 CSH VAL WR DATA H
EN1 -PHASE CHANGE COMING H
-MBC4 CORE DATA VAL -2 H
CK2 MEM RQ 2 H
MBC1 EBUS REG 30 H
EBUS D30 E H DD1

NOTE: DIAGNOSTIC MIXERS USE FUNCTIONS 160-167

EE1 CORE BUSY A H — 10104 E44 — MBC5 CORE BUSY B H
BC1 DIAG 04 B H — 10101 E11 — MBC5 DIAG 04 H
BA1 DIAG 05 B H — 10101 E11 — MBC5 DIAG 05 H
AU2 DIAG 06 B H — 10101 E11 — MBC5 DIAG 06 H
AT2 DIAG READ FUNC 16X L — 10101 E11 — MBC5 DIAG READ FUNC 16X L

8 MIX 10164 E48
EE2 MBC1 WRITE OK H
MBC2 CSH VAL WR PULSE H
DT2 SBUS ADR HOLD H
DJ2 MBC3 CSH WR SEL ALL H
ER1 -ACKN PULSE H
FR1 -MBC4 CORE DATA VALID H
DU2 MEM RQ 3 H
MBC1 EBUS REG 31 H
MBC5 DIAG 04 H
MBC5 DIAG 05 H
MBC5 DIAG 06 H
MBC5 DIAG READ FUNC 16X L
EBUS D31 E H DD2

8 MIX 10164 E52
MBC2 CSH ADR WR PULSE H
MBC2 CSH WR WR PULSE H
EF2 -MBC3 A CHANGE COMING A H
EK2 MBC3 CSH WR WR DATA H
EJ2 MBC4 CORE ADR 34 H
CORE RD IN PROG H
DV2 -MBC4 MEM START H
MBC1 EBUS REG 32 H
EBUS D32 E H DJ1

8 MIX 10164 E21
BP2 -MBC2 DATA CLR DONE IN H
BP1 RQ HOLD FF H
-MBC3 ANY SBUS RQ IN H
BR2 DATA VALID A OUT H
BF2 MBC4 CORE ADR 35 H
BH2 MEM ADR PAR H
BL2 -MEM WR RQ H
MBC1 EBUS REG 33 H
EBUS D33 E H DK1

4X2 MIX LATCH 10173 E12
BE2 CSH3 MATCH HOLD 2 IN H
MBC1 MATCH HOLD 2 H
BF1 CSH3 MATCH HOLD 1 IN H
MBC1 MATCH HOLD 1 H
EU2 -E CACHE WR CYC H
MBC5 HOLD MATCH H

DECODER 10161 E19
MBC5 CSH 0 WR EN L BR1
MBC5 CSH 1 WR EN L BD1
MBC5 CSH 2 WR EN L DC1
MBC5 CSH 3 WR EN L CF2
-MBC3 RD PAUSE 2ND HALF L
ET2 -CSH2 ONE WORD RD L

CV2 MBC2 CSH DATA CLR T1 L
EU2 E CACHE WR CYC L
FN1 -CSH4 EBOX WR T4 IN L
-MBC1 RESET L
10117 E43
D 10176 E56 C 0
MBC1 CLK A H
ES2 CSH4 DATA CLR DONE L
EU2 E CACHE WR CYC L
-MBC1 RESET L
10117 E43
MBC5 HOLD MATCH H

BR1 MBC5 CSH 0 WR EN L
-MBC1 PMA 34 A L
-MBC1 PMA 35 A L
10117 E22
MBC5 FORCE VAL MATCH 0 H CU2

BD1 MBC5 CSH 1 WR EN L
-MBC1 PMA 34 A L
MBC1 PMA 35 A L
10117 E22
MBC5 FORCE VAL MATCH 1 H BM1

DC1 MBC5 CSH 2 WR EN L
MBC1 PMA 34 A L
-MBC1 PMA 35 A L
10117 E26
MBC5 FORCE VAL MATCH 2 H CA1

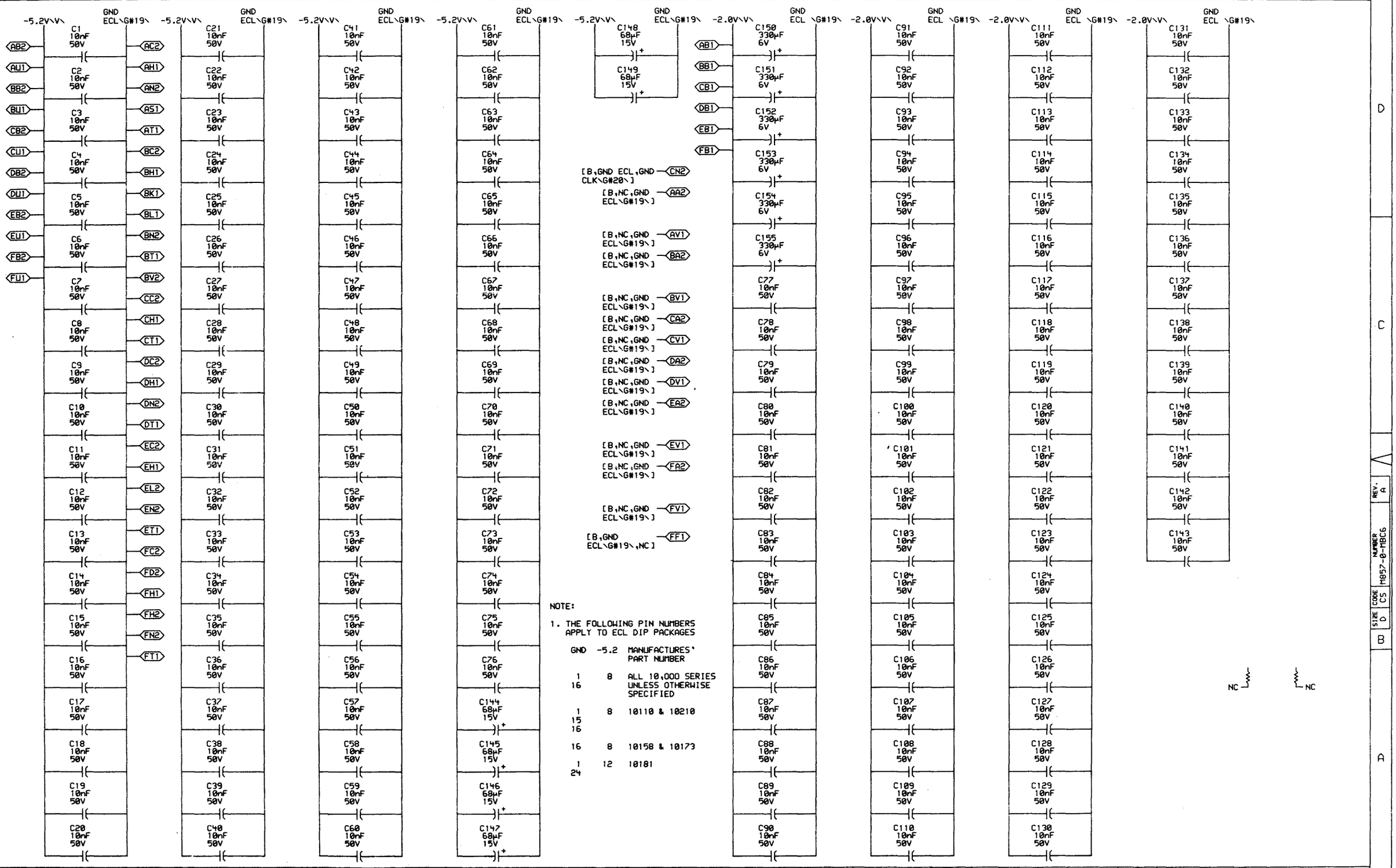
CF2 MBC5 CSH 3 WR EN L
MBC1 PMA 34 A L
MBC1 PMA 35 A L
10117 E26
MBC5 FORCE VAL MATCH 3 H CM1

BE1 MBX1 CCA ALL PAGES CYC L
ES2 CSH4 DATA CLR DONE L
FA1 MBX1 FORCE MATCH EN L
10104 E32

REVISIONS		
CHK	CHANGE NO.	REV

digital
XTRA1<MCA25.M853>PMBC5.DRW 06-AUG-84 09:21
FIRST USED ON OPTION/MODEL: MCA25
DRN. D. Toomey DATE 06-AUG-84
CHK'D. D. DELLORCO DATE 06-AUG-84
ENG. C.A. JENS DATE 06-AUG-84
BOARD LOCATION: 4AF22
SHEET 1 OF 1
NEXT HIGHER ASSEMBLY: D-DD-M857-0

TITLE: FORCE VAL MATCH & MBC DIAG MIX
SIZE D | CODE CS | NUMBER M857-0-MBC5 | REV. A



REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. J. Toomby DATE 06-AUG-84 ENG. C.A. JENS DATE 06-AUG-84
CHK D. DELLORCO DATE 06-AUG-84 BOARD LOCATION: 4AF22 SHEET 1 OF 1
XTRA:<MCA25.M0531>PMBC6.DRW 06-AUG-84 09:22 NEXT HIGHER ASSEMBLY: D-DD-M857-0
FIRST USED ON OPTION/MODEL: MCA25

TITLE: MBC MBOX CONTROL PWR, GND, CAPS

SIZE	CODE	NUMBER	REV.
D	CS	M857-0-MBC6	A

MRO 1

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R56(1)	MBC5	B5	68Ω	%E12(1)
R60(1)	MBC5	B5	68Ω	%E12(2)
R21(1)	MBC1	B2	68Ω	%E17(15)
R75(1)	MBC3	D3	68Ω	%E20(15)
R110(1)	MBC1	A4	68Ω	%E23(15)
R112(1)	MBC2	B3	68Ω	%E24(15)
R66(1)	MBC2	A4	68Ω	%E27(2)
R65(1)	MBC2	A3	68Ω	%E27(5)
R11(1)	MBC3	B4	68Ω	%E28(15)
R109(1)	MBC2	A4	68Ω	%E28(2)
R14(1)	MBC2	B7	68Ω	%E29(14)
R8(1)	MBC2	C7	68Ω	%E29(2)
R59(1)	MBC2	C7	68Ω	%E29(3)
R143(1)	MBC5	A2	68Ω	%E32(2)
R16(1)	MBC2	A6	68Ω	%E34(14)
R213(1)	MBC2	D7	68Ω	%E34(5)
R64(1)	MBC2	B4	68Ω	%E34(6)
R215(1)	MBC2	D7	68Ω	%E36(6)
R214(1)	MBC2	D7	68Ω	%E36(7)
R32(1)	MBC3	C7	68Ω	%E40(14)
R35(1)	MBC3	C7	68Ω	%E40(15)
R206(1)	MBC2	D4	68Ω	%E40(6)
R27(1)	MBC4	C7	68Ω	%E41(14)
R36(1)	MBC4	C6	68Ω	%E41(2)
R37(1)	MBC4	C6	68Ω	%E41(3)
R185(1)	MBC3	A6	68Ω	%E42(2)
R38(1)	MBC5	A6	68Ω	%E43(2)
R28(1)	MBC3	C7	68Ω	%E44(15)
R13(1)	MBC3	B4	68Ω	%E46(15)
R31(1)	MBC3	A4	68Ω	%E46(2)
R9(1)	MBC3	C3	68Ω	%E49(15)
R7(1)	MBC3	D2	68Ω	%E5(2)
R33(1)	MBC4	D7	68Ω	%E50(14)
R34(1)	MBC4	D7	68Ω	%E50(3)
R120(1)	MBC4	C7	68Ω	%E53(3)
R119(1)	MBC4	C7	68Ω	%E53(6)
R19(1)	MBC2	B4	68Ω	%E54(15)
R84(1)	MBC3	D4	68Ω	%E55(2)
R76(1)	MBC3	D4	68Ω	%E55(3)
R93(1)	MBC4	B3	68Ω	%E55(7)

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R80(1)	MBC3	D5	68Ω	%E56(13)
R156(1)	MBC5	A6	68Ω	%E56(4)
R50(1)	MBC4	A3	68Ω	%E60(3)
R67(1)	MBC3	B5	68Ω	%E60(6)
R131(1)	MBC4	A4	68Ω	%E64(2)
R128(1)	MBC4	B4	68Ω	%E65(14)
R30(1)	MBC3	A5	68Ω	%E65(2)
R88(1)	MBC4	B5	68Ω	%E65(3)
R3(1)	MBC3	D4	68Ω	%E65(9)
R201(1)	MBC4	D2	68Ω	%E67(15)
R167(1)	MBC2	C3	68Ω	%E67(6)
R205(1)	MBC4	D2	68Ω	%E67(9)
R129(1)	MBC4	B4	68Ω	%E70(14)
R92(1)	MBC4	C4	68Ω	%E70(2)
R166(1)	MBC4	C4	68Ω	%E70(3)
R165(1)	MBC2	D4	68Ω	%E72(15)
R164(1)	MBC2	D4	68Ω	%E73(15)
R133(1)	MBC4	C4	68Ω	%E74(2)
R89(1)	MBC4	A4	68Ω	%E74(7)
R49(1)	MBC4	A3	68Ω	%E75(14)
R15(1)	MBC2	B7	68Ω	-APR2 WR BAD ADR PAR H
R186(1)	MBC3	A7	68Ω	-CCL START MEM H
R113(1)	MBC1	C6	68Ω	CLK1 MBC H
R121(1)	MBC2	C5	68Ω	-CSH2 E CORE RD RQ B H
R61(1)	MBC2	D5	68Ω	CSH2 ONE WORD RD H
R69(1)	MBC3	A5	68Ω	-CSH2 RD PAUSE 2ND HALF H
R57(1)	MBC1	B4	68Ω	CSH3 ADR PMA EN H
R68(1)	MBC2	A5	68Ω	CSH3 ANY VAL HOLD A H
R99(1)	MBC1	C2	68Ω	CSH3 MATCH HOLD 1 IN H
R98(1)	MBC1	C2	68Ω	CSH3 MATCH HOLD 2 IN H
R118(1)	MBC2	C5	68Ω	-CSH4 CLEAR WR T0 H
R107(1)	MBC3	A2	68Ω	-CSH4 DATA CLR DONE H
R122(1)	MBC2	C5	68Ω	-CSH4 EBOX T3 H
R161(1)	MBC2	D4	68Ω	CSH4 EBOX WR T4 IN H
R187(1)	MBC3	A7	68Ω	-CSH5 CHAN RD T5 H
R18(1)	MBC2	C7	68Ω	-CSH5 CHAN T3 H
R171(1)	MBC2	D4	68Ω	CSH5 CHAN WR T5 IN H
R188(1)	MBC3	A7	68Ω	-CSH5 PAGE REFILL T9 H
R208(1)	MBC2	C4	68Ω	CSH6 CACHE WR IN H
R148(1)	MBC3	B2	68Ω	-CSH6 CHAN WR CACHE H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R174(1)	MBC2	D4	68Ω	CSH6 WR FROM MEM NXT H
R138(1)	MBC3	B2	68Ω	-E CACHE WR CYC H
R177(1)	MBC1	D8	68Ω	-LOAD EBUS REG H
R39(1)	MBC1	C5	68Ω	MBC1 CLK A H
R47(1)	MBC1	C5	68Ω	MBC1 CLK B H
R200(1)	MBC1	C5	68Ω	MBC1 CLK C H
R178(1)	MBC1	C5	68Ω	MBC1 CLK D H
R6(1)	MBC1	C5	68Ω	MBC1 CLK E H
R10(1)	MBC1	C5	68Ω	MBC1 CLK F H
R157(1)	MBC1	D7	68Ω	MBC1 EBUS REG 27 H
R180(1)	MBC1	D7	68Ω	MBC1 EBUS REG 28 H
R151(1)	MBC1	D7	68Ω	MBC1 EBUS REG 29 H
R154(1)	MBC1	D7	68Ω	MBC1 EBUS REG 30 H
R160(1)	MBC1	D6	68Ω	MBC1 EBUS REG 31 H
R195(1)	MBC1	D6	68Ω	MBC1 EBUS REG 32 H
R182(1)	MBC1	D6	68Ω	MBC1 EBUS REG 33 H
R140(1)	MBC1	D2	68Ω	MBC1 MATCH HOLD 1 H
R142(1)	MBC1	D2	68Ω	MBC1 MATCH HOLD 2 H
R100(1)	MBC1	C7	68Ω	MBC1 PMA 34 A H
R150(1)	MBC1	C7	68Ω	-MBC1 PMA 34 A H
R146(1)	MBC1	C7	68Ω	MBC1 PMA 35 A H
R145(1)	MBC1	C7	68Ω	-MBC1 PMA 35 A H
R210(1)	MBC1	D3	68Ω	MBC1 PMA HOLD 26 H
R101(1)	MBC1	D4	68Ω	MBC1 PMA HOLD 27 H
R97(1)	MBC1	D4	68Ω	MBC1 PMA HOLD 28 H
R95(1)	MBC1	D4	68Ω	MBC1 PMA HOLD 29 H
R96(1)	MBC1	D4	68Ω	MBC1 PMA HOLD 30 H
R139(1)	MBC1	D3	68Ω	MBC1 PMA HOLD 31 H
R136(1)	MBC1	D3	68Ω	MBC1 PMA HOLD 32 H
R137(1)	MBC1	D3	68Ω	MBC1 PMA HOLD 33 H
R106(1)	MBC1	C2	68Ω	MBC1 PMA HOLD 34 H
R102(1)	MBC1	C2	68Ω	MBC1 PMA HOLD 35 H
R79(1)	MBC1	B1	68Ω	MBC1 RESET H
R83(1)	MBC1	B1	68Ω	-MBC1 RESET H
R117(1)	MBC1	B1	68Ω	-MBC1 WRITE OK H
R22(1)	MBC1	B2	68Ω	MBC1 WRITE OK IN A H
R23(1)	MBC1	B2	68Ω	MBC1 WRITE OK IN B H
R159(1)	MBC2	C1	68Ω	MBC2 CACHE WR 00 A H
R179(1)	MBC2	C1	68Ω	MBC2 CACHE WR 09 A H
R152(1)	MBC2	C1	68Ω	MBC2 CACHE WR 18 A H

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R155(1)	MBC2	C1	68Ω	MBC2 CACHE WR 27 A H
R123(1)	MBC2	D2	68Ω	MBC2 CSH ADR WR PLS FF H
R198(1)	MBC2	D1	68Ω	MBC2 CSH ADR WR PULSE H
R207(1)	MBC2	D2	68Ω	MBC2 CSH VAL WR PLS FF H
R114(1)	MBC2	D1	68Ω	MBC2 CSH VAL WR PULSE H
R149(1)	MBC2	C2	68Ω	MBC2 CSH WR DATA FF H
R204(1)	MBC2	D2	68Ω	MBC2 CSH WR WR PLS FF H
R196(1)	MBC2	D1	68Ω	MBC2 CSH WR WR PULSE H
R170(1)	MBC2	B6	68Ω	MBC2 FORCE BAD ADR PAR H
R48(1)	MBC2	C7	68Ω	MBC2 RQ HOLD H
R108(1)	MBC2	C6	68Ω	-MBC2 RQ HOLD FF H
R62(1)	MBC3	D7	68Ω	-MBC3 A CHANGE COMING H
R63(1)	MBC3	C7	68Ω	MBC3 A CHANGE COMING A H
R44(1)	MBC3	D7	68Ω	-MBC3 A CHANGE COMING B H
R87(1)	MBC3	D2	68Ω	MBC3 A PHASE H
R181(1)	MBC3	A1	68Ω	-MBC3 ANY SBUS RQ IN H
R24(1)	MBC3	C7	68Ω	MBC3 B CHANGE COMING H
R158(1)	MBC3	C7	68Ω	-MBC3 B CHANGE COMING H
R40(1)	MBC3	B7	68Ω	-MBC3 B CHANGE COMING A H
R4(1)	MBC3	D3	68Ω	MBC3 CLK A PHASE COMING H
R191(1)	MBC3	A3	68Ω	MBC3 CORE BUSY H
R105(1)	MBC3	C2	68Ω	-MBC3 FIRST WD ADR SEL H
R115(1)	MBC3	C2	68Ω	-MBC3 INH 1ST MB REQ H
R73(1)	MBC3	C4	68Ω	MBC3 MEM START CLR H
R74(1)	MBC3	B6	68Ω	-MBC3 MEM START SET H
R20(1)	MBC3	D1	68Ω	MBC3 PHASE CHANGE COMING H
R55(1)	MBC3	A5	68Ω	MBC3 RD PAUSE 2ND HALF H
R46(1)	MBC4	A1	68Ω	MBC4 ADR 34 H
R168(1)	MBC4	A1	68Ω	MBC4 ADR 35 H
R132(1)	MBC4	C4	68Ω	MBC4 ANY REQUEST;WIRE OR H
R90(1)	MBC4	C3	68Ω	-MBC4 ANY RQS LEFT H
R153(1)	MBC4	B6	68Ω	-MBC4 CORE DATA VALID -2 H
R85(1)	MBC4	A6	68Ω	-MBC4 CORE DATA VALID A H
R135(1)	MBC4	A6	68Ω	-MBC4 CORE RD IN PROG H
R192(1)	MBC4	A6	68Ω	MBC4 CORE RD IN PROG A H
R29(1)	MBC4	B3	68Ω	MBC4 INIT COMP H
R82(1)	MBC4	B2	68Ω	-MBC4 INIT COMP H
R25(1)	MBC4	C7	68Ω	MBC4 LAST ACKN H
R72(1)	MBC4	C7	68Ω	-MBC4 LAST ACKN H
R78(1)	MBC4	C6	68Ω	MBC4 LAST ACKN SEEN H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

DRN. S. Toomey	DATE 06-AUG-84	ENG. C. A. JENS	DATE 06-AUG-84
CHK D. DELLORCO	DATE 06-AUG-84	BOARD LOCATION: 4AF22	
		SHEET 1 OF 2	
XTRA1(MCA25.M8531)M8571.DRW 23-JUL-84 14:33		NEXT HIGHER ASSEMBLY: D-DD-M857-0	
FIRST USED ON OPTION/MODEL: MCA25			

TITLE: MBOX CONTROL TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M857-0-RES	A

REV.	NUMBER	CODE	SIZE
A	M857-0-RES	CS	D

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R26(1)	MBC4	C6	68Ω	-MBC4 LAST ACKN SEEN H
R12(1)	MBC4	D6	68Ω	MBC4 MEM START H
R71(1)	MBC4	D6	68Ω	-MBC4 MEM START A H
R70(1)	MBC4	D6	68Ω	-MBC4 MEM START B H
R130(1)	MBC4	B3	68Ω	MBC4 MEM START RD H
R94(1)	MBC4	B3	68Ω	-MBC4 MEM START RD H
R169(1)	MBC4	D1	68Ω	MBC4 PMA ADR PAR HOLD H
R91(1)	MBC4	D3	68Ω	MBC4 RQ 0A H
R86(1)	MBC4	C4	68Ω	MBC4 RQ 0B H
R172(1)	MBC4	D3	68Ω	MBC4 RQ 1A H
R175(1)	MBC4	D3	68Ω	MBC4 RQ 2A H
R173(1)	MBC4	D3	68Ω	MBC4 RQ 3A H
R183(1)	MBC5	C7	68Ω	MBC5 CORE BUSY B H
R189(1)	MBC5	C7	68Ω	MBC5 DIAG 04 H
R190(1)	MBC5	C7	68Ω	MBC5 DIAG 05 H
R197(1)	MBC5	C7	68Ω	MBC5 DIAG 06 H
R194(1)	MBC5	B7	68Ω	-MBC5 DIAG READ FUNC 16X H
R141(1)	MBC5	A5	68Ω	MBC5 HOLD MATCH H
R217(1)	MBC1	B4	68Ω	MBX CSH ADR 26 H
R147(1)	MBC5	A2	68Ω	-MBX1 CCA ALL PAGES CYC H
R176(1)	MBC2	D4	68Ω	MBX1 CCA INVAL T4 A H
R111(1)	MBC5	A3	68Ω	-MBX1 FORCE MATCH EN H
R103(1)	MBC1	B4	68Ω	MBX1 REFILL ADR EN H
R17(1)	MBC2	C7	68Ω	-MBX2 CHAN WR CYC H
R53(1)	MBC1	C2	68Ω	MBX3 REFILL HOLD H
R81(1)	MBC3	B5	68Ω	-MBX4 CACHE TO MB T2 H
R184(1)	MBC3	B6	68Ω	-MBX4 CACHE TO MB T4 A H
R209(1)	MBC2	D4	68Ω	MBX4 WRITEBACK T2 H
R199(1)	MBC4	D2	68Ω	MBX5 MEM RD RQ IN H
R116(1)	MBC3	A2	68Ω	-MBX5 MEM TO C EN H
R203(1)	MBC4	D2	68Ω	MBX5 MEM WR RQ IN H
R124(1)	MBC4	D5	68Ω	MBX5 RQ 0 IN H
R125(1)	MBC4	D5	68Ω	MBX5 RQ 1 IN H
R127(1)	MBC4	D5	68Ω	MBX5 RQ 2 IN H
R134(1)	MBC4	D5	68Ω	MBX5 RQ 3 IN H
R163(1)	MBC4	C8	68Ω	MEM ACKN A H
R162(1)	MBC4	C8	68Ω	MEM ACKN B H
R45(1)	MBC4	B7	68Ω	-MEM DATA VALID A H
R43(1)	MBC4	B7	68Ω	-MEM DATA VALID B H
R42(1)	MBC6	A1	68Ω	NC

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

RESISTOR LOC(PIN)	SHOWN ON DRW#	REF	VALUE	TERMINATES SIGNAL
R126(1)	MBC6	A1	68Ω	NC
R193(1)	MBC4	A7	68Ω	NC
R77(1)	MBC4	C8	68Ω	NXM ACKN H
R41(1)	MBC4	B7	68Ω	-NXM DATA VAL H
R216(1)	MBC2	D6	68Ω	PAG1 PT 26 B H
R211(1)	MBC1	D3	68Ω	PMA3 PA 26 H
R52(1)	MBC1	B2	68Ω	PMA3 PA 27 H
R51(1)	MBC1	B2	68Ω	PMA3 PA 28 H
R58(1)	MBC1	B2	68Ω	PMA3 PA 29 H
R54(1)	MBC1	B2	68Ω	PMA3 PA 30 H
R1(1)	MBC1	A2	68Ω	PMA3 PA 31 H
R104(1)	MBC1	C8	68Ω	PMA4 34 B H
R144(1)	MBC1	C8	68Ω	PMA4 35 B H
R202(1)	MBC4	D2	68Ω	PMA4 ADR PAR H
R2(1)	MBC1	A2	68Ω	PMA4 PA 32 H
R5(1)	MBC1	A2	68Ω	PMA4 PA 33 H
R212(1)	MBC2	D7	68Ω	-PMA5 SEL 7 H

REVISIONS		
CHK	CHANGE NO.	REV

digital | DRN. [signature] DATE 06-AUG-84 | ENG. C. A. JENS DATE 06-AUG-84
CHK'D. D. DELLORCO DATE 06-AUG-84 | BOARD LOCATION: 4AF22 | SHEET 2 OF 2
XTRA:<MCA25.M8531>M8572.DRW 23-JUL-84 14:33 | NEXT HIGHER ASSEMBLY: D-DD-M857-0
FIRST USED ON OPTION/MODEL: MCA25
TITLE: MBOX CONTROL TERMINATORS
SIZE D | CODE CS | NUMBER M857-0-RES | REV. A
MRO 1