

DOCUMENT NUMBER	REV	DESCRIPTION
D-TC-MF20-0-1	E	TABLE OF CONTENTS
D-MU-MF20-0-15	*	MF20 MODULE UTILIZATION LIST
D-MU-MF20-0-CPMU	*	MODULE UTILIZATION

MODULE (C.S.) MOS MEMORY

D-DD-5412855-0	*	XBUS TERMINATOR SHEET 1
D-UA-5412855-0-0	A	XBUS TERMINATOR SHEET 1
D-CS-5412855-0-1	*	XBUS TERMINATOR BOARD
D-DD-5412851-0	B	ADDRESS TIMER SHEET 1
D-UA-5412851-0-0	D	ADDRESS TIMER SHEET 1
D-CS-5412851-0-OSC1	A	SELECT LOGIC
D-CS-5412851-0-OSC2	B	POWER SUPPLY
D-DD-M8572-0	A	CABLE BOARD SHEET 1
D-UA-M8572-0-0	B	CABLE BOARD SHEET 1
D-CS-M8572-0-XCD1	*	CLK SEL LOGIC
D-CS-M8572-0-XCD2	A	XBUS CABLE
D-CS-M8572-0-XCD3	*	POWER AND GND
D-DD-M8574-0	B	WRITE PATH SHEET 1
E-UA-M8574-0-0	B	WRITE PATH SHEET 1
D-CS-M8574-0-WRP0	A	DATA 00-15
D-CS-M8574-0-WRP1	*	DATA 16-PAR
D-CS-M8574-0-WRP2	*	MIX AND LATCH A
D-CS-M8574-0-WRP3	*	MIX AND LATCH B
D-CS-M8574-0-WRP4	*	MIX AND LATCH C
D-CS-M8574-0-WRP5	*	DATA BUFFER
D-CS-M8574-0-WRP6	*	ECC GENERATOR
D-CS-M8574-0-WRP7	*	ECC DIAG REG
D-CS-M8574-0-WRP8	*	SPARE BIT RAM
D-CS-M8574-0-WRP9	*	SPARE BIT MIXER
D-CS-M8574-0-WRPA	*	POWER. GND. CAPS.
D-CS-M8574-0-WRPB	*	POWER. GND. CAPS.
D-CS-M8574-0-RES	*	TERMINATORS

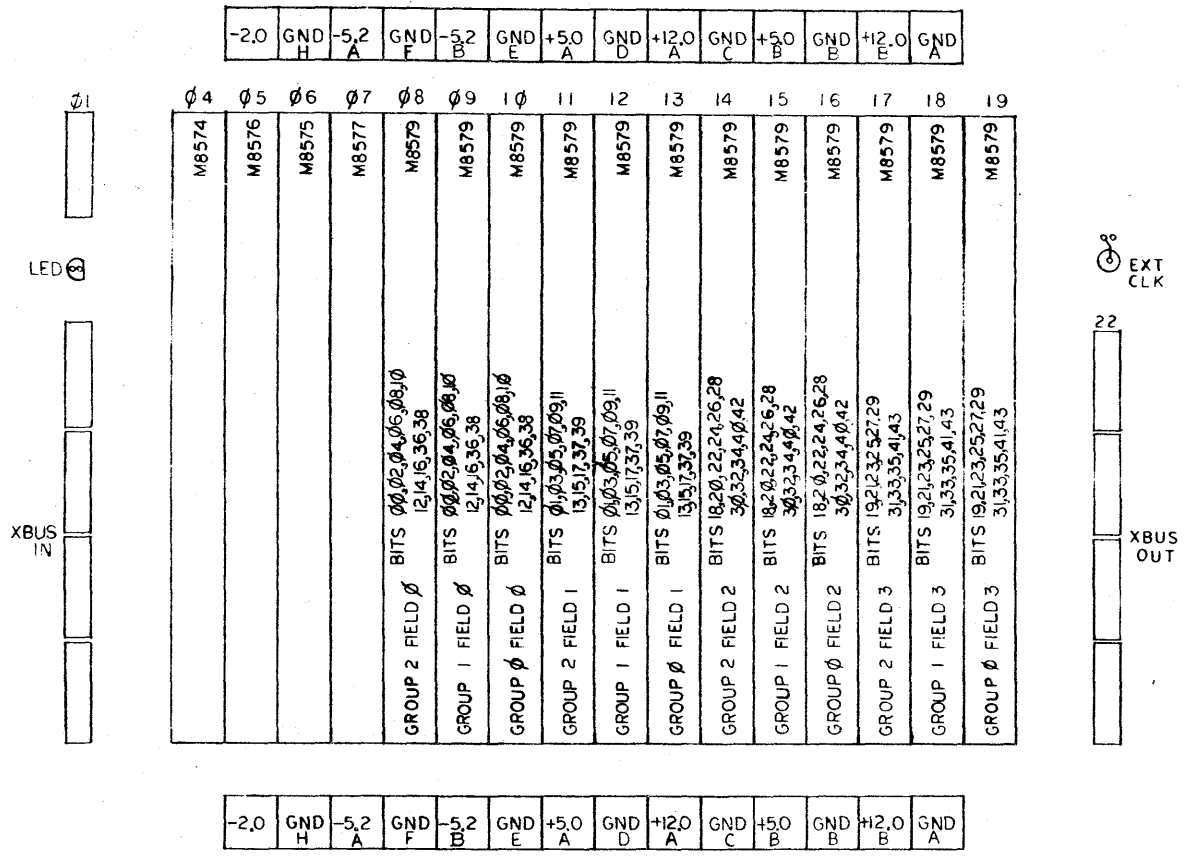
DOCUMENT NUMBER	REV	DESCRIPTION
D-DD-M8575-0	*	SYNDROME SHEET 1
E-UA-M8575-0-0	A	SYNDROME SHEET 1
D-CS-M8575-0-SYN0	*	BIT SUB DECODER
D-CS-M8575-0-SYN1	*	BIT SUB DATA
D-CS-M8575-0-SYN2	*	BIT SUB ECC BITS
D-CS-M8575-0-SYN3	*	GENERATOR
D-CS-M8575-0-SYN4	*	CALCULATOR
D-CS-M8575-0-SYN5	*	CORRECTION DECODE
D-CS-M8575-0-SYN6	*	DATA CORRECTION
D-CS-M8575-0-SYN7	*	PORT ADDRESS
D-CS-M8575-0-SYN8	*	DIAG SELECTION
D-CS-M8575-0-SYN9	*	DIAG MIXER
D-CS-M8575-0-SYNA	*	POWER CONTROL
D-CS-M8575-0-SYNB	*	POWER. GND. CAPS.
D-CS-M8575-0-SYNC	*	POWER. GND. CAPS.
D-CS-M8575-0-RES	*	TERMINATORS
D-DD-M8576-0	A	MOS CONTROL SHEET 1
E-UA-M8576-0-0	B	MOS CONTROL SHEET 1
D-CS-M8576-0-CTL0	*	SBUS DRVR & RECVR
D-CS-M8576-0-CTL1	A	START LOGIC
D-CS-M8576-0-CTL2	A	CYCLE CONTROL
D-CS-M8576-0-CTL3	A	WRITE DATA MOVER
D-CS-M8576-0-CTL4	A	ERR REG & ACKN
D-CS-M8576-0-CTL5	*	READ DATA MOVER
D-CS-M8576-0-CTL6	*	DATA VALID
D-CS-M8576-0-CTL7	*	DIAGNOSTIC MOVER
D-CS-M8576-0-CTL8	A	DIAGNOSTIC CNTRL
D-CS-M8576-0-CTL9	*	SM PROM CONTROL
D-CS-M8576-0-CTLA	*	RAS & SEL DRVR
D-CS-M8576-0-CTLB	*	POWER. GND. CAPS.
D-CS-M8576-0-CTLC	*	POWER. GND. CAPS.
D-CS-M8576-0-RES	A	TERMINATORS
D-DD-M8577-0	B	ADDRESS AND TIME SHEET 1
E-UA-M8577-0-0	C	ADDRESS AND TIME SHEET 1
D-CS-M8577-0-ADT0	*	PORT ADR INTER
D-CS-M8577-0-ADT1	*	PORT ADR REG
D-CS-M8577-0-ADT2	*	PORT ADR MIXERS
D-CS-M8577-0-ADT3	*	REFRESH CYCLE
D-CS-M8577-0-ADT4	A	TIMING RAM
D-CS-M8577-0-ADT5	A	ARRAY TIME DRVR
D-CS-M8577-0-ADT6	A	PHS COM CLOCK
D-CS-M8577-0-ADT7	*	ERR HANDLE LOGIC
D-CS-M8577-0-ADT8	*	DATA BUFFER
D-CS-M8577-0-ADT9	A	DIAGNOSTIC LOGIC
D-CS-M8577-0-ADTA	*	POWER. GND. CAPS.
D-CS-M8577-0-ADTB	*	POWER. GND. CAPS.
D-CS-M8577-0-RES	A	TERMINATORS

DRN.	DATE	ENG.	DATE	TITLE: MOS MEMORY MF20
CHK'D.	DATE	BOARD LOCATION: N/A		
DSK:MF20TC.T2P14.566J 120-OCT-82 08:27		NEXT HIGHER ASSEMBLY:		SIZE CODE
FIRST USED ON OPTION/MODEL: MF20 NONE				NUMBER
				REV. H

8	7	6	5	4	3	2	1
DOCUMENT NUMBER		REV	DESCRIPTION		OPTION/ASSY MOS MEMORY		
D-DD-M8579-0		A	MOS STORAGE SHEET 1				
D-UA-M8579-0-0		C	MOS STORAGE SHEET 2				
D-CS-M8579-0-SM00		*	ARRAY BIT[T+00]				
D-CS-M8579-0-SM01		*	ARRAY BIT[T+01]				
D-CS-M8579-0-SM02		*	ARRAY BIT[T+02]				
D-CS-M8579-0-SM03		*	ARRAY BIT[T+03]				
D-CS-M8579-0-SM04		*	ARRAY BIT[T+04]				
D-CS-M8579-0-SM05		*	ARRAY BIT[T+05]				
D-CS-M8579-0-SM06		*	ARRAY BIT[T+06]				
D-CS-M8579-0-SM07		*	ARRAY BIT[T+07]				
D-CS-M8579-0-SM08		*	ARRAY BIT[T+08]				
D-CS-M8579-0-SM09		*	ARRAY BIT[T+09]				
D-CS-M8579-0-SM10		*	ARRAY BIT[T+10]				
D-CS-M8579-0-SM11		*	WR PULSE LOGIC				
D-CS-M8579-0-SM12		*	ROW ADR STROBE				
D-CS-M8579-0-SM13		*	COL ADR STROBE				
D-CS-M8579-0-SM14		*	ADDRESS CONTROL				
D-CS-M8579-0-SM15		*	SM TERMINATOR				
D-CS-M8579-0-SM16		*	5V PWR DISTRIB				
D-CS-M8579-0-SM17		*	5V PWR. CAP. GND.				
D-CS-M8579-0-SM18		*	12V PWR. CAP. GND.				
D-CS-M8579-0-SM19		*	-2V PWR. CAP. GND.				
D-CS-M8579-0-SM20		*	-5V PWR. CAP. GND.				
D-CS-M8579-0-SM21		*	-5V PWR. CAP. GND.				
D-CS-M8579-0-RES		*	TERMINATORS				
D-DD-M8580-0		*	DUAL TRANSLATOR SHEET 1				
D-UA-M8580-0-0		A	DUAL TRANSLATOR SHEET 1				
D-CS-M8580-0-DT01		*	DUAL TRANSLATOR				
D-CS-M8580-0-DT02		*	DATA TRNCVR 0-5				
D-CS-M8580-0-DT03		*	DATA TRNCVR 6-11				
D-CS-M8580-0-DT04		*	DATA TRNCVR 12-17				
D-CS-M8580-0-DT05		*	ADDRESS DRIVERS				
D-CS-M8580-0-DT06		*	CTRL & REF VOLT				
D-CS-M8580-0-DT07		*	MEM DATA DRVRS				
D-CS-M8580-0-DT08		*	POWER. GND. CAPS.				
D-CS-M8580-0-RES		*	TERMINATORS				
D-DD-M8581-0		*	XBUS TRANSLATOR SHEET 1				
D-UA-M8581-0-0		A	XBUS TRANSLATOR SHEET 1				
D-CS-M8581-0-DX01		*	XBUS TRANSLATOR				
D-CS-M8581-0-DX02		*	DATA TRNCVR 0-5				
D-CS-M8581-0-DX03		*	DATA TRNCVR 6-11				
D-CS-M8581-0-DX04		*	DATA TRNCVR 12-17				
D-CS-M8581-0-DX05		*	ADDRESS DRIVERS				
D-CS-M8581-0-DX06		*	CTRL & REF VOLT				
D-CS-M8581-0-DX07		*	POWER. GND. CAPS.				
D-CS-M8581-0-RES		*	TERMINATORS				
DOCUMENT NUMBER		REV	DESCRIPTION				
D-IC-MF20-0-3		A	MF20 CABLE DIAGRAM				
D-BD-MF20-0-4		*	MF20 BLOCK DIAGRAM				
D-FD-MF20-0-5		*	MF20 READ CYCLE FLOW CHART				
D-FD-MF20-0-6		*	MF20 REFRESH CYCLE FLOW CHART				
D-FD-MF20-0-7		*	MF20 WRITE CYCLE FLOW CHART				
D-TD-MF20-0-8		*	DIAGNOSTIC CYCLE TIMING DIAGRAM				
D-TD-MF20-0-9		*	MF20 READ/REFRESH CYCLE TIMING DIAGRAM				
D-TD-MF20-0-10		*	MF20 WRITE CYCLE TIMING DIAGRAM				
D-TD-MF20-0-11		*	READ CYCLE TIMING DIAGRAM				
D-TD-MF20-0-12		*	REFRESH CYCLE TIMING DIAGRAM				
D-BD-MF20-0-13		*	BATTERY BOX BLOCK DIAGRAM				
D-IC-MF20-0-14		*	POWER SUPPLY CONNECTOR DIAGRAM				
D-BD-MF20-0-16		*	MASTER OSCILLATOR BLOCK DIAGRAM				
D-TD-MF20-0-17		*	MF20 TIMING RAMS				
D-BD-MF20-0-18		*	MF20 FIXED VALUED RAM CONTENTS				
D-BD-MF20-0-19		*	MF20 BACKPLANE XBUS CONNECTIONS				
D-CS-MF20-0-20		*	STORAGE ARRAY ORGANIZATION				
D-CS-MF20-0-21		*	MF20M BLOCK DIAGRAM				
A-SP-MF20-0-SYNC		*	MF20 XBUS CLOCK SYNCHRONIZATION				
A-SP-MF20-0-2		B	INSTALLATION PROCEDURE				
E-UA-MF20-0-0		D	MOS MEMORY				
K-PL-MF20-0-DBP		D	MOS MEMORY (PL)				
E-UA-KW20-0-0		B	MASTER OSCILLATOR				
A-PL-KW20-0-0		B	MASTER OSCILLATOR (PL)				
E-AD-7015075-0-0		B	BATTERY BOX ASSY				
A-PL-7015075-0-0		B	BATTERY BOX ASSY (PL)				
E-AD-7016018-0-0		B	CARD CAGE ASSY				
B-PL-7016018-0-0		B	CARD CAGE ASSY (PL)				
E-AD-7014358-0-0		*	WIRED ASSY MF20				
K-WL-MF20-0-WL		C	WIRE LIST (MF20)				
B-PL-MF20-0-SH		B	SHIP LIST				
NOTE: A REVISION DESIGNATED AS "*" REPRESENTS THE INITIAL RELEASE REVISION OF A DOCUMENT IN THE CASE WHERE THE INITIAL RELEASE REVISION WAS "-", "*", OR WAS LEFT BLANK.							
DRN. DATE ENG. DATE TITLE: MOS MEMORY MF20							
CHK'D. DATE BOARD LOCATION: N/A							
DSK:MF20TC.T2PL4.5663 120-OCT-82 08:22 SHEET 3 OF 3							
FIRST USED ON OPTION/MODEL: MF20 NEXT HIGHER ASSEMBLY: NONE							
SIZE CODE NUMBER REV. D TC MF20-0-1 H							

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GROUP 0 IS FIRST 256K WORDS
GROUP 1 IS SECOND 256K
GROUP 2 IS THIRD 256K



REV.	CHG.	NO.
1	1	1

DRN. <i>[Signature]</i>	FIRST USED ON	MF20
CHK'D BY <i>[Signature]</i>	TITLE	MF20 MODULE
ENG. <i>[Signature]</i>	PROJ. ENG. <i>[Signature]</i>	UTILIZATION LIST
PROD.	NEXT HIGHER ASSY.	
B-DD-MF20-0	SCALE	NONE
SHEET 1	OF 1	DIST.

DRAWING NUMBER		PAGE	PART NO.	DESCRIPTION	REVISIONS	
				FILE: ORIGINAL LAYOUT		
				ECO NUMBER		
				MODULE REVISION	A	
D-UA-5412855-0-0	2			XBUS TERMINATOR	A	
K-PL-5412855-0-0	1			PARTS LIST	A	
D-CS-5412855-0-1	1			XBUS TERMINATOR BOARD	-	
E-MD-5012854-0-0	2			DRILL & ETCH DRAWING	A	
K-PC-5412855-0-DBC	-	5012854		ETCH CIRCUIT BOARD	B	
				P.C. DESIGN DATA BASE	A	
NOTES:						

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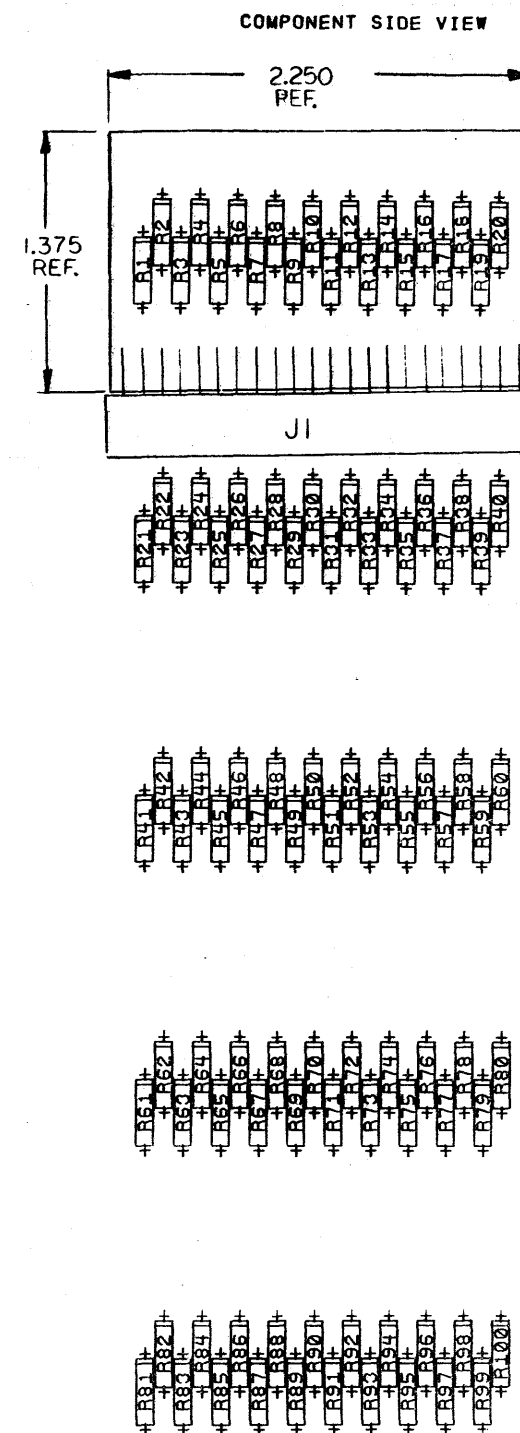
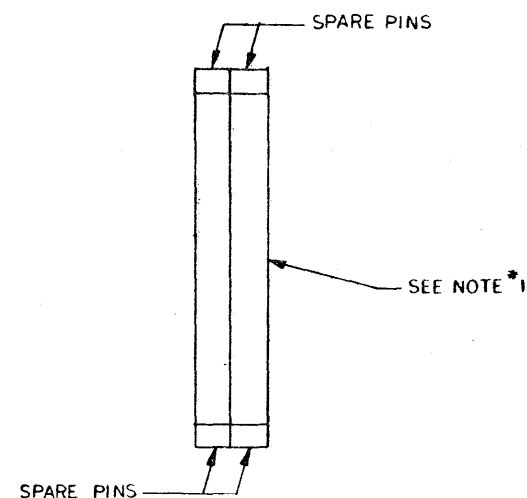
REVISIONS		
CHK	CHANGE NO.	REV



DRN	DATE	ENG	DATE
<i>P. Lucier</i>	01-JAN-64	<i>John Hackworth</i>	1 May 78
CHK'D	DATE	BOARD LOCATION	N/A
<i>M. Norman</i>	01-JAN-64		
	00:00	SHEET	1 OF 1

TITLE: XBUS TERMINATOR			
SIZE	CODE	NUMBER	REV.
D	DD	5412855-0	

TERMD.TX(4,662)	01-JAN-64	00:00	NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: MF20		NONE	



NOTES: 1. THE SPARE PINS SHOWN ARE ON
THE CONNECTOR CARD ON BACKPLANE.
THIS IS THE WRAP SIDE OF THE
BACKPLANE.

CHG	CHANGE NO	REV

ETCH REV.	B
P.C. DESIGN DATA BASE REV.	B

SIGNATURES		DATE	digital	
DRN. <i>[Signature]</i>		<i>10/26/75</i>		
CHK'D <i>[Signature]</i>		<i>10/26/75</i>		
ENG. <i>[Signature]</i>		<i>10/26/75</i>	TITLE XBUS	
PROJ. ENG. <i>[Signature]</i>		<i>10/26/75</i>	TERMINATOR	
PROD. <i>[Signature]</i>		<i>10/26/75</i>		
SCALE 2/1		SIZE	CODE	NUMBER
SHT. 1 OF 2		D	UA	5412855-0-0
NEXT HIGHER ASSY. D-DD-5412855-0				

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1-8-5502145
8300FW53
30030
3215

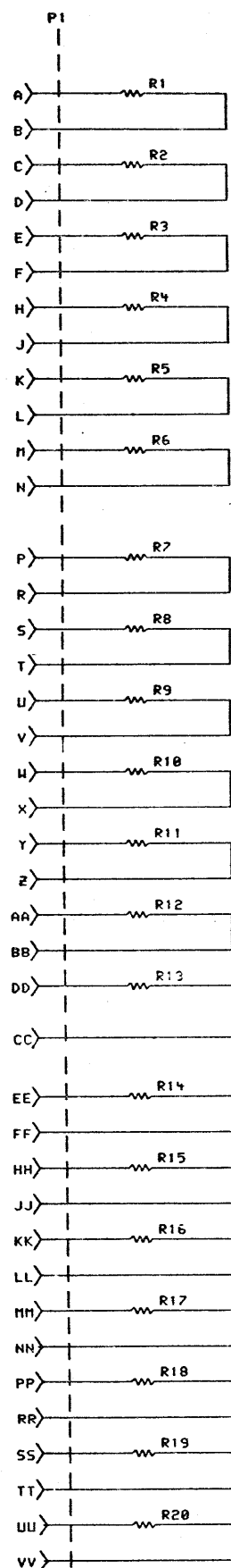
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SHEET 1 OF 1

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REVISIONS		
CHK	CHANGE NO.	REV

digital	DRN. <i>P. Lucier</i>	DATE 14-APR-78	ENG. <i>John Hochberg</i>	DATE 1 May 78	TITLE: XBUS TERMINATOR BOARD
	CHK'D. <i>M. M...</i>	DATE 1 May 78	BOARD LOCATION: 1 OF 1	SHEET 1 OF 1	
TERMBD.DRW(4,662)		26-APR-78 15:29		NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL: MF20		D-DD-5412855-0		REV.	
SIZE D		CODE CS	NUMBER 5412855-0-1	REV.	

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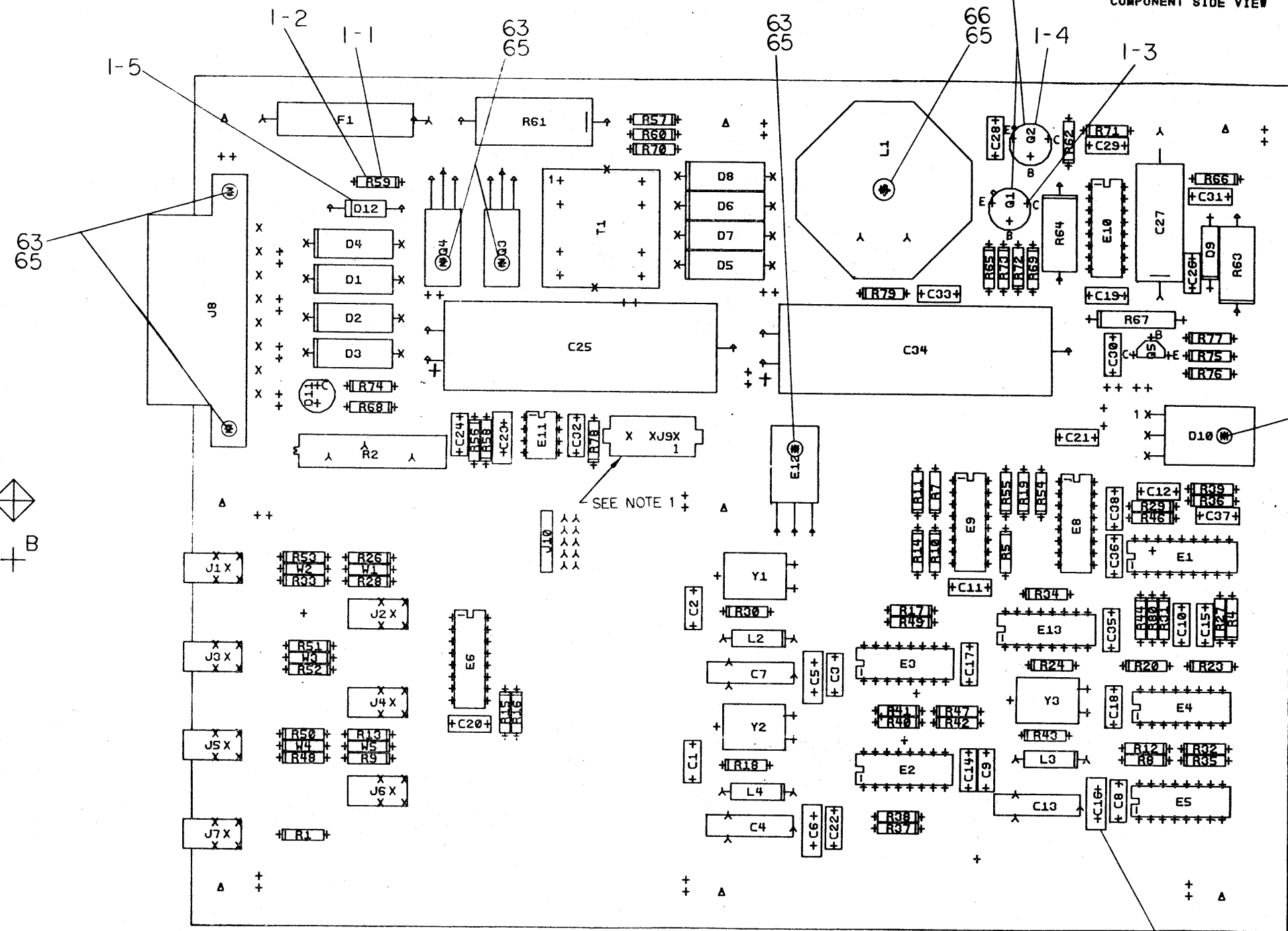
NOTES: 1. ITEM #71 CONNECTS TO J9 ON BOARD

CHK	CHANGE NO	REV
5412851	-1	C
C. LIU		
MRO02		
M. T. 2 JAN 80		
CHONG LIU		

ETCH REV. C
P.C. DESIGN DATA BASE REV. C

SIGNATURES		DATE	digital	
DRN.	D. Mac Donald	1/29/78	TITLE	
CHK'D.	D. Mac Donald	1/29/78		
ENG.	C. C. Chen	7-21-77	MASTER OSCILLATOR	
PROJ. ENG.	D. H. Chen	5-2-78		
PROD.	G. B. B. B.	4-28-77	SIZE CODE NUMBER	
SCALE	2:1			
SHT.	1 OF 5		D UA	5412851-0-0
NEXT HIGHER ASSY. D-DD-5412851-C				

COMPONENT SIDE VIEW



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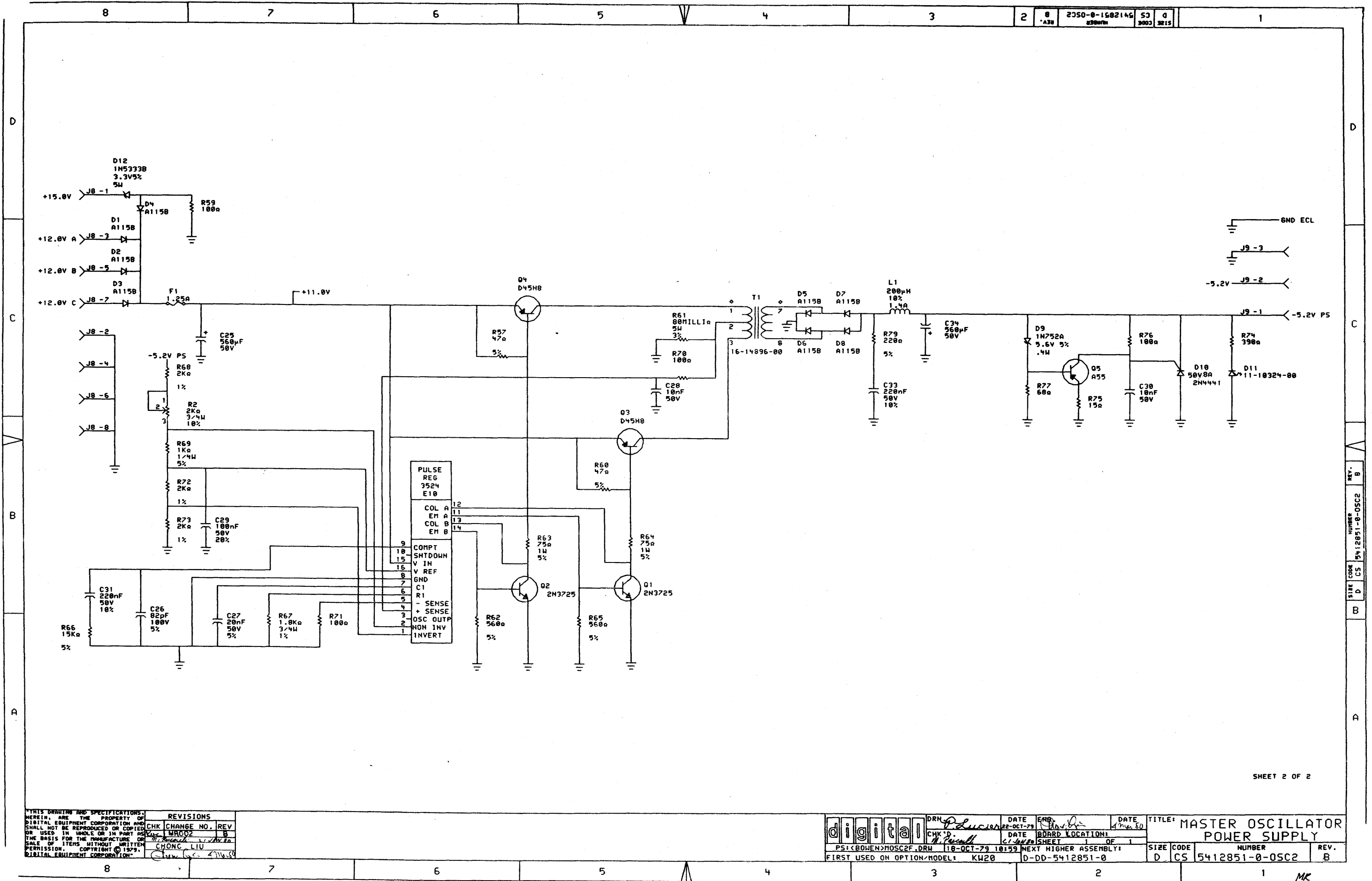
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1 MS# 104453C



SHEET 2 OF 2

REVISIONS		
CHK	CHANGE NO.	REV
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CHONG LIU		

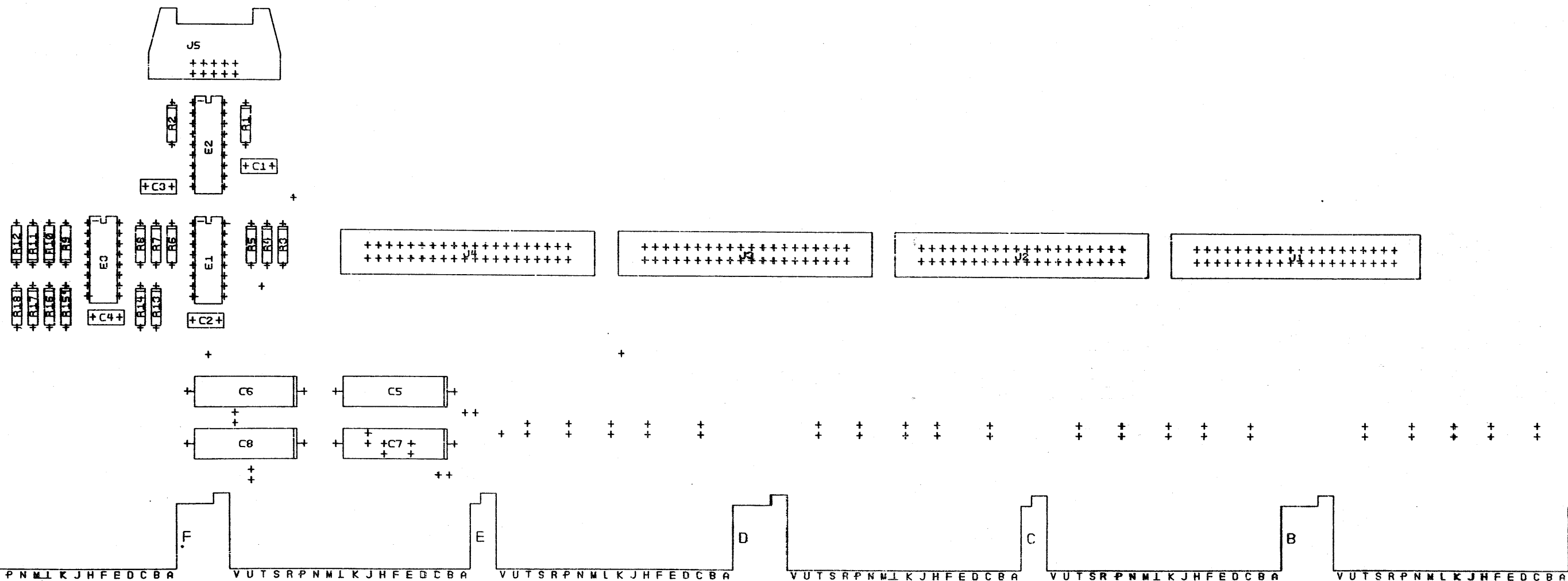
digital		DRN	DATE	ENG	DATE	TITLE: MASTER OSCILLATOR POWER SUPPLY	
CHK'D		DATE	BOARD LOCATION	SHEET 1 OF 1		SIZE	CODE
PS1<BOWEN>MOSC2F.DRW		18-OCT-79 10:59	NEXT HIGHER ASSEMBLY:	D-DD-5412851-0		CS	5412851-0-OSC2
FIRST USED ON OPTION/MODEL: KW20						REV.	B

MK

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13(QTY 12)

COMPONENT SIDE VIEW



NOTES:

CHANGE NO	REV
1	1
2	2
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100	100

ETCH REV.	D
P.C. DESIGN DATA BASE REV.	A

SIGNATURES	DATE	digital
DRN. <i>[Signature]</i>	5-21-78	
CHK. <i>[Signature]</i>	5-21-78	
ENG. <i>[Signature]</i>	5-21-78	
PROJ. ENG. <i>[Signature]</i>	7-7-78	
PROD. <i>[Signature]</i>	7-7-78	
SCALE 2/1		
SHT. 1 OF 5		
NEXT HIGHER ASSY. B-DD-M8572-0		
TITLE X-BUS CABLE BOARD		
SIZE CODE	NUMBER	REV
0 UA	M8572-0-0	B

1 MS# 104448