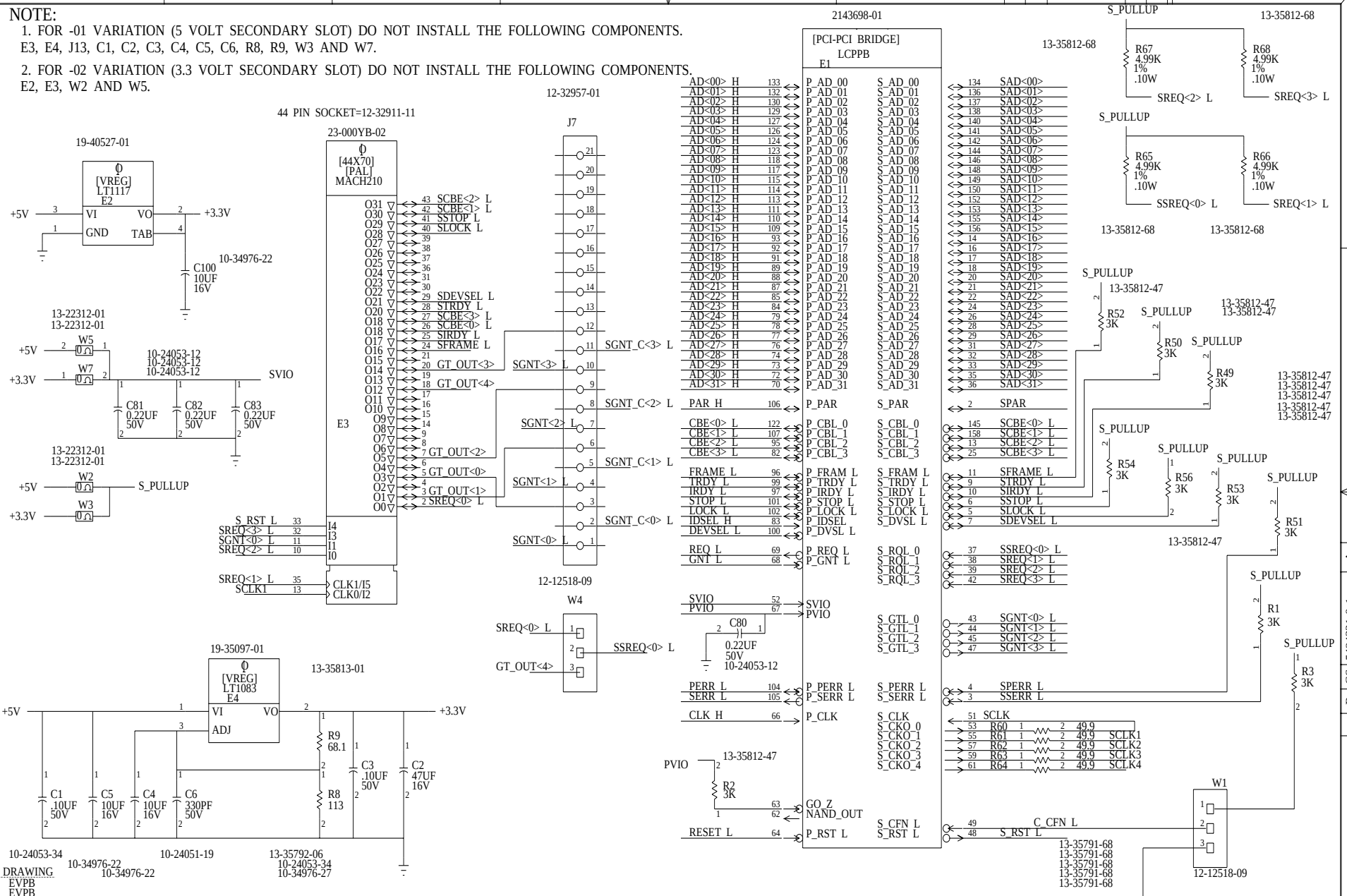
NOTE:

1. FOR -01 VARIATION (5 VOLT SECONDARY SLOT) DO NOT INSTALL THE FOLLOWING COMPONENTS. E3, E4, J13, C1, C2, C3, C4, C5, C6, R8, R9, W3 AND W7.

2. FOR -02 VARIATION (3.3 VOLT SECONDARY SLOT) DO NOT INSTALL THE FOLLOWING COMPONENTS. E2, E3, W2 AND W5.



DRAWING
EVPB
EVPB
LAST_MODIFIED = Thu Jun 29 09:09:05 1995

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EC-QM6TA-TE

REVISION		
CHK	CHANGE NO.	REV

DRN. J. PATEL	DATE 24-FEB-95	ENG. J. PATEL	DATE 24-FEB-95
CHK'D.	DATE	BOARD LOCATION:	
USRA:		SHEET 1 OF 4	
FIRST USED ON OPTION/MODEL:		TOP DOCUMENT NUMBER: K-DD-5424331-0-0	

TITLE: I-LCPPB EB52

SIZE	CODE	NUMBER	REV.
B	CS	5424331-0-1	AX06

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EC-QM6TA-TE

A1 TRST L
A2 +12V
A3 TMS
A4
A5 +5V
A6 INTA L
A7 INTC L
A8 +5V
A9 RESERVED
A10 PVIO
A11 RESERVED

KEY

A14 RESERVED
A15 RESET L
A16 PVIO
A17 GNT L
A18
A19 RESERVED
A20 AD<30> H
A21 B25
A22 AD<28> H
A23 AD<26> H
A24
A25 AD<24> H
A26 IDSEL H
A27 B31
A28 AD<22> H
A29 AD<20> H
A30
A31 AD<18> H
A32 AD<16> H
A33 B36
A34 FRAME L
A35
A36 TRDY L
A37
A38 STOP L
A39 B41
A40
A41
A42

B1 -12V
B2 TCK H
B3
B4
B5 +5V
B6 +5V
B7 INTB L
B8 INTD L
B9 PRSNT1 L
B10 RESERVED
B11 PRSNT2 L

KEY

B14 RESERVED
B15
B16 CLK H
B17
B18 REQ L
B19 PVIO
B20 AD<31> H
B21 AD<29> H
B22
B23 AD<27> H
B24 AD<25> H
B25 B25
C68 1 2 .022UF 50V
10-24052-24
B26 CBE<3> L
B27 AD<23> H
B28
B29 AD<21> H
B30 AD<19> H
B31 B31
C69 1 2 .022UF 50V
10-24052-24
B32 AD<17> H
B33 CBE<2> L
B34
B35 IRDY L
B36 B36
C70 1 2 .022UF 50V
10-24052-24
B37 DEVSEL L
B38
B39 LOCK L
B40 PERR L
B41 B41
C71 1 2 .022UF 50V
10-24052-24
B42 SERR L

A43 PAR H
A44 AD<15> H
A45 A45
C75 1 2 .022UF 50V
10-24052-24
A46 AD<13> H
A47 AD<11> H
A48
A49 AD<09> H

A52 CBE<0> L
10-24053-01
A53 C74 1 2 .01UF 50V
A54 AD<06> H
A55 AD<04> H
A56
A57 AD<02> H
A58 AD<00> H
A59 PVIO
A60
A61 +5V
A62 +5V

B43 A45
B44 CBE<1> L
B45 AD<14> H
B46
B47 AD<12> H
B48 AD<10> H
B49

B52 AD<08> H
B53 AD<07> H
10-24053-01
B54 C73 1 2 .01UF 50V
B55 AD<05> H
B56 AD<03> H
B57
B58 AD<01> H
B59 PVIO
B60
B61 +5V
B62 +5V

12-16862-04
J1

16		
15	CLK H	
14		
13	SCLK	
12		
11	SGNT<3> L	
10		
9	SGNT<2> L	
8		
7	SCLK4	
6		
5	SCLK3	
4		
3	SCLK2	
2		
1	SCLK1	

12-16862-04
J2

16	
15	SAD<00>
14	
13	SAD<01>
12	
11	SAD<02>
10	
9	SAD<03>
8	
7	SAD<04>
6	
5	SAD<05>
4	
3	SAD<06>
2	
1	SAD<07>

12-12297-01

J13

+5V	4
	3
	2
	1

ENG. J. PATEL	DATE 24-FEB-95	TITLE: I-LCPPB EB52	
BOARD LOCATION:			
SHEET 2 OF 4			
TOP DOCUMENT NUMBER: K-DD-5424331-0-0	SIZE B / CODE CS	NUMBER 5424331-0-1	REV. AX06

5424331-0-1 CS B A

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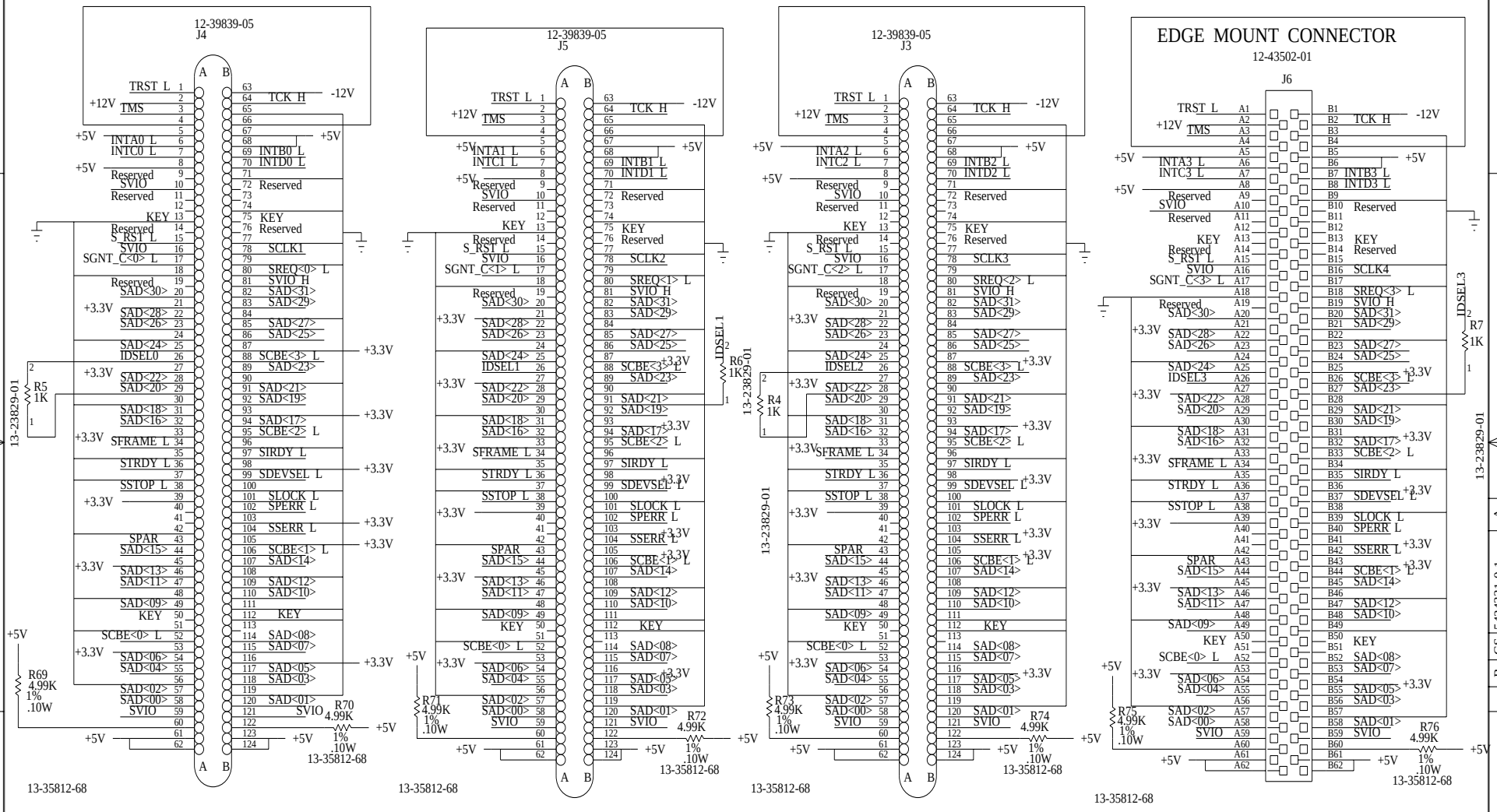
EC-QM6TA-TE



INTA L = INTA0 L, INTD1 L, INTC2 L, INTB3 L

INTB L = INTB0 L, INTA1 L, INTD2 L, INTC3 L

INTC L = INTC0 L, INTB1 L, INTA2 L, INTD3 L

INTD L = INTD0 L, INTC1 L, INTB2 L, INTA3 L

ENG. J. PATEL	DATE 24-FEB-95	TITLE: I-LCPPB EB52	
BOARD LOCATION:			
SHEET 3 OF 4			
TOP DOCUMENT NUMBER: K-DD-5424331-0-0	SIZE B	CODE CS	NUMBER 5424331-0-1 REV. AX06

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EC-QM6TA-TE

12-16862-04 J8

SIRDY L
SFRAME L
SCBE<2> L
SCBE<3> L
SREQ<3> L
SREQ<2> L
SREQ<1> L
SREQ<0> L

12-16862-04 J9

SAD<24>
SAD<25>
SAD<26>
SAD<27>
SAD<28>
SAD<29>
SAD<30>
SAD<31>

12-16862-04 J10

SAD<16>
SAD<17>
SAD<18>
SAD<19>
SAD<20>
SAD<21>
SAD<22>
SAD<23>

12-16862-04 J11

SCBE<0> L
SCBE<1> L
SPAR
SSERR L
SPERR L
SSTOP L
SDEVSEL L
STRDY L

12-16862-04 J12

SAD<08>
SAD<09>
SAD<10>
SAD<11>
SAD<12>
SAD<13>
SAD<14>
SAD<15>

13-16395-01

SIP RES SPK10 R57

S_PULLUP
INTA L
INTB L
INTC L
INTD L
COM
2.7K

C16 .01UF 50V
C13 .01UF 50V
C23 .01UF 50V
10-24053-01
10-24053-01
10-24053-01

+3.3V
C65 15UF 16V
C66 15UF 16V
C64 15UF 16V
10-18000-06
10-18000-06
10-18000-06

+5V
C24 15UF 16V
C32 .10UF 25V
C25 .10UF 25V
C58 .01UF 50V
C39 .01UF 50V
C42 .01UF 50V
C45 .01UF 50V
C49 .01UF 50V
10-18000-06
10-24053-34
10-24053-34
10-24053-01
10-24053-01
10-24053-01
10-24053-01

+3.3V
C59 .01UF 50V
C61 .01UF 50V
C40 .01UF 50V
C43 .01UF 50V
C46 .01UF 50V
C48 .01UF 50V
C50 .01UF 50V
C53 .01UF 50V
C57 .01UF 50V
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01

+5V
C84 .01UF 50V
C85 .01UF 50V
C86 .01UF 50V
C87 .01UF 50V
C88 .01UF 50V
C89 .01UF 50V
C90 .01UF 50V
C91 .01UF 50V
C92 .01UF 50V
C93 .01UF 50V
C94 .01UF 50V
C95 .01UF 50V
10-24053-01
10-24053-01
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10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01
10-24053-01

+3.3V
C101 1000PF 50V
C102 1000PF 50V
C103 1000PF 50V
C104 .22UF 50V
C105 .22UF 50V
10-24053-12
10-24053-12

10-24051-25
10-24051-25
10-24051-25

+3.3V
C7 .01UF 50V
C11 .01UF 50V
C9 .01UF 50V
C8 .01UF 50V
C22 .01UF 50V
C20 .01UF 50V
C18 .01UF 50V
C15 .01UF 50V
C14 .01UF 50V
C12 .01UF 50V
C10 .01UF 50V
C21 .01UF 50V
C19 .01UF 50V
C17 .01UF 50V
C72 .01UF 50V
C76 .01UF 50V
C77 .01UF 50V
C78 .01UF 50V
C79 .01UF 50V
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ENG. J. PATEL	DATE 24-FEB-95	TITLE: I-LCPPB EB52	
BOARD LOCATION:			
SHEET 4 OF 4			
TOP DOCUMENT NUMBER: K-DD-5424331-0-0		SIZE B / CODE CS / NUMBER 5424331-0-1	REV. AX06

5424331-0-1

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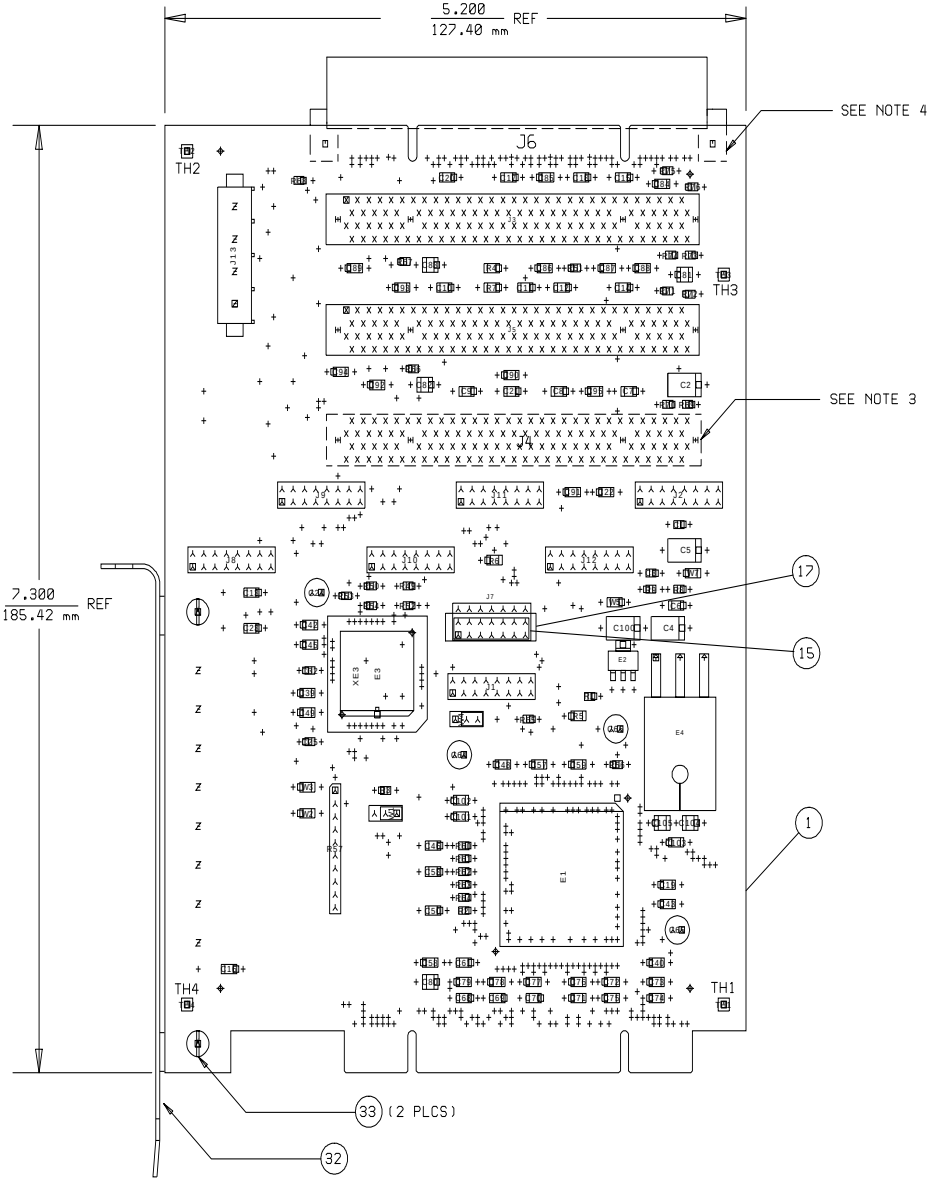

DATE	RESPONSIBLE ENGINEER	ECO NO	REV

DATE	RESPONSIBLE ENGINEER	ECO NO	REV

NOTES:
1. Ø1 VARIATION - E3, E4, J13, C1-C6, W3, W7, R8 & R9 ARE NOT INSTALLED.
2. Ø2 VARIATION - E2, E3, W2, & W5 ARE NOT INSTALLED.
3. J4 IS INSTALLED ON SIDE 2.
4. J6 IS INSTALLED ON SIDE 2.

DESIGN INFORMATION

SURFACE MOUNT TECHNOLOGY: SIDE 1 _X_ SIDE 2 _X_ NONE ___

APPROVALS	DATE
DRAWN: JACK LEPKOWSKI	27/MAR/95
CHECKED: DAVID DROZD	27/MAR/95
MECH ENG: JASH PATEL	
PROJ ENG: JASH PATEL	
MFG ENG:	
SCALE: 2/1	
SHEET 1 OF 2	
TOP DOC NO: K-DD-5424331-0-0	

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TITLE: I-LCPPB EB52

SIZE	CODE	NUMBER	REV
D	UA	5424331-0-0	AX01

ETCH REV B01 MEDIA- K

WO# 298351

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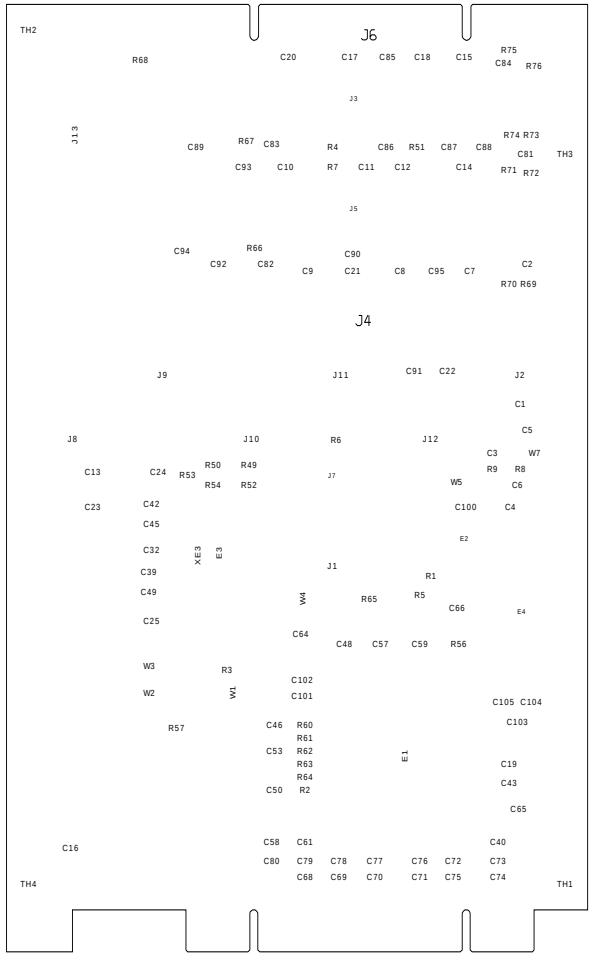
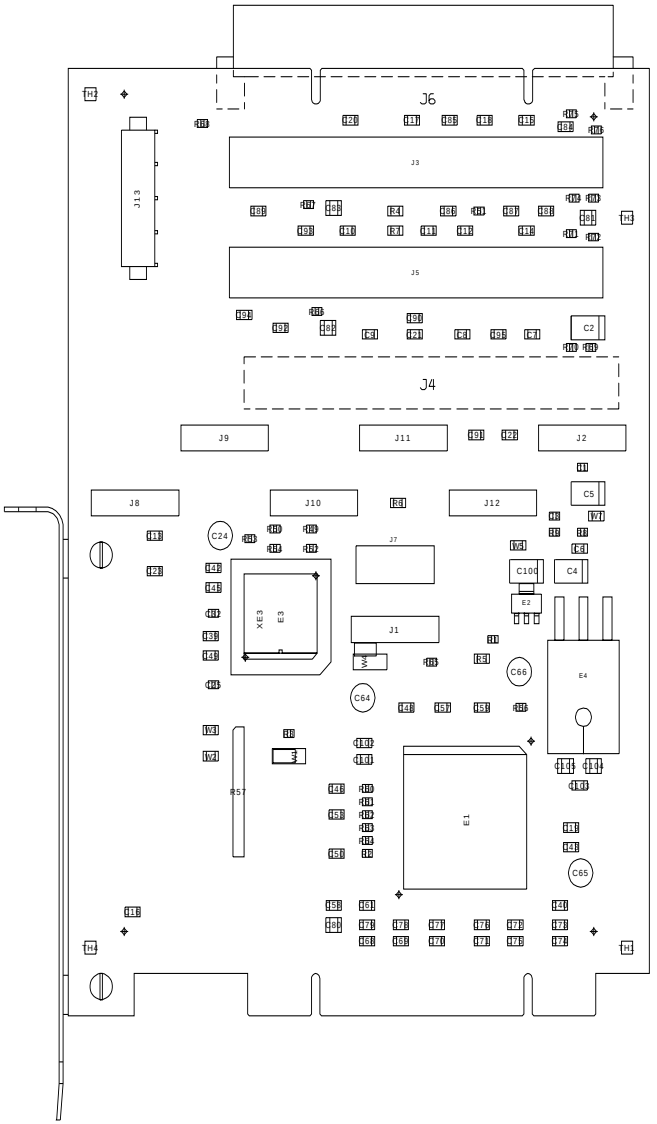


VIEWED FROM SIDE 1



TITLE	DOCUMENT NUMBER			
I-LCPPB EB52	SIZE	CODE	NUMBER	REV
	D	UA	5424331-0-0	AX01
	SCALE 2/1		MEDIA= K	SHEET 2 OF 2

1 WO# 298351

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DATE	RESPONSIBLE ENGINEER	ECO NUMBER	REV

VIEWED FROM SIDE 1

PRINTED WIRE BOARD LAYER CONSTRUCTION

LAYER	DIELECTRIC SPACING	LAYER TYPE	COPPERT WEIGHT	LINE WIDTHS
1	==========	SIGNAL	0.5 OZ + PLATING	0.006"
	0.008 +/- 0.002			
2	----------	PLANE	1.0 OZ	
	0.008 +/- 0.002			
2	----------	PLANE	1.0 OZ	
	0.020 REFERENCE			
2	----------	PLANE	1.0 OZ	
	0.008 +/- 0.002			
2	----------	PLANE	1.0 OZ	
	0.008 +/- 0.002			
6	==========	SIGNAL	0.5 OZ + PLATING	0.006"

OVERALL THICKNESS (PLATING-TO-PLATING), 0.062 +/-0.006 1,58mm +/-1,16mm
OUTER LAYERS ARE STARTED WITH 0.5 OZ COPPER PLATED TO 0.0014 (0,035mm) MINIMUM COPPER THICKNESS.
0.5 OZ COPPER THICKNESS IS 0.0007 (0,017mm) NOMINAL 0.0003 (0,007mm) MINIMUM AFTER PROCESSING.
1.0 OZ COPPER THICKNESS IS 0.0014 (0,035mm) NOMINAL 0.0010 (0,025mm) MINIMUM AFTER PROCESSING.
THE TOLERANCE FOR THE LINEWIDTHS ABOVE IS +/- 0.0015 (0,038mm). FOR ALL OTHERS, REFER TO DIGITAL STANDARD 176.

NOTES:

1) IF A CONFLICT BETWEEN THIS DOCUMENTATION/DESIGN PACKAGE AND ANY OTHER REFERENCED DOCUMENT EXISTS, THIS DOCUMENT/DESIGN PACKAGE WILL TAKE PRECEDENCE.

2) ALL PWB ARTWORK FEATURES (IN ALL FORMATS) ARE SUPPLIED AT NOMINAL DIMENSIONS. ALL ARTWORK AND DRILL FEATURES MAY BE MODIFIED TO ACCOMMODATE SPECIFIC FABRICATION PROCESSES.

3) ALL COPPER FOIL MATERIAL FOR PWBS WITH NOMINAL OVERALL THICKNESS GREATER THAN 0.062 (1,570MM) OR HAVING ASPECT RATIO (THICKNESS/FHS) GREATER THAN 5:1 WILL MEET OR EXCEED ANSI / IPC MF-150 TYPE ED (ELECTRO-DEPOSITED) GRADE III REQUIREMENTS. COPPER FOIL FOR ALL OTHER PWBS WILL MEET OR EXCEED ANSI/IPC MF-150 TYPE ED (ELECTRO-DEPOSITED) GRADE I REQUIREMENTS.

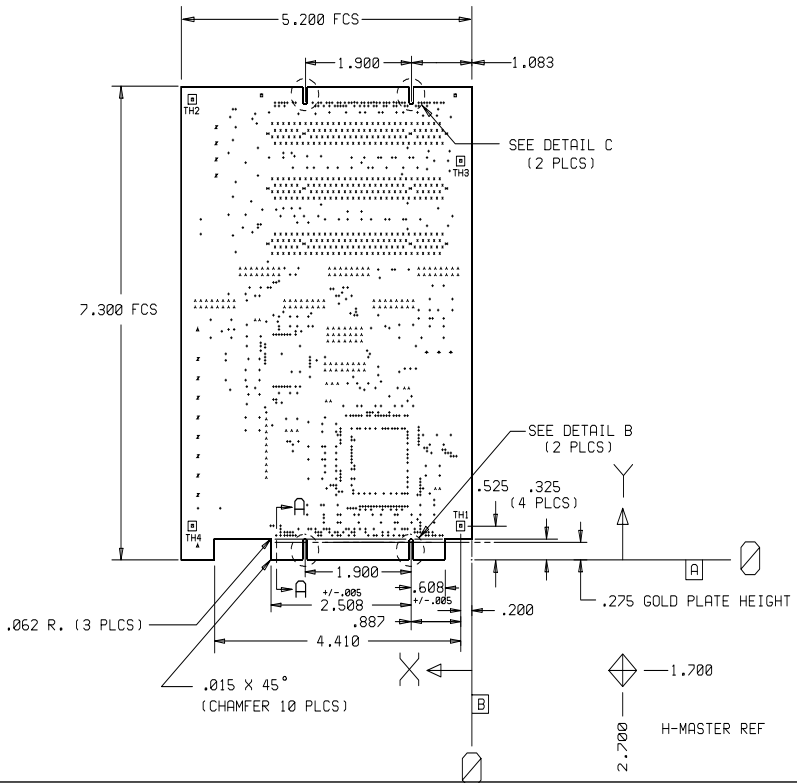
4) DIELECTRIC MATERIAL TO BE FR4 WITH A MINIMUM GLASS TRANSITION TEMPERATURE (TG) OF 135 DEGREE C MEASURED USING IPC THERMAL MECHANICAL ANALYSIS.

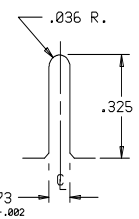
5) PTH COPPER THICKNESS WILL BE 0.0010 (0,025MM) ABSOLUTE MINIMUM FOR SURFACE MOUNT PWBS WITH BASE MATERIALS HAVING TG LESS THAN 200 DEGREE C AND NOMINAL OVERALL THICKNESS 0.093 (2,36MM) OR GREATER. PTH COPPER THICKNESS FOR ALL OTHER PWBS WILL BE 0.00080 (0,0203MM) ABSOLUTE MINIMUM.

6) DIGITAL-APPROVED LIQUID PHOTOIMAGABLE SOLDERMASK (LPISM) IS REQUIRED ON BOTH SIDES OF THE PWB. FOR SURFACE MOUNT DEVICE PADS OF 50 MIL PITCH AND FINER, THE SOLDERMASK DATA DEFINES THE PAD SOLDERABLE SURFACE BY INTENTIONALLY PLACING SOLDERMASK OPENINGS DIRECTLY ON THE ETCH PAD SURFACE. FOR THESE DEVICES, THE SOLDERMASK ARTWORK FEATURES ARE SUPPLIED AT NOMINAL DIMENSIONS REFLECTING THE DESIRED SOLDERMASK DEFINED ETCH PAD SURFACE FOR THE FINISHED PRODUCT. ALL OTHER SOLDERABLE SURFACE ETCH FEATURES ARE SUPPLIED AT ZERO CLEARANCE TO ASSOCIATED ETCH FEATURES REFLECTING DESIRED COVERAGE.

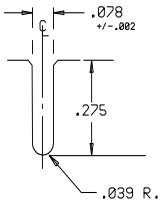
7) THE PWB FABRICATOR WILL ADD ANY REQUIRED PLATING BUSS AND FINGER EXTENSION DETAIL FOR EACH CIRCUIT AND NICKEL / GOLD PLATE EDGE CONNECTOR DETAIL PER DIGITAL STANDARD 176.

8) EDGE BEVEL ACCEPTABLE ALONG ENTIRE BOTTOM EDGE OF CIRCUIT/PANEL (REF SECTION A-A).

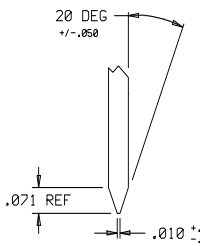




DETAIL B
NO SCALE



DETAIL C
NO SCALE



SECTION A-A
NO SCALE

HOLE DATA (FOR STANDARD HOLE TOLERANCES USE DEC STD 176)																							
SYMBOL																							
FINISHED HOLE SIZE (INCHES)																							
POSITIVE TOLERANCE (INCHES)																							
NEGATIVE TOLERANCE (INCHES)																							
FINISHED HOLE SIZE (mm)																							
POSITIVE TOLERANCE (mm)																							
NEGATIVE TOLERANCE (mm)																							
PLATED?																							
QUANTITY																							

FROM LAYER _____ TO LAYER _____

FABRICATION INFORMATION MATERIAL AND WORKMANSHIP FOR ALL FABRICATED PRINTED WIRING BOARDS MUST MEET THE REQUIREMENTS OF DEC STD 176

FABRICATE BOARD PER: _____ AS SHOWN X | STEP AND REPEAT CODE: NONE | PRESS FIT COMPONENTS: YES ___ NO X

DESIGN INFORMATION
NUMBER OF LAYERS: 6 LAYER CONSTRUCTION: _____ AS SHOWN X
CONTROLLED IMPEDANCE: YES ___ NO X CONTROLLED CAPACITANCE: YES ___ NO X
SURFACE MOUNT TECH / MINIMUM PITCH: SIDE 1 .025 SIDE 2 N/A
PLANAR RESISTOR TECHNOLOGY: YES ___ NO X NUMBER OF PRT LAYERS ___
BOARD FINISH: REFLOW TIN LEAD ___ HASL X ALL COPPER ___ OTHER _____
SOLDERMASK: NONE ___ SIDE 1 X SIDE 2 X | SMOBC: YES X NO ___
NOMENCLATURE: NONE ___ SIDE 1 X SIDE 2 ___ | TENTED VIAS: YES ___ NO X
MINIMUM VIA HOLE SIZE: .015 MINIMUM COMPONENT HOLE SIZE: .038
PAD EXPANSION: OUTER LAYERS X SIGNAL INNER LAYERS ___ NONE ___
INCIRCUIT THIEVING: NONE ___ SIDE 1 X SIDE 2 X AS SHOWN ___
TECHNOLOGY (LW/LS): LINE .006 SPACE .007
CIRCUIT OUTLINE/FINGER DETAIL: _____ AS SHOWN X
SPECIAL REQUIREMENTS: _____

TOLERANCES INCHES UNLESS OTHERWISE SPECIFIED		
INCHES	MM	ANGLES
.XXX ± .010	,XX ± ,25	±0 DEG
.XX ± .020	,X ± ,50	30 MIN
.X ± .100	X, ± 2,50	
APPROVALS		DATE
DRAWN: JACK LEPKOWSKI		27/MAR/95
CHECKED: DAVID DROZD		27/MAR/95
MECH ENG: JASH PATEL		27/MAR/95
PROJ ENG: JASH PATEL		27/MAR/95
MFG ENG:		
SCALE: 1/1		
SHEET 1 OF 2		
TOP DOC NO: K-DD-5024330-0-0		

digital™

TITLE:

CIRCUIT DRILL AND ETCH DRAWING

SIZE	CODE	NUMBER	REV
D	MD	5024330-0-0	AX02

ETCH REV: B01 MEDIA= K

1 WO# 298351

SIZE	CODE	NUMBER	REV
D	MD	5024330-0-0	AX02

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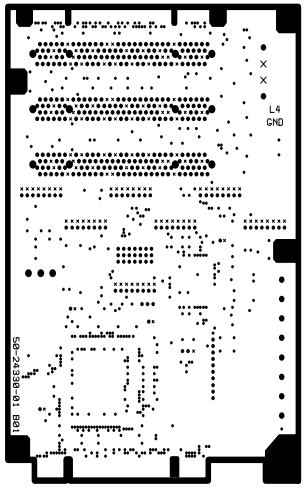
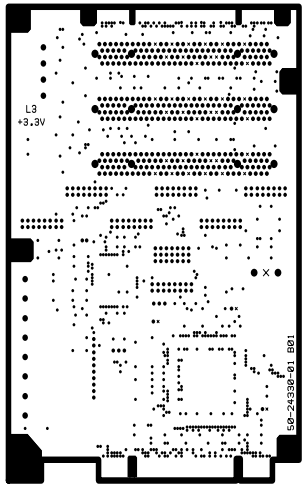
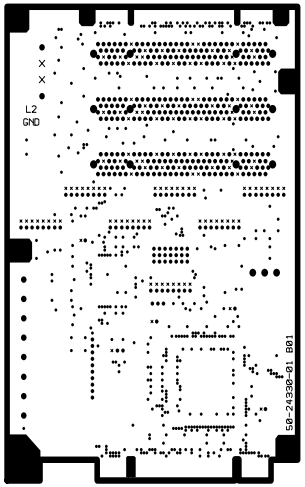
LAYER 4 VIEWED FROM SIDE 2



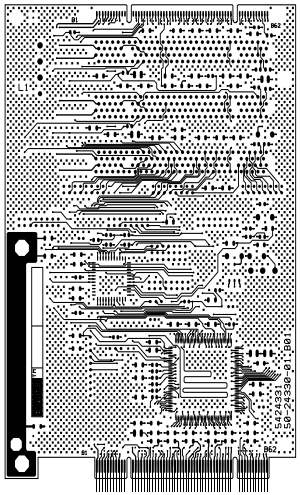
LAYER 3 VIEWED FROM SIDE 1



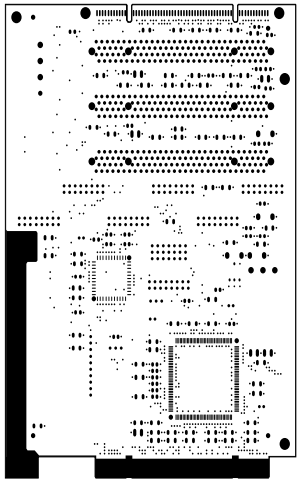
LAYER 2 VIEWED FROM SIDE 1



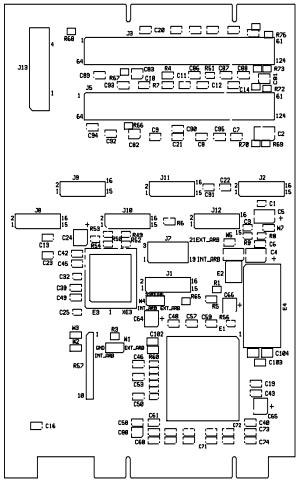
LAYER 1 VIEWED FROM SIDE 1



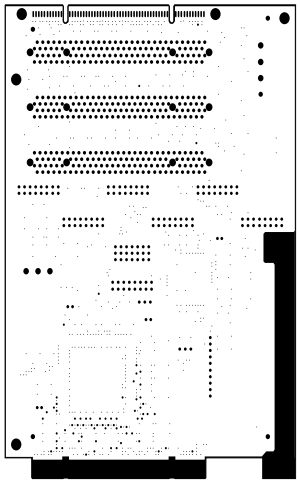
SOLDERMASK SIDE 1 VIEWED FROM SIDE 1



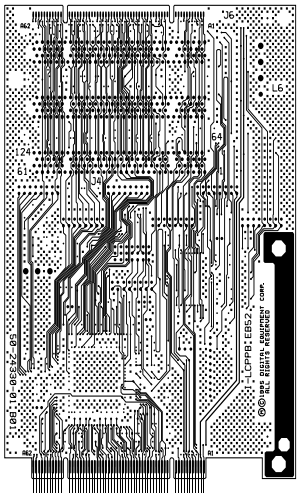
SILK SCREEN VIEWED FROM SIDE 1



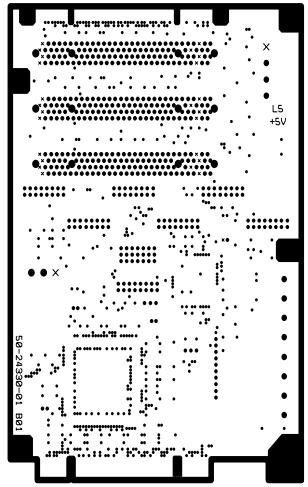
SOLDERMASK SIDE 2 VIEWED FROM SIDE 2



LAYER 6 VIEWED FROM SIDE 2



LAYER 5 VIEWED FROM SIDE 2



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