

4 | 3 | 2 | 1

SPECIFICATIONS:

ROHS COMPLIANCE NOTE: HOMOGENOUS MATERIALS IN THIS BOARD SHALL BE COMPLIANT THE EU RoHS DIRECTIVE 2002/95/EC

MATERIALS: ALL LAMINATES AND BONDING MATERIALS SHOULD BE SELECTED FROM IPC-4101 OR IPC-4103, MINIMUM Tg>170degC, Td>300degC, U.L. RATING OF 94 V-0

MATERIAL FAMILY: ISOLA 370HR

CLADDING: EXTERNAL LAYERS .5 OZ. COPPER, OVERPLATE TO 1.5 OZ. INTERNAL SIGNAL LAYERS .5 OZ. COPPER. INTERNAL PLANE LAYERS 1 OZ. COPPER.

NOTE: IF THE LAYER STACKUP CONFLICTS WITH THE ABOVE CLADDING SPECIFICATIONS THEN THE LAYER STACKUP SHALL TAKE PRECEDENCE.

SOLDER MASK: SHALL BE LIQUID PHOTOIMAGEABLE (LPI) APPLIED ON BOTH SIDES OVER BARE COPPER OR GOLD AND SHALL MEET IPC-SM-840 (LATEST REV.) CLASS 3. COLOR GREEN.

SILK SCREEN: SHALL BE PERMANENT NON-CONDUCTIVE EPOXY INK, COLOR: WHITE SYNTHETIC INKJET PRINTING ALLOWED FOR DENSE BOARDS, COLOR: WHITE

SURFACE FINISH: ENIG (ELECTROLESS NICKEL/IMMERSION GOLD) PER IPC-4552 LATEST REVISION

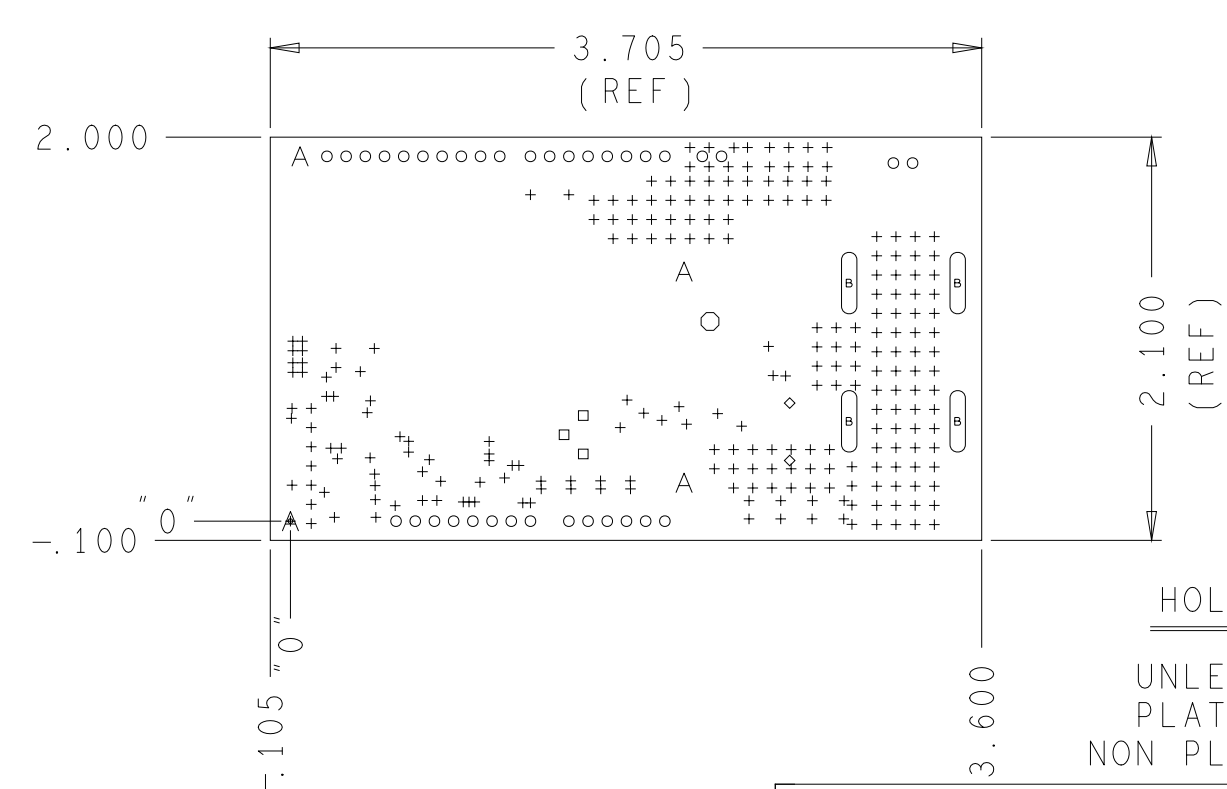
INTENTIONAL SHORTS: IF SUPPLIED DATA INCLUDES A FILE "READ\_ME.2". THEN INTENTIONAL NET SHORTS EXIST. CUSTOMER REVIEW AND APPROVAL IS REQUIRED IF SUPPLIED DATA REPORTS ANY CONDITION THAT DOES NOT MATCH "READ\_ME.2" FILE PROVIDED.

TEST REQUIREMENTS: 100% NETLIST ELECTRICAL VERIFICATION USING CUSTOMER SUPPLIED IPC-D-356 NETLIST FOR OPENS AND SHORTS WHEN "GERBER DATA" IS PROVIDED. THIS VERIFICATION ALSO REQUIRED FOR "ODB++" DATA PER EMBEDDED NETLIST.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	28NOV19	J.PENAFLO
B	ECR-093893	18MAY20	J.PENAFLO
C	ECR-097939	22AUG20	J.PENAFLO
D	ECR-098625	12SEP20	J.PENAFLO

REQUIREMENTS:

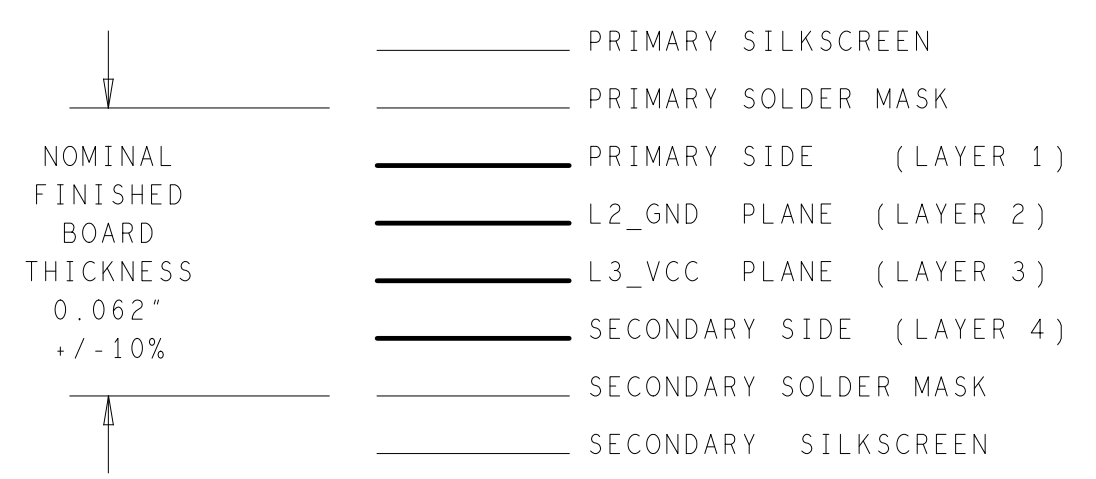
- REFER TO IPC-6010 SERIES (LATEST REV.), CLASS 2 FOR FABRICATION UNLESS OTHERWISE SPECIFIED.
- ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00115, (LATEST REVISION.)
- MODIFICATIONS TO THE ARTWORK ARE NOT ALLOWED WITHOUT WRITTEN AUTHORIZATION.
- HOLE PATTERN TOLERANCES FOR UNDIMENSIONED HOLES SHALL BE A DIAMETER OF 0.005 INCHES FROM THEIR TRUE POSITION.
- PLATED HOLE WALL THICKNESS SHALL NOT BE LESS THAN 0.001 INCH MINIMUM AVERAGE, WITH NO READING LESS THAN .0008 BY CROSS SECTION.
- HOLE DIAMETERS APPLY AFTER PLATING.
- FINISHED CONDUCTOR WIDTHS SHALL NOT BE REDUCED FROM THE NOMINAL INDICATED ON THE MASTER PATTERN, BY MORE THAN THE CONDUCTOR THICKNESS.
- MINIMUM DESIGN LINE WIDTH IS .008 INCH.
- MINIMUM DESIGN SPACING IS .0078 INCH.
- ~~NON FUNCTIONAL PAD REMOVAL FROM INNER SIGNAL LAYERS MAY BE PERFORMED AFTER CUSTOMER APPROVAL.~~
- IF PAD SIZES PROVIDED ARE NOT LARGE ENOUGH TO MAINTAIN ANNULAR RING REQUIREMENT, MFR. MAY REQUEST APPROVAL TO TEAR DROP PADS TO MAINTAIN ANNULAR RING. (AT PAD TO TRACE INTERSECTION ONLY AND ELECTRICAL INTEGRITY MUST BE MAINTAINED.)
- THIEVING MAY BE ADDED TO COMPENSATE FOR LOW COPPER DENSITY AREAS ON THIS DESIGN ONLY AFTER REVIEW AND APPROVAL FROM THE CUSTOMER:
  - A. THIEVING TO CARD EDGE, FIDUCIALS, NON-PLATED THROUGH HOLES, ALL OTHER FEATURES TO BE 0.200 INCH MINIMUM.
  - B. THERE SHALL BE NO THIEVING IN ANY AREAS FREE OF SOLDER MASK OR INTERNAL COPPER PLANES.
- MFR. TO LEGIBLY ETCH OR STAMP/SCREEN WITH PERMANENT NON-CONDUCTIVE INK ON SECONDARY SIDE IN A CLEAR AREA UNLESS OTHERWISE INDICATED:
  - A. U.L. CODE-FLAMMABILITY RATING
  - B. DATE CODE (STAMP).
  - C. LOT NUMBER
  - D. MFR LOGO
  - E. SUCCESSFUL ELECTRICAL TEST.
- REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.



HOLE TOLERANCE  
UNLESS SPECIFIED  
PLATED: +/-3MILS  
NON PLATED: +/-2MILS

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
+	12.0	PLATED	241	DIA MAX
□	30.0	PLATED	3	
◇	35.0	PLATED	2	
○	45.0	PLATED	36	
○	80.0	PLATED	1	
A	125.0	NON-PLATED	4	
B	320.0x80.0	NON-PLATED	4	

4 LAYER STACKUP



PRIMARY SIDE

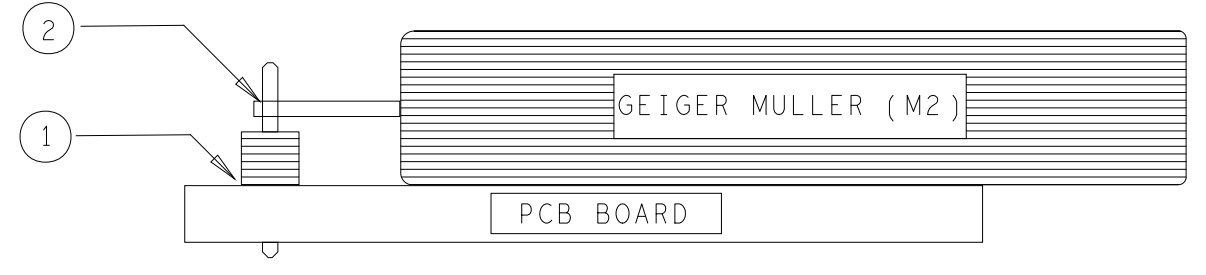
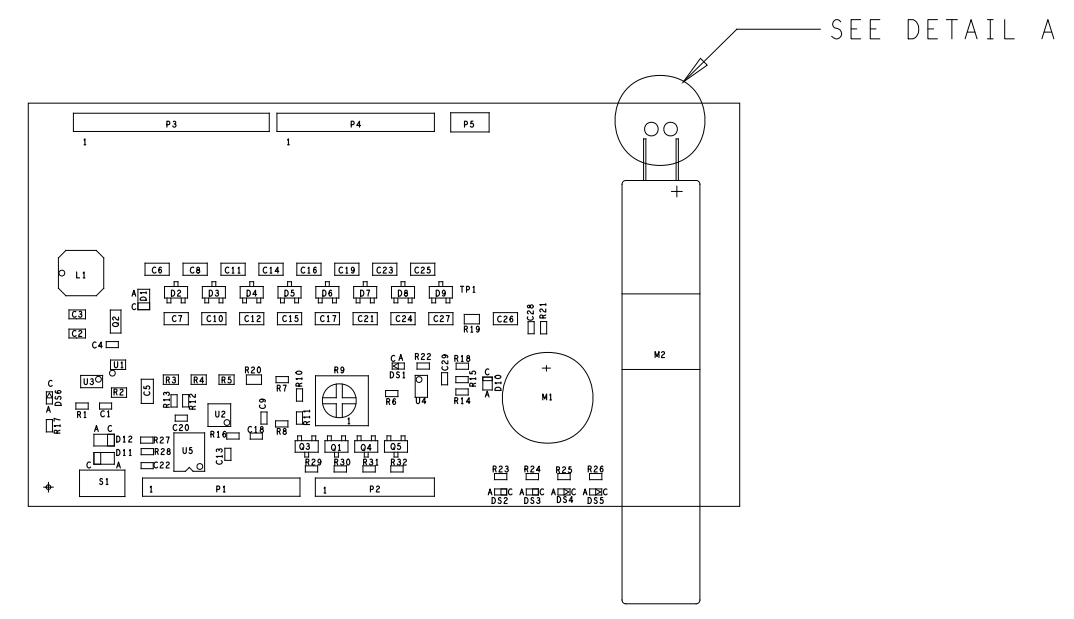
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES .XX -.010 --1/32 -- 2 .XXX -.005 .XXXX -.0050	APPROVAL TEMPLATE ENGINEER	DATE	<p>WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887</p>
	HARDWARE SERVICES M. JOSE	04OCT19	
MATERIAL	TEST ENGINEER		TITLE FABRICATION EVAL-CN0536-ARDZ CUSTOMER EVAL BOARD Z
	COMPONENT ENGINEER A. AGENA	04OCT19	
FINISH	HARDWARE RELEASE K. JABATAN	04OCT19	SIZE C 24355 FSCM NO 09-057494 DRAWING NUMBER REV D
	DESIGNER M. VALE	04OCT19	
DO NOT SCALE DWG	PTD ENGINEER J. PENAFLO CHECKER	28NOV19	SCALE 1/1 SHEET 1 OF 1

4 | 3 | 2 | 1

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D	ECR-098625	12SEP20	J.PENAFLO

ASSEMBLY NOTES:

1. BOARD ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00119 (LATEST REVISION).
2. REPAIRS PER IPC-7711/21(LATEST REVISION) ARE ALLOWED.
3. REPAIRS ARE NOT ALLOWED IN SOLDERMASK FREE AREAS ON EITHER SIDE OF THE BOARD.
4. RoHS COMPLIANCE: ASSEMBLY VENDOR SHOULD ASSURE COMPLIANCE WITH LEAD-FREE AND RoHS PCB ASSEMBLY STANDARDS (EU RoHS DIRECTIVE 2002/95/EC).
5. DO NOT TRIM/CUT EXCESS PINS OF P1, P2, P3 AND P4
6. SEPARATE THE BOARDS AFTER ASSEMBLY
7. INSTALL SHUNT CONNECTOR (M036050) TO PIN 1 AND 2 OF P5



HEADER AND GEIGER INSTALLATION

1. MOUNT HEADER CONNECTOR ( TSW-102-09-G-S) FIRST AND SOLDER IT DOWN.
2. LAYDOWN GEIGER (M2) ON THE PCB WITH PROPER POLARITY ORIENTATION THEN SOLDER THE 2 PINS OF M2 TO THE HEADER CONNECTOR.
3. STRAP THE COMPONENT M2 TO THE PCB SLOTTED HOLES USING CABLE TIE (M044354). CUT THE EXCESS CABLE TIE.



DETAIL A

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES .XX -.010 --1/32 --2 .XXX -.005 .XXXX -.0050	APPROVAL TEMPLATE ENGINEER	DATE 04OCT19	WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887				
	HARDWARE SERVICES M. JOSE	HARDWARE SYSTEMS				TITLE ASSEMBLY EVAL - CN0536 - ARDZ CUSTOMER EVAL BOARD Z	
MATERIAL	TEST ENGINEER	COMPONENT ENGINEER A. AGENA TEST PROCESS 04OCT19	DESIGNER M. VALE PTD ENGINEER J. PENAFLO CHECKER 28NOV19	SIZE C	FSCM NO 24355	DRAWING NUMBER 01-057494	REV D
FINISH	HARDWARE RELEASE K. JABATAN 04OCT19	SCALE 1/1	SHEET 1 OF 2				

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D

D

C

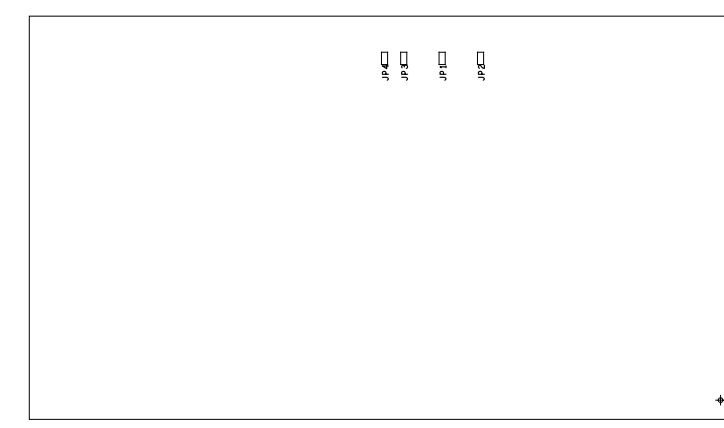
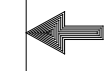
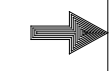
C

B

B

A

A



SECONDARY SIDE



WWM  
DIVISION  
804 WOBURN STREET  
WILMINGTON, MA 01887

SIZE	FSCM NO	DRAWING NUMBER	REV
C	24355	01-057494	D
SCALE	1/1	SHEET 2 OF 2	

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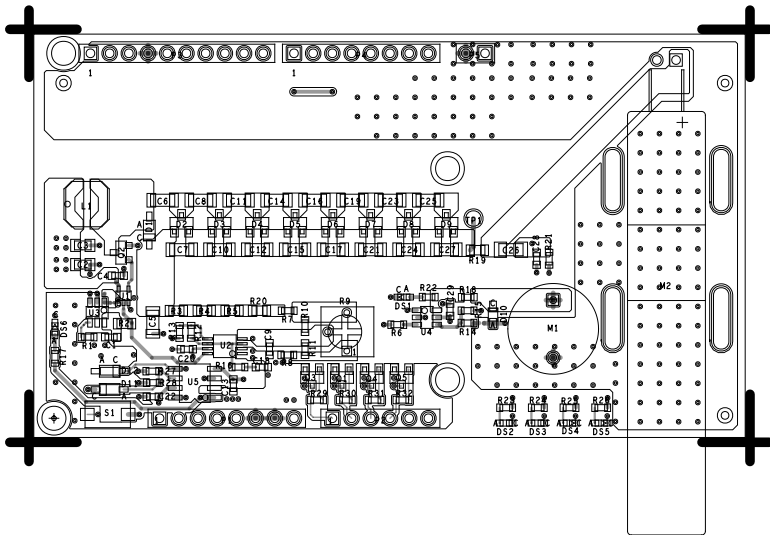
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2

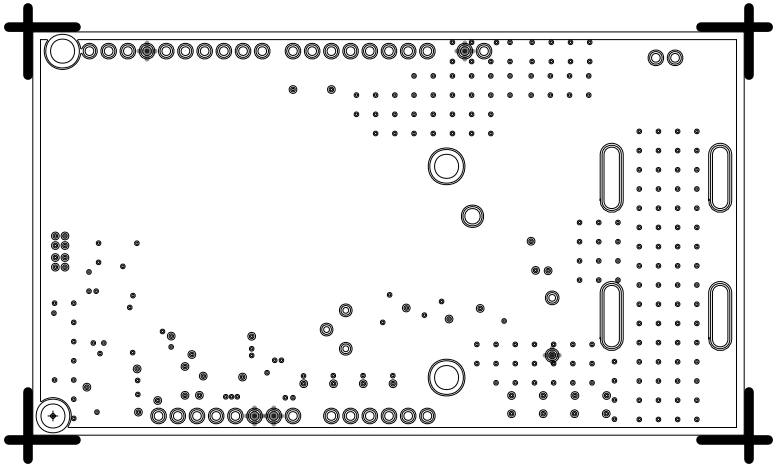
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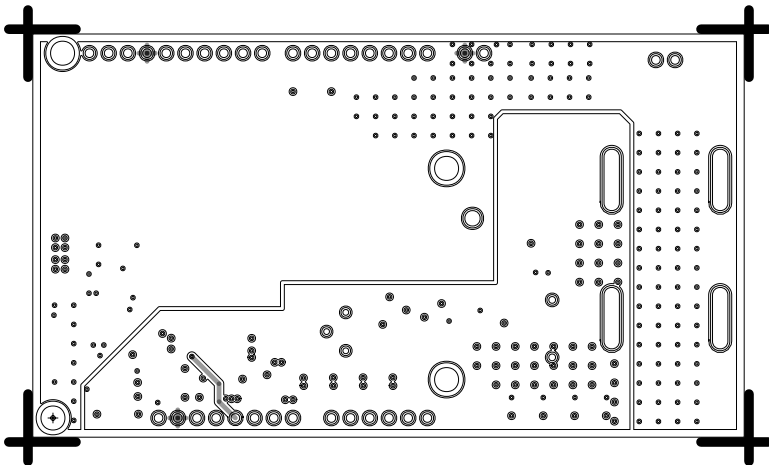
L1 PRIMARY  
08-057494-01  
REV D



L2 GND  
08-057494-07  
REV D



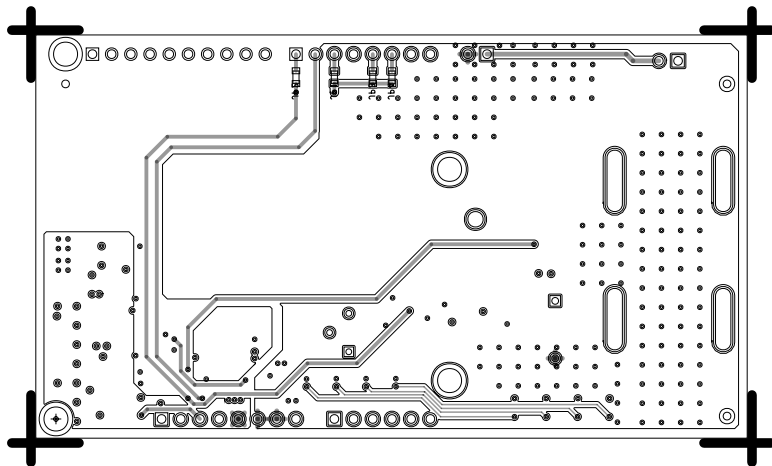
L3 VCC  
08-057494-08  
REV D



L4 SECONDARY

08-057494-02

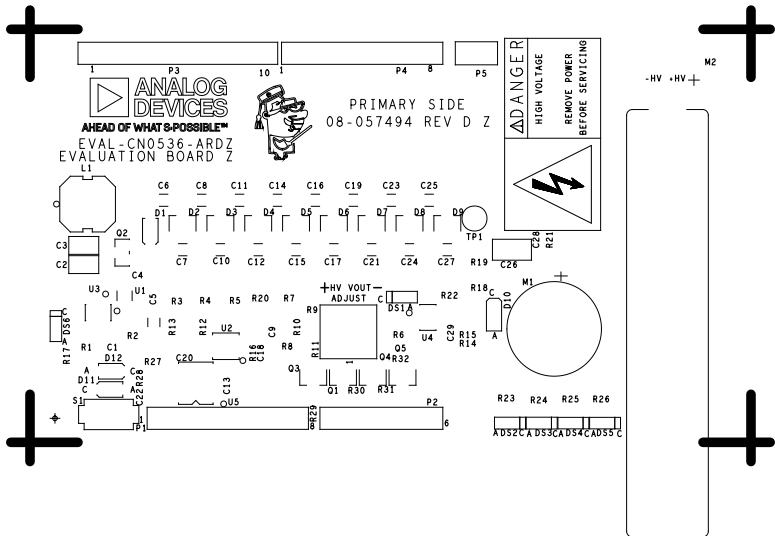
REV D



SILKSCREEN PRIMARY

08 - 057494 - 03

REV D

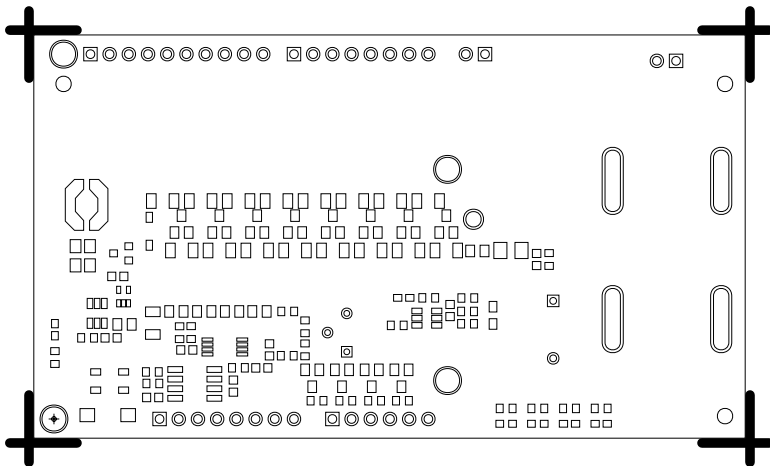




SOLDERMASK PRIMARY

08 - 057494-04

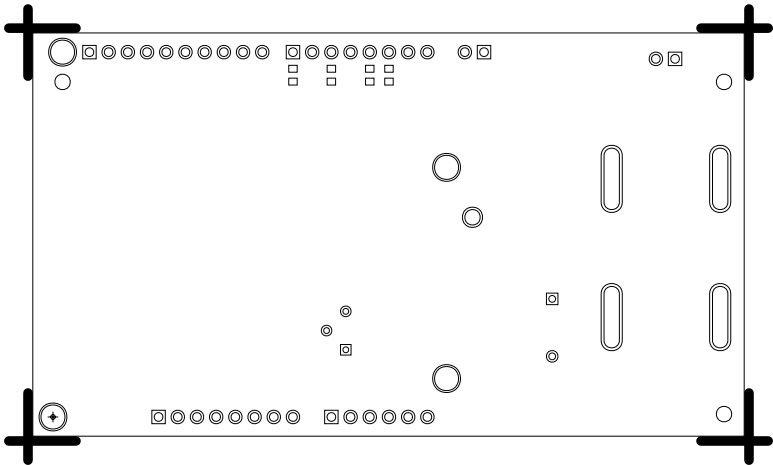
REV D



SOLDERMASK SECONDARY

08-057494-06

REV D



SILKSCREEN SECONDARY

08-057494-05

REV D



SECONDARY SIDE



1b1

1b1

1b3

1b4

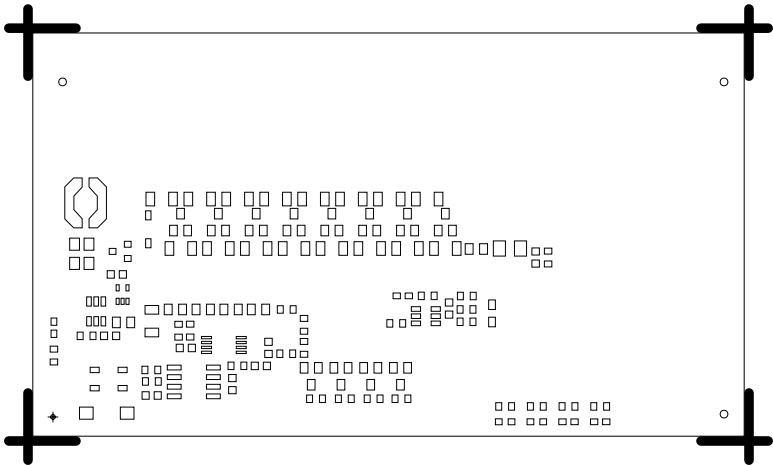
b2



PASTEMASK PRIMARY

08-057494-09

REV D



PASTEMASK SECONDARY

08-057494-10

REV D

