

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE		PAT SHEAHAN
B	CHANGES PER ECR-088858	18JUN19	M RECIO
C	CHANGES PER ECR 089572	05AUG19	M RECIO
D	CHANGES PER ECR-093689	27FEB20	P SHEAHAN
E	CHANGES PER ECR-101689	03MAR21	P SHEAHAN

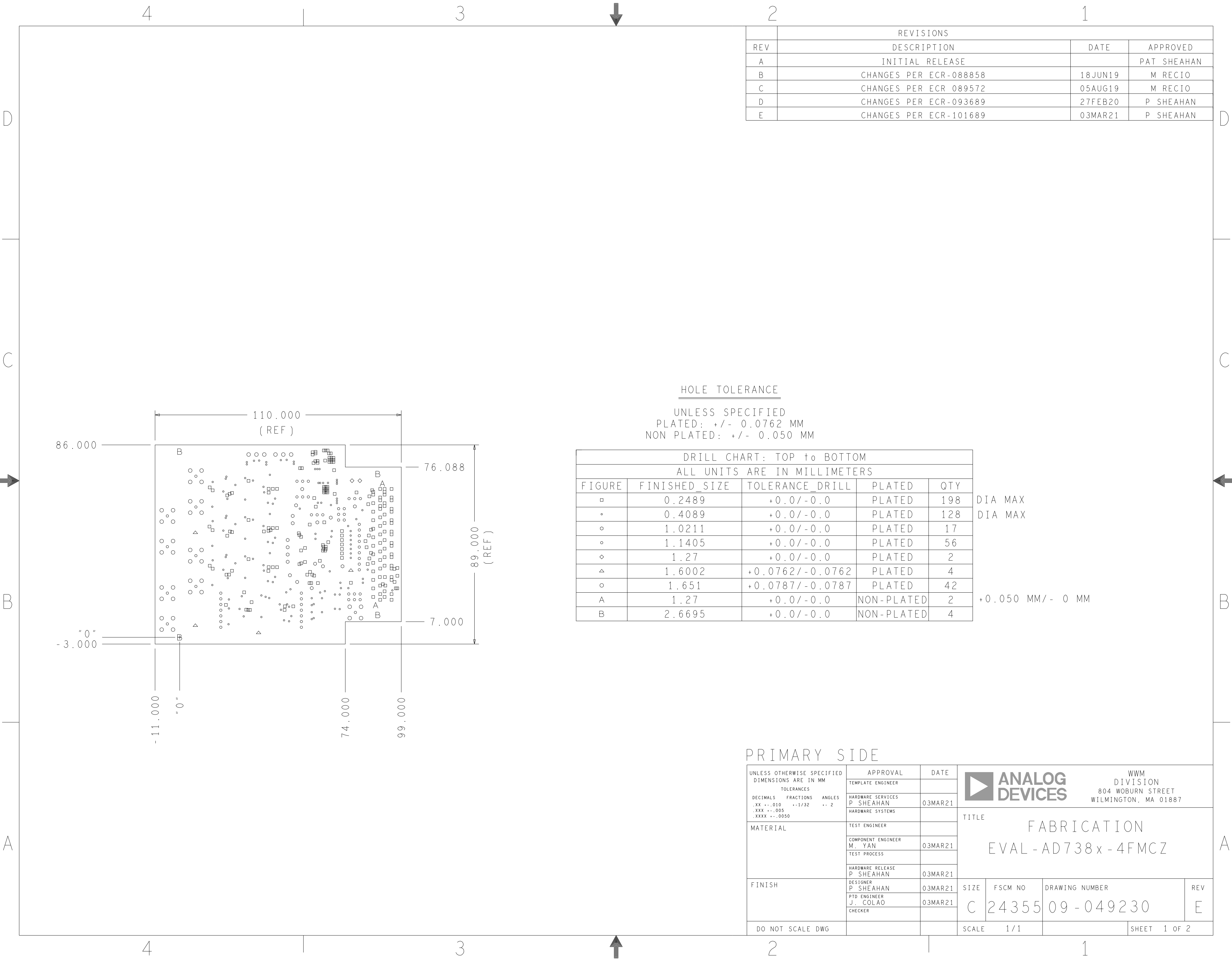
ASSEMBLY NOTES:

- BOARD ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00119 (LATEST REVISION).
- REPAIRS PER IPC-7711/21(LATEST REVISION) ARE ALLOWED.
- REPAIRS ARE NOT ALLOWED IN SOLDERMASK FREE AREAS ON EITHER SIDE OF THE BOARD.
- RoHS COMPLIANCE: ASSEMBLY VENDOR SHOULD ASSURE COMPLIANCE WITH LEAD-FREE AND RoHS PCB ASSEMBLY STANDARDS (EU RoHS DIRECTIVE 2002/95/EC).
- INSTALL JUMPER SHUNTS(M031256) ON THE FOLLOWING LOCATIONS:
A: LK1 (PIN 1 & 2)
B: LK2 (PIN 1 & 2)
C: LK3 (PIN 1 & 2)
D: LK4 (PIN 3 & 4)
E: LK5 (PIN 3 & 4)
- Board ID Label Content varies depending on the SAP Model.

Board ID Label Information	
SAP MODEL NUMBER	Board ID Label
EVAL-AD7380-4FMCZ	EVAL-AD7380-4FMCZ
EVAL-AD7381-4FMCZ	EVAL-AD7381-4FMCZ
EVAL-AD7383-4FMCZ	EVAL-AD7383-4FMCZ
EVAL-AD7384-4FMCZ	EVAL-AD7384-4FMCZ
EVAL-AD7386-4FMCZ	EVAL-AD7386-4FMCZ
EVAL-AD7387-4FMCZ	EVAL-AD7387-4FMCZ

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM TOLERANCES DECIMALS FRACTIONS ANGLES .XX -.010 --1/32 -- 2 .XXX -.005 .XXXX -.0050	APPROVAL	DATE	<div><div></div><div>ANALOG DEVICES</div></div> <div>WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887</div>			
	TEMPLATE ENGINEER					
	HARDWARE SERVICES P. SHEAHAN	03MAR21	TITLE ASSEMBLY EVAL - AD738x - 4FMCZ			
	HARDWARE SYSTEMS					
MATERIAL	TEST ENGINEER		SIZE C	FSCM NO 24355	DRAWING NUMBER 01 - 049230	REV E
	COMPONENT ENGINEER M. YAN	03MAR21				
	TEST PROCESS					
FINISH	HARDWARE RELEASE P. SHEAHAN	03MAR21	SCALE 1 / 1	SHEET 1 OF 2		
	DESIGNER P. SHEAHAN	03MAR21				
	PTD ENGINEER J. COLAO CHECKER	03MAR21				
DO NOT SCALE DWG						



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HOLE TOLERANCE


UNLESS SPECIFIED
PLATED: +/- 0.0762 MM
NON PLATED: +/- 0.050 MM

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILLIMETERS				
FIGURE	FINISHED_SIZE	TOLERANCE_DRILL	PLATED	QTY
□	0.2489	+0.0/-0.0	PLATED	198
•	0.4089	+0.0/-0.0	PLATED	128
◊	1.0211	+0.0/-0.0	PLATED	17
◊	1.1405	+0.0/-0.0	PLATED	56
◊	1.27	+0.0/-0.0	PLATED	2
△	1.6002	+0.0762/-0.0762	PLATED	4
◊	1.651	+0.0787/-0.0787	PLATED	42
A	1.27	+0.0/-0.0	NON-PLATED	2
B	2.6695	+0.0/-0.0	NON-PLATED	4

DIA MAX
DIA MAX

+0.050 MM/- 0 MM

PRIMARY SIDE

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MATERIAL			TEST ENGINEER				TITLE FABRICATION EVAL - AD738x - 4FMCZ									
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FINISH			DESIGNER P. SHEAHAN		03MAR21		SIZE C		FSCM NO 24355		DRAWING NUMBER 09 - 049230		REV E			
			PTD ENGINEER J. COLAO		03MAR21											
			CHECKER													
DO NOT SCALE DWG							SCALE		1 / 1				SHEET		1 OF 2	



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, FR4 OR EQUIVALENT
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.

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 .2 MM.
- MINIMUM DESIGN SPACING IS .12 MM.
- ~~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:
 - THIEVING TO CARD EDGE, FIDUCIALS, NON-PLATED THROUGH HOLES, ALL OTHER FEATURES TO BE 0.200 INCH MINIMUM.
 - 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:
 - U.L. CODE-FLAMMABILITY RATING
 - DATE CODE (STAMP).
 - LOT NUMBER
 - MFR LOGO
 - SUCCESSFUL ELECTRICAL TEST.
- REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.

4 LAYER STACKUP

	PRIMARY SILKSCREEN
	PRIMARY SOLDER MASK
NOMINAL FINISHED BOARD THICKNESS 1.6MM +/- 10%	PRIMARY SIDE (LAYER 1)
	L2_GND PLANE (LAYER 2)
	L3_PWR PLANE (LAYER 3)
	SECONDARY SIDE (LAYER 4)
	SECONDARY SOLDER MASK
	SECONDARY SILKSCREEN

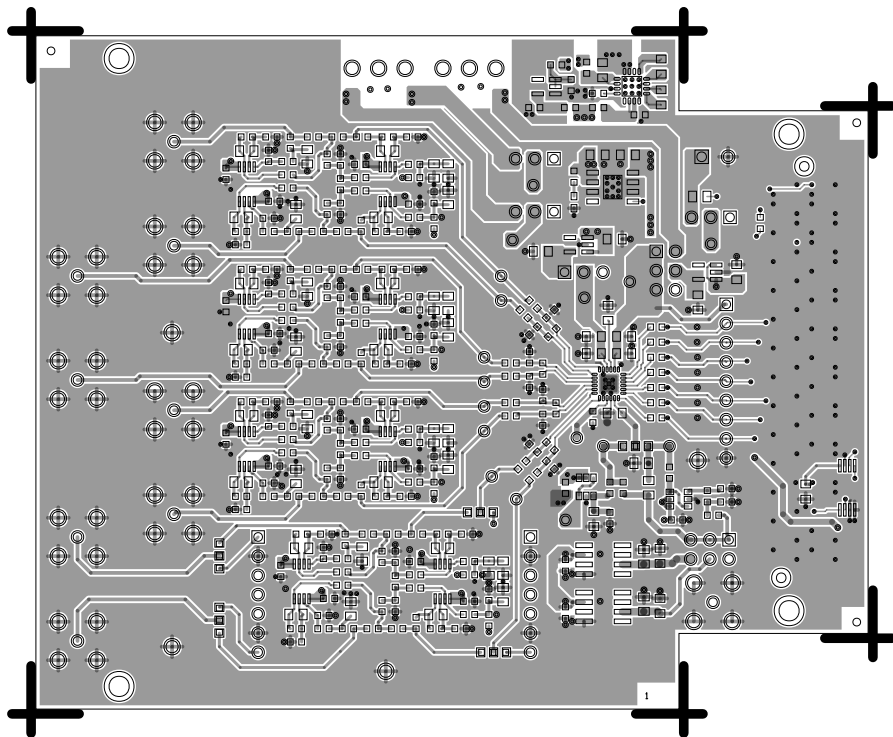
PRIMARY SIDE

		WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887	
SIZE	FSCM NO	DRAWING NUMBER	REV
C	24355	09-049230	E
SCALE	1/1	SHEET 2 OF 2	

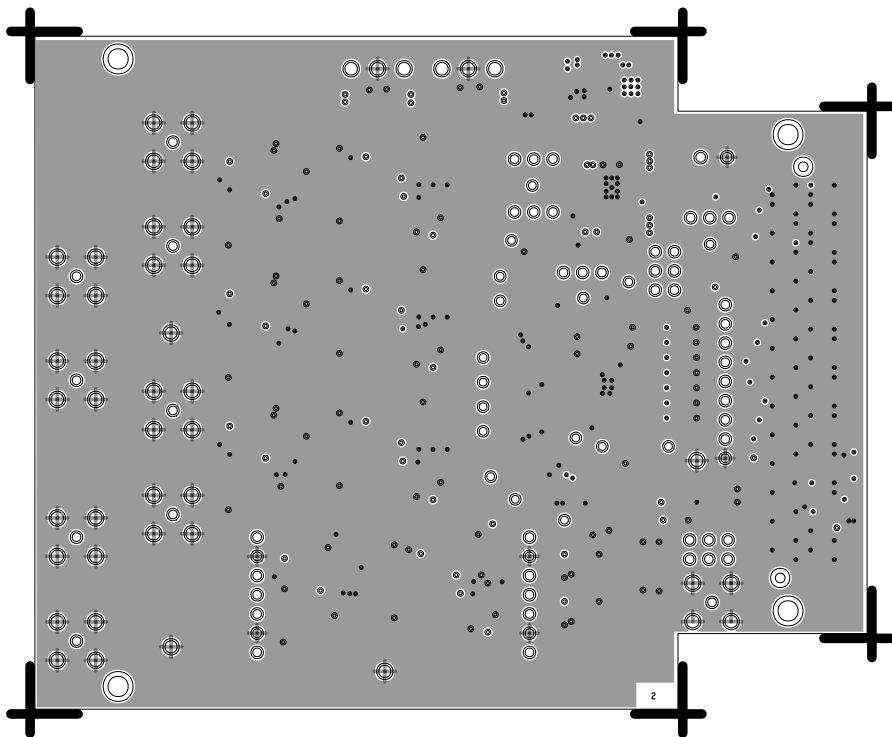
EVAL-AD738x-4FMCZ Rev-E



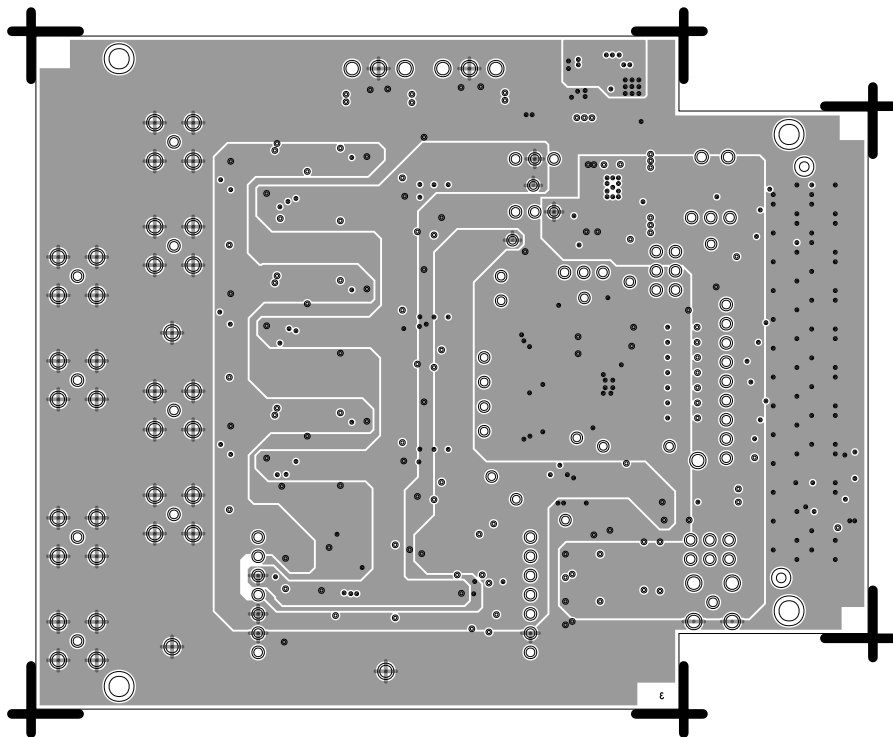
L1 PRIMARY
08-049230-01
EVAL-AD738x-4FMCZ Rev-E



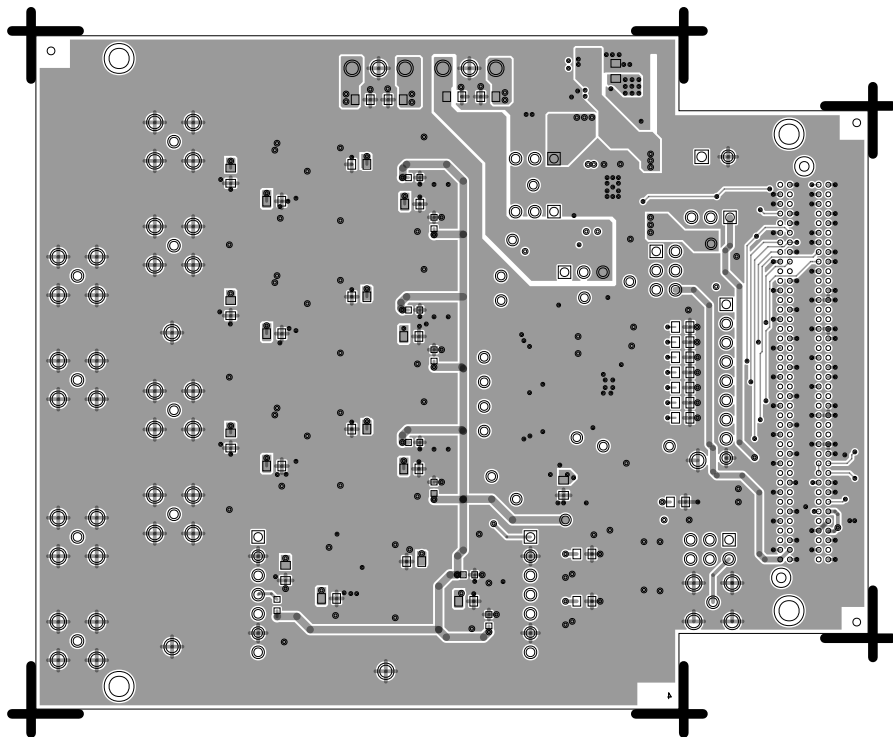
L2 GND
08-049230-07
EVAL-AD738x-4FMCZ Rev-E



L3 PWR
08- 049230-08
EVAL-AD738x-4FMCZ Rev-E



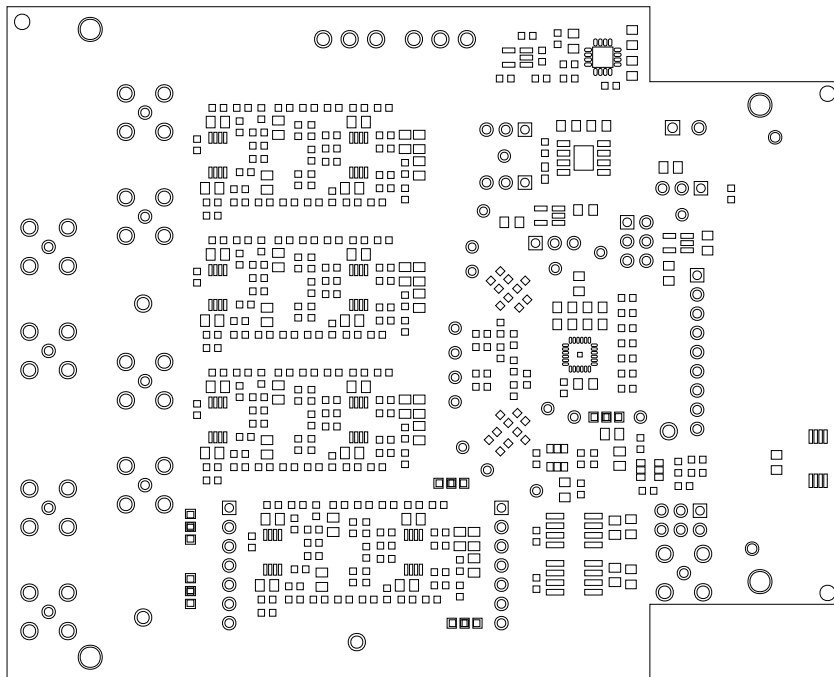
L4 SECONDARY
08-049230-02
EVAL-AD738x-4FMCZ Rev-E



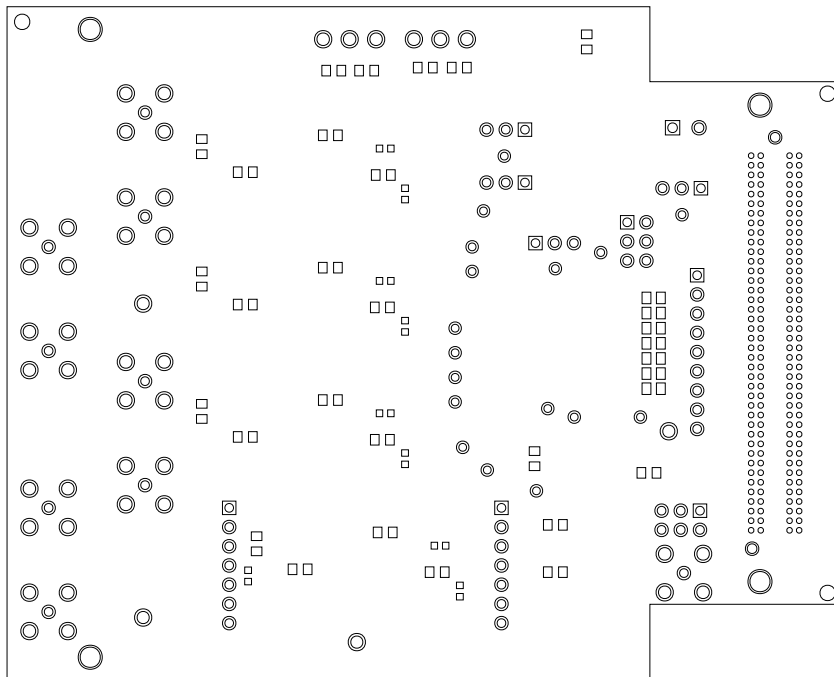
EVAL-AD738x-4FMCZ Rev-E



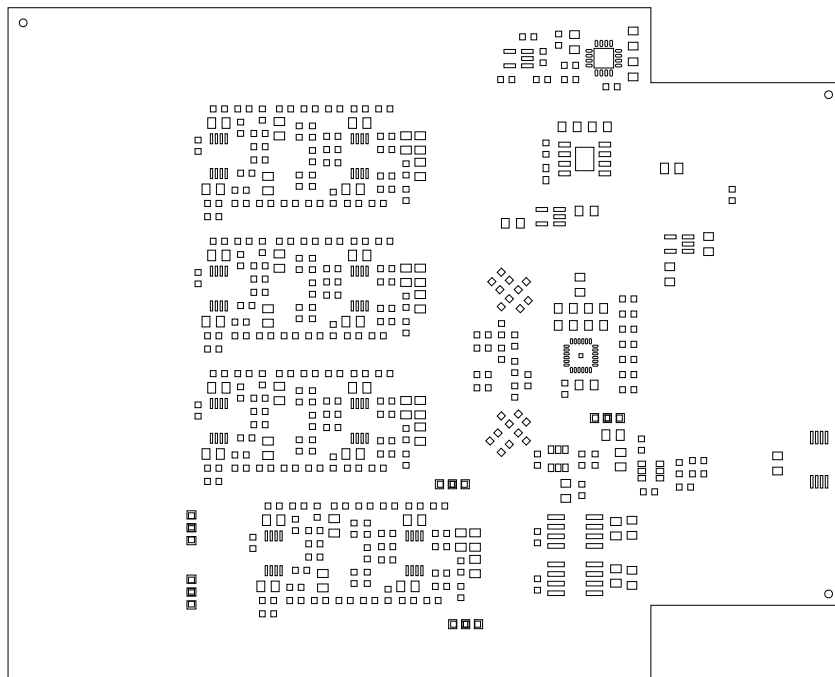
SOLDERMASK PRIMARY
08-049230-04
EVAL-AD738x-4FMCZ Rev-E



SOLDERMASK SECONDARY
08-049230-06
EVAL-AD738x-4FMCZ Rev-E



PASTEMASK PRIMARY
08-049230-09
EVAL-AD738x-4FMCZ Rev-E



PASTEMASK SECONDARY
08-049230-10
EVAL-AD738x-4FMCZ Rev-E

