

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	15APR22	R. WHITNEY
B	CHANGES AS PER ECR-109621	04OCT22	R. WHITNEY
C	CHANGES AS PER ECR-111941	27JAN23	R. WHITNEY
D	CHANGES AS PER ECR-113566	11APR23	R. WHITNEY
E	CHANGES AS PER ECR-115079	08AUG23	R. WHITNEY

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. SEE DETAIL A FOR Y1 INSTALLATION.
5. U9 IS A DEVICE-SOCKET COMBO AND FOLLOWS THIS SOLDERPASTE INSTRUCTION:

SUPPLIED PART	INSTALLED PART	PASTEMASK
U20(SOCKET)	INSTALLED SOCKET	NO PASTEMASK
U20(DEVICE)	INSTALLED DUT	PASTEMASK
6. RoHS COMPLIANCE: ASSEMBLY VENDOR SHOULD ASSURE COMPLIANCE WITH LEAD-FREE AND RoHS PCB ASSEMBLY STANDARDS (EU RoHS DIRECTIVE 2002/95/EC).
7. BOARD ASSEMBLY SPECIAL NOTES: (IN ORDER TO MINIMIZE MIC DEVICES (U11-U14) DAMAGE)

A. DO NOT BOARD WASH OR CLEAN AFTER THE REFLOW PROCESS.

B. DO NOT BRUSH BOARD WITH OR WITHOUT SOLVENTS AFTER THE REFLOW PROCESS.

C. DO NOT DIRECTLY EXPOSE TO ULTRASONIC PROCESSING, WELDING, OR CLEANING.

D. DO NOT INSERT ANY OBJECT IN PORT HOLE OF DEVICE AT ANY TIME.

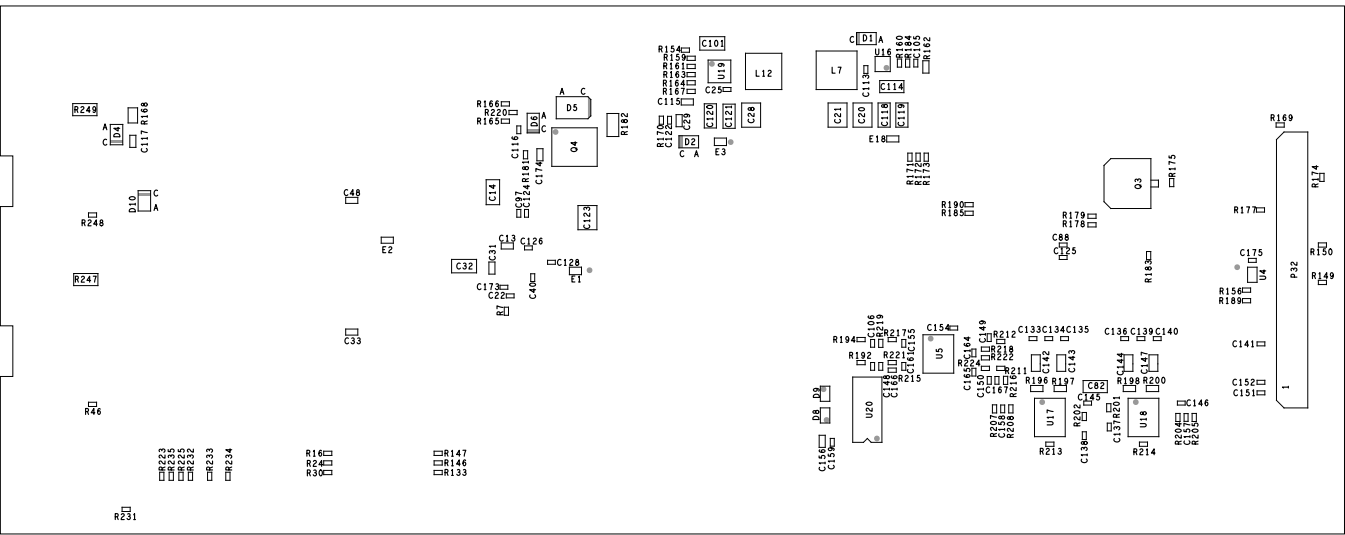
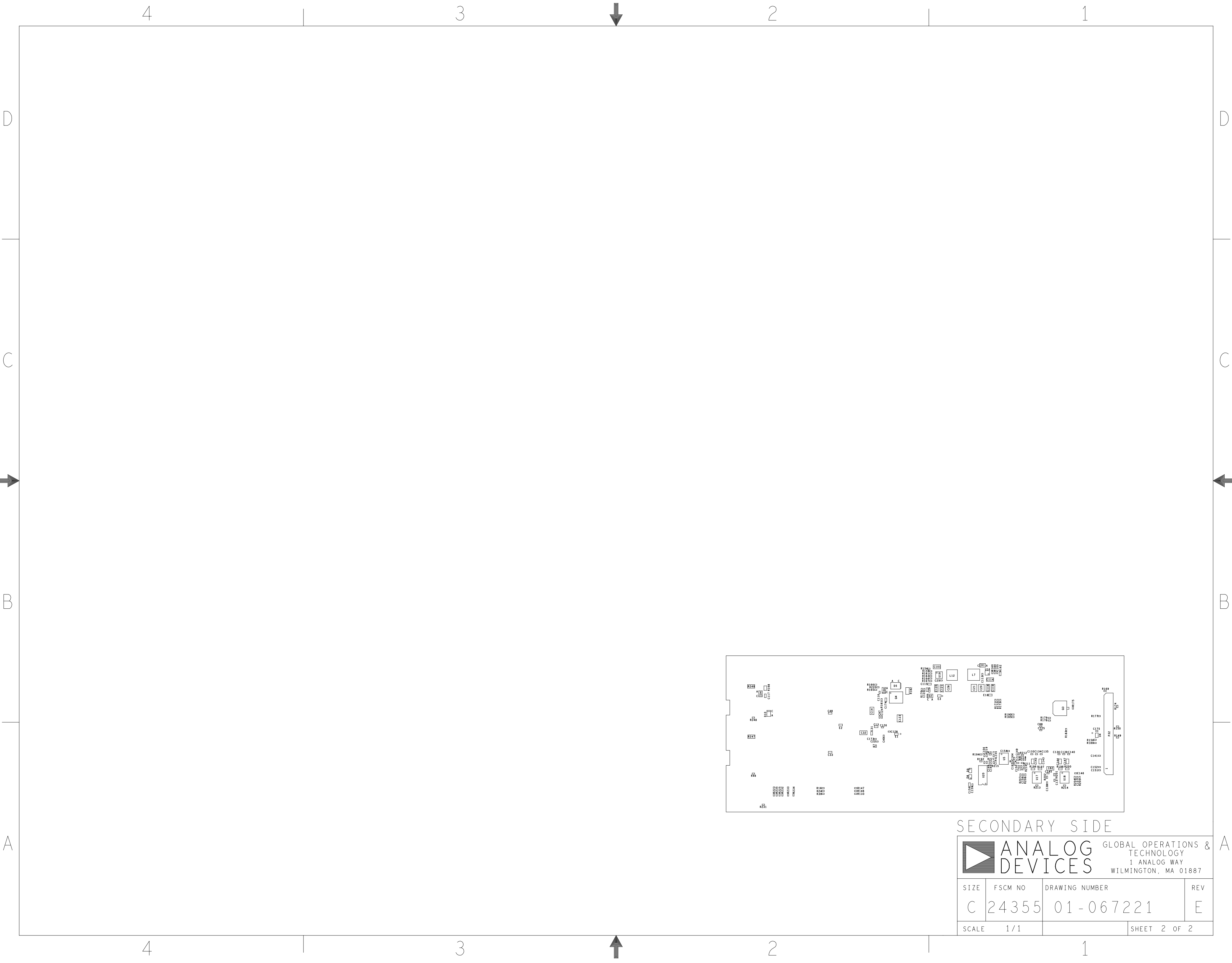
E. DO NOT APPLY OVER 30 PSI OF AIR PRESSURE INTO THE PORT HOLE.

F. DO NOT PULL A VACUUM OVER PORT HOLE OF THE MICROPHONE.

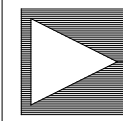
G. DO NOT APPLY A VACUUM WHEN REPACKING INTO SEALED BAGS AT A RATE FASTER THAN 0.5 ATM/SEC.
8. BOARDS TO BE SHIPPED SINGULATED AFTER ASSEMBLY PROCESS. SMOOTHEN EDGES AND FREE FROM BURRS AFTER DEPANELIZATION PROCESS.

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  TOLERANCES DECIMALS FRACTIONS ANGLES .XX -.010 --1/32 -- 2 .XXX -.005 .XXXX -.0050	APPROVAL	DATE	<div><div></div><div>ANALOG DEVICES</div></div> <div>GLOBAL OPERATIONS &amp; TECHNOLOGY 1 ANALOG WAY WILMINGTON, MA 01887</div>			
	TEMPLATE ENGINEER					
MATERIAL	HARDWARE SERVICES M. VALE	03NOV21	TITLE ASSEMBLY EVAL-AD2437A1MZ_BRD CUSTOMER EVALUATION Z			
	HARDWARE SYSTEMS					
	TEST ENGINEER					
	COMPONENT ENGINEER M. YAN	03NOV21				
FINISH	TEST PROCESS		SIZE C	FSCM NO 24355	DRAWING NUMBER 01-067221	REV E
	HARDWARE RELEASE K. JABATAN	03NOV21				
	DESIGNER R. PLANADA	15APR22				
DO NOT SCALE DWG	PTD ENGINEER R. WHITNEY	15APR22	SCALE 1/1			SHEET 1 OF 2
	CHECKER					



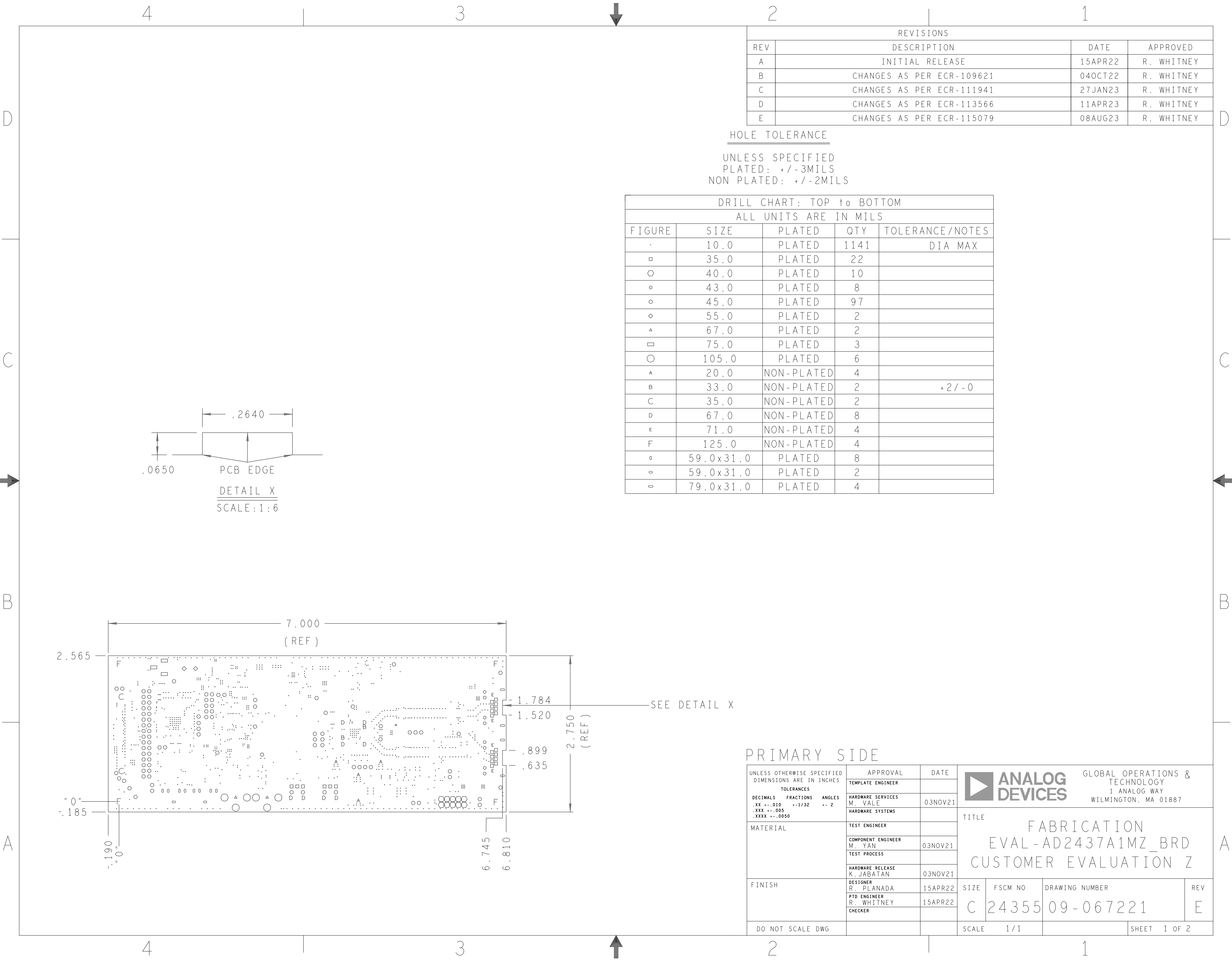
SECONDARY SIDE



**ANALOG  
DEVICES**

GLOBAL OPERATIONS &  
TECHNOLOGY  
1 ANALOG WAY  
WILMINGTON, MA 01887

SIZE	FSCM NO	DRAWING NUMBER	REV
C	24355	01-067221	E
SCALE	1 / 1	SHEET 2 OF 2	

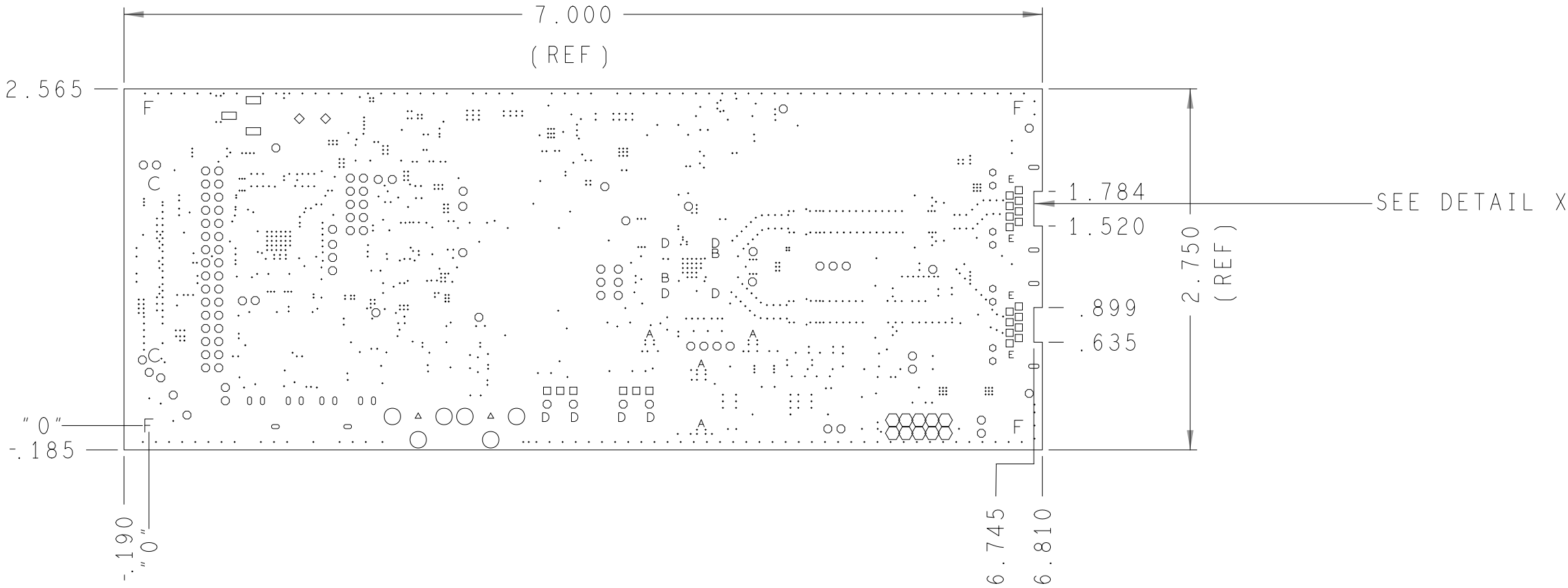
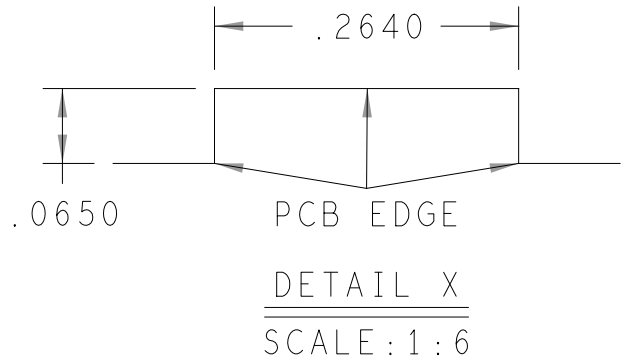


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HOLE TOLERANCE

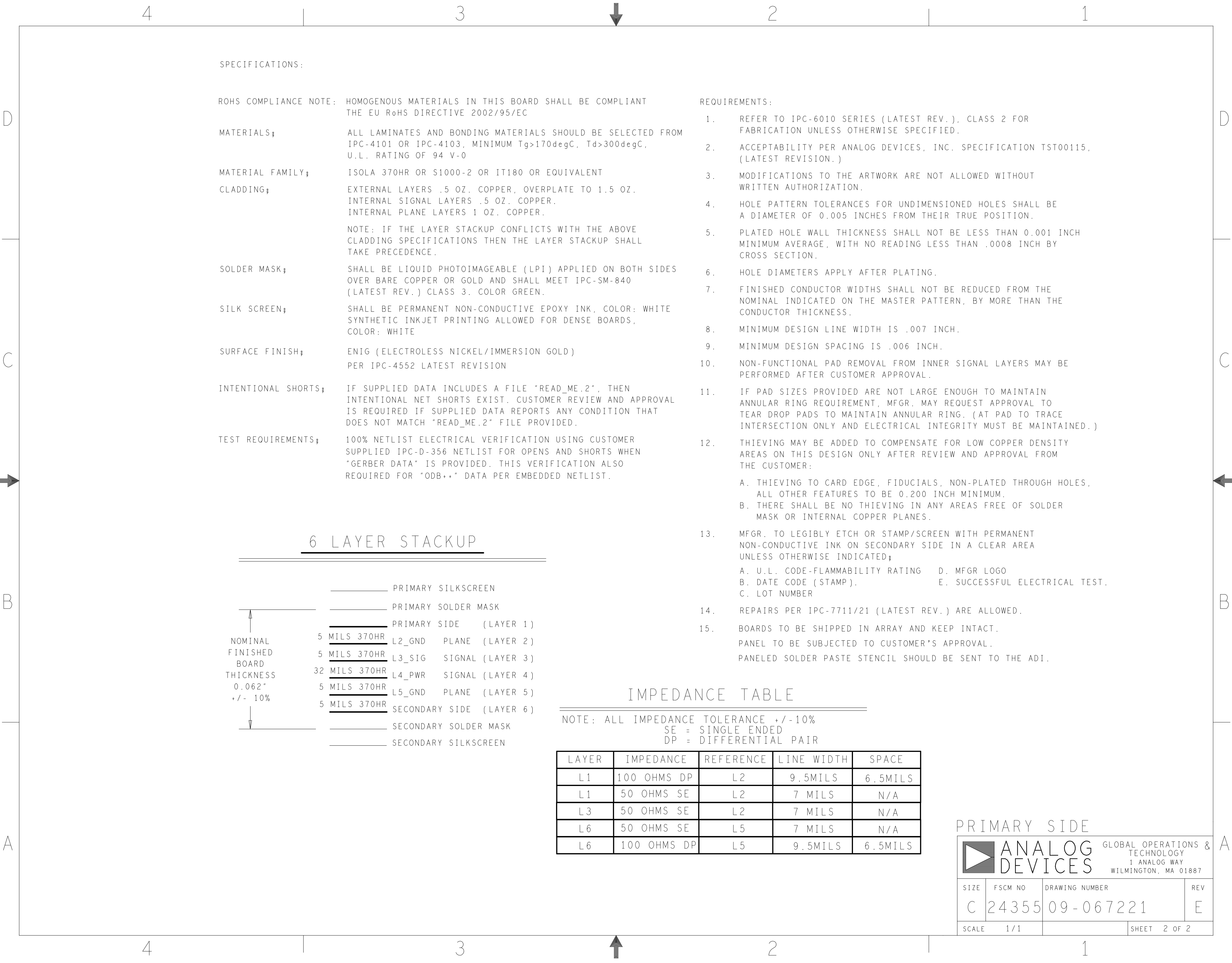
UNLESS SPECIFIED  
PLATED: +/-3MILS  
NON PLATED: +/-2MILS

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
.	10.0	PLATED	1141	DIA MAX
□	35.0	PLATED	22	
○	40.0	PLATED	10	
◦	43.0	PLATED	8	
◦	45.0	PLATED	97	
◇	55.0	PLATED	2	
△	67.0	PLATED	2	
▢	75.0	PLATED	3	
○	105.0	PLATED	6	
A	20.0	NON-PLATED	4	
B	33.0	NON-PLATED	2	+2/-0
C	35.0	NON-PLATED	2	
D	67.0	NON-PLATED	8	
E	71.0	NON-PLATED	4	
F	125.0	NON-PLATED	4	
◦	59.0x31.0	PLATED	8	
◦	59.0x31.0	PLATED	2	
◦	79.0x31.0	PLATED	4	



PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS .XX ±.010 .XXX ±.005 .XXXX ±.0050 FRACTIONS --1/32 ANGLES --2	APPROVAL	DATE	 GLOBAL OPERATIONS & TECHNOLOGY 1 ANALOG WAY WILMINGTON, MA 01887			
	TEMPLATE ENGINEER					
	HARDWARE SERVICES M. VALE	03NOV21	TITLE FABRICATION EVAL-AD2437A1MZ_BRD CUSTOMER EVALUATION Z			
	HARDWARE SYSTEMS					
MATERIAL	TEST ENGINEER		SIZE C			
	COMPONENT ENGINEER M. YAN	03NOV21				
	TEST PROCESS		FSCM NO 24355			
	HARDWARE RELEASE K. JABATAN	03NOV21				
FINISH	DESIGNER R. PLANADA	15APR22	DRAWING NUMBER 09-067221			
	PTD ENGINEER R. WHITNEY	15APR22				
	CHECKER		REV E			
DO NOT SCALE DWG			SCALE 1/1		SHEET 1 OF 2	



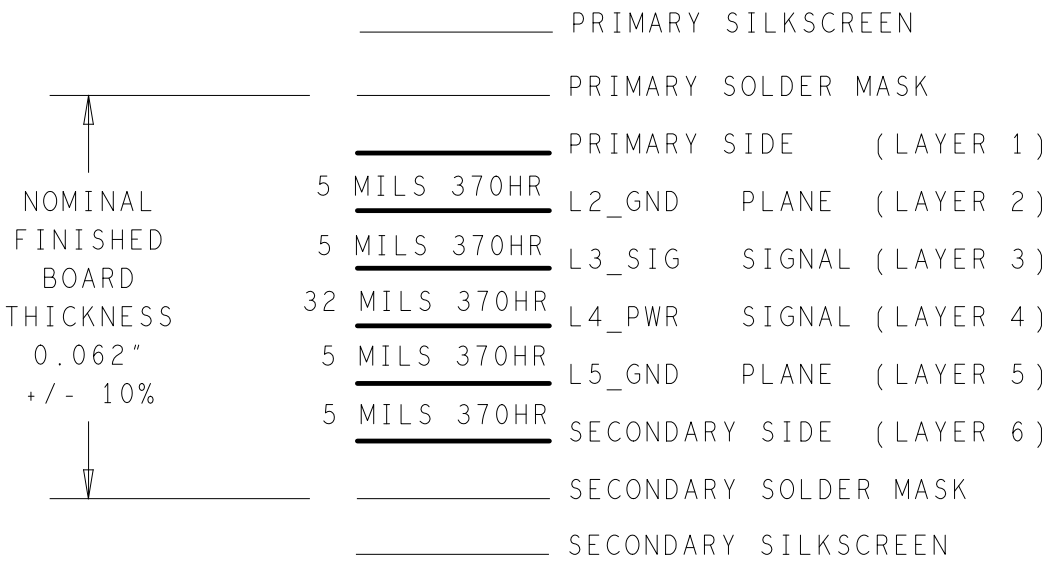
SPECIFICATIONS:

- 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 OR S1000-2 OR IT180 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 INCH 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 .007 INCH.
- MINIMUM DESIGN SPACING IS .006 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, MFGR. 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.
- MFGR. 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. MFGR LOGO
  - E. SUCCESSFUL ELECTRICAL TEST.
- REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.
- BOARDS TO BE SHIPPED IN ARRAY AND KEEP INTACT. PANEL TO BE SUBJECTED TO CUSTOMER'S APPROVAL. PANELED SOLDER PASTE STENCIL SHOULD BE SENT TO THE ADI.

6 LAYER STACKUP

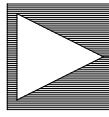


IMPEDANCE TABLE

NOTE: ALL IMPEDANCE TOLERANCE +/-10%  
SE = SINGLE ENDED  
DP = DIFFERENTIAL PAIR

LAYER	IMPEDANCE	REFERENCE	LINE WIDTH	SPACE
L1	100 OHMS DP	L2	9.5MILS	6.5MILS
L1	50 OHMS SE	L2	7 MILS	N/A
L3	50 OHMS SE	L2	7 MILS	N/A
L6	50 OHMS SE	L5	7 MILS	N/A
L6	100 OHMS DP	L5	9.5MILS	6.5MILS

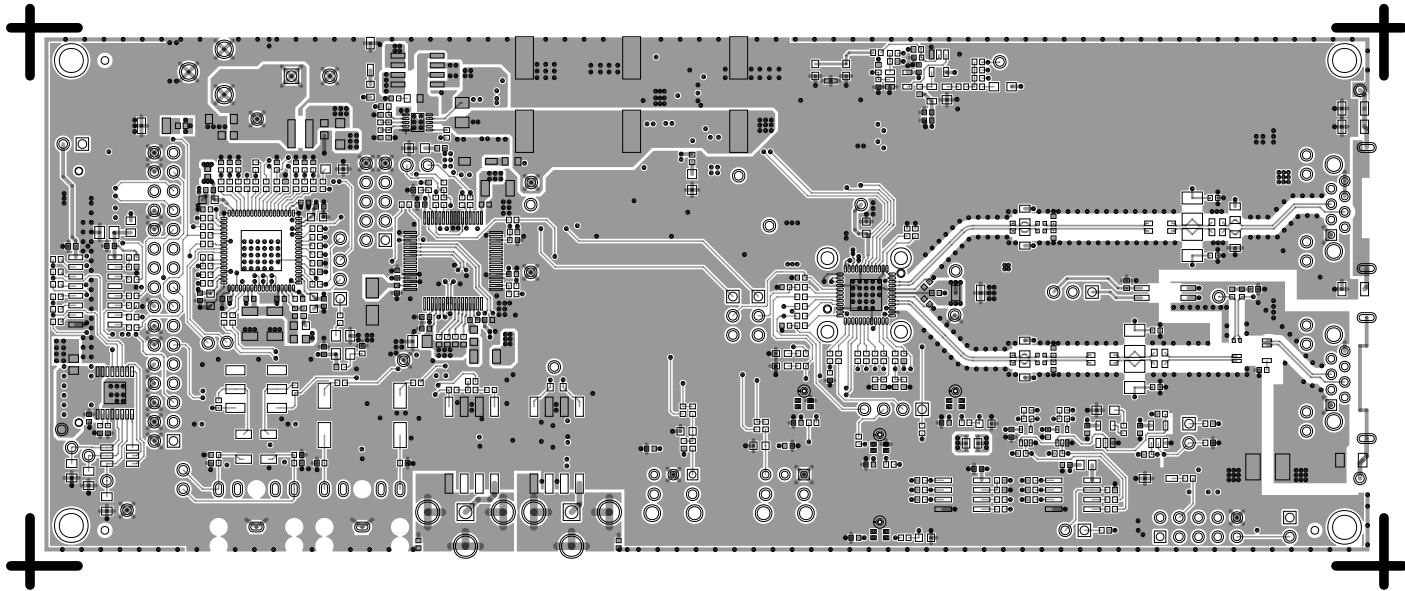
PRIMARY SIDE

ANALOG DEVICES

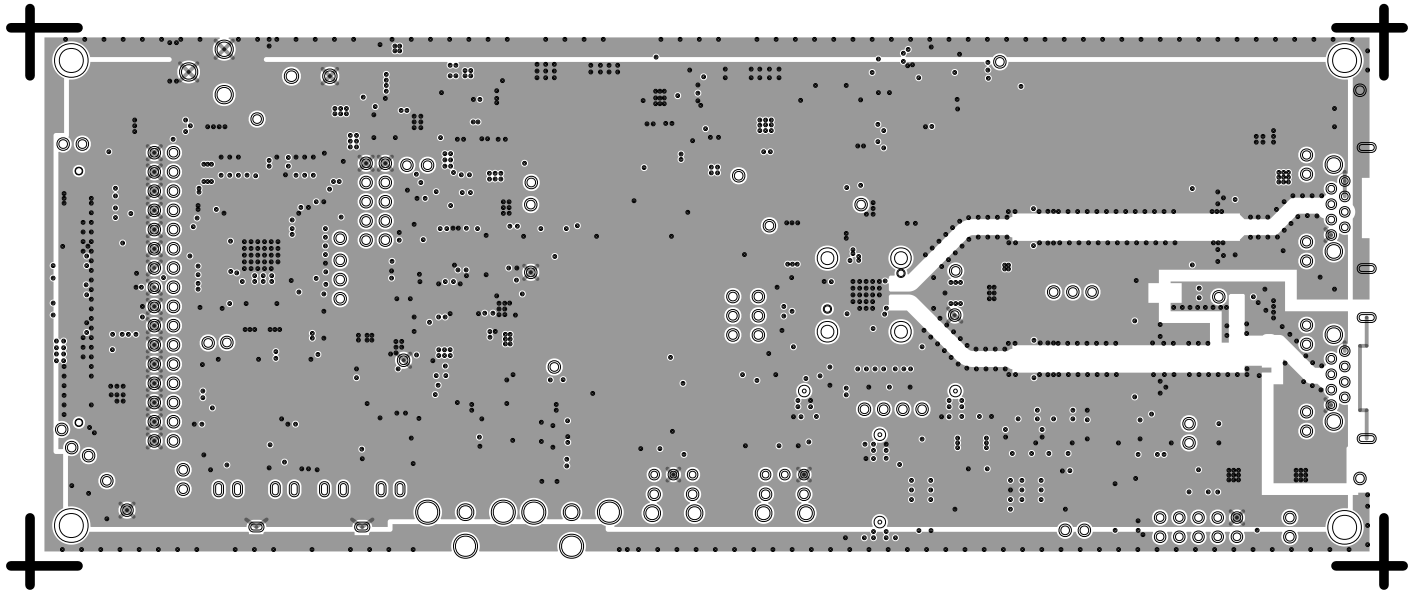
GLOBAL OPERATIONS & TECHNOLOGY  
1 ANALOG WAY  
WILMINGTON, MA 01887

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C	24355	09-067221	E
SCALE	1 / 1	SHEET	2 OF 2

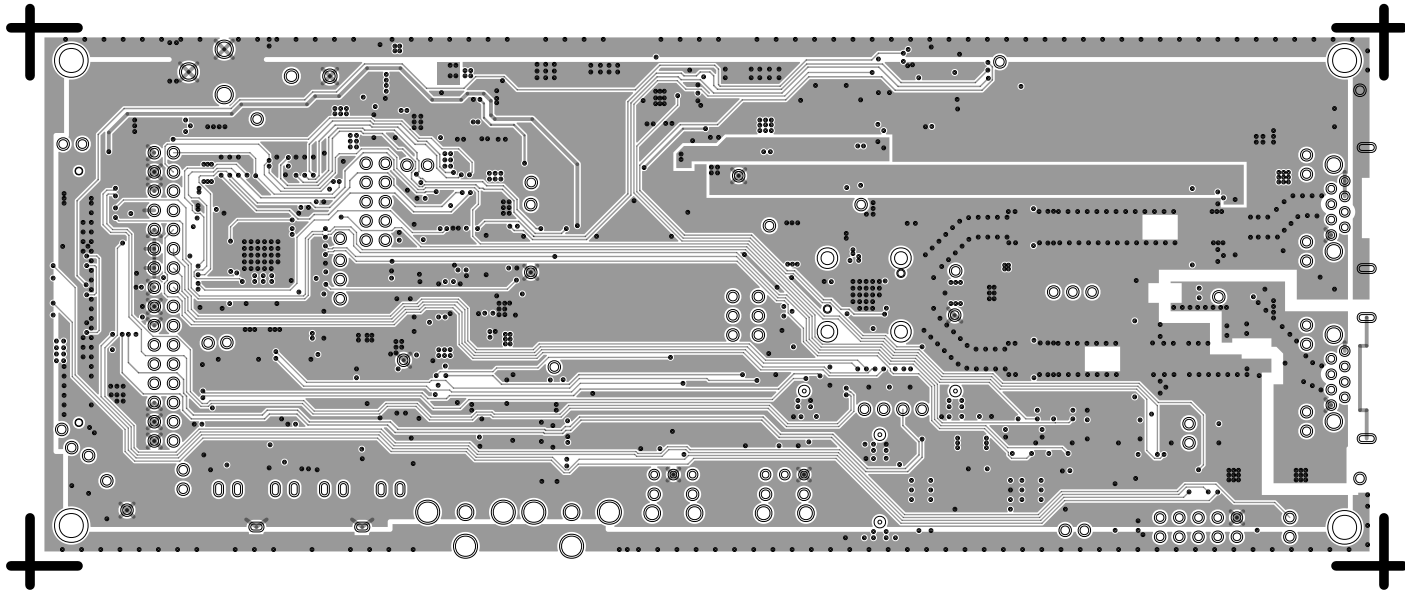
L1 PRIMARY  
08-067221-01  
REV E



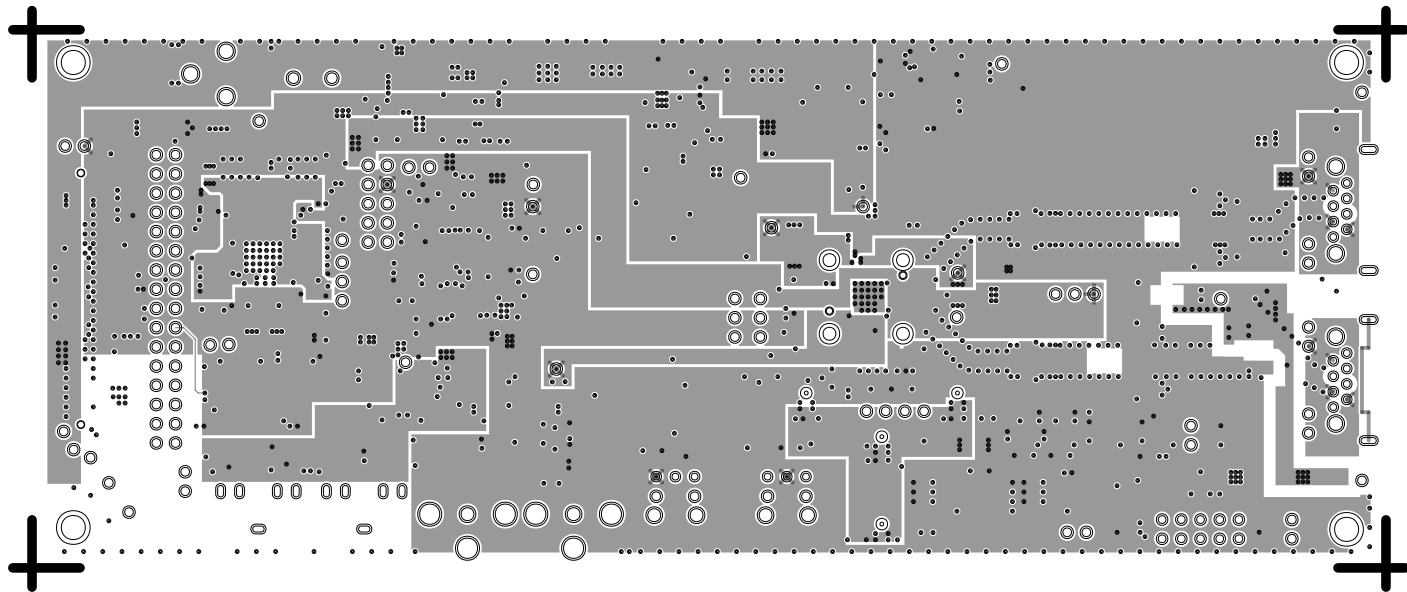
L2 GND  
08-067221-07  
REV E



L3 SIG  
08-067221-08  
REV E

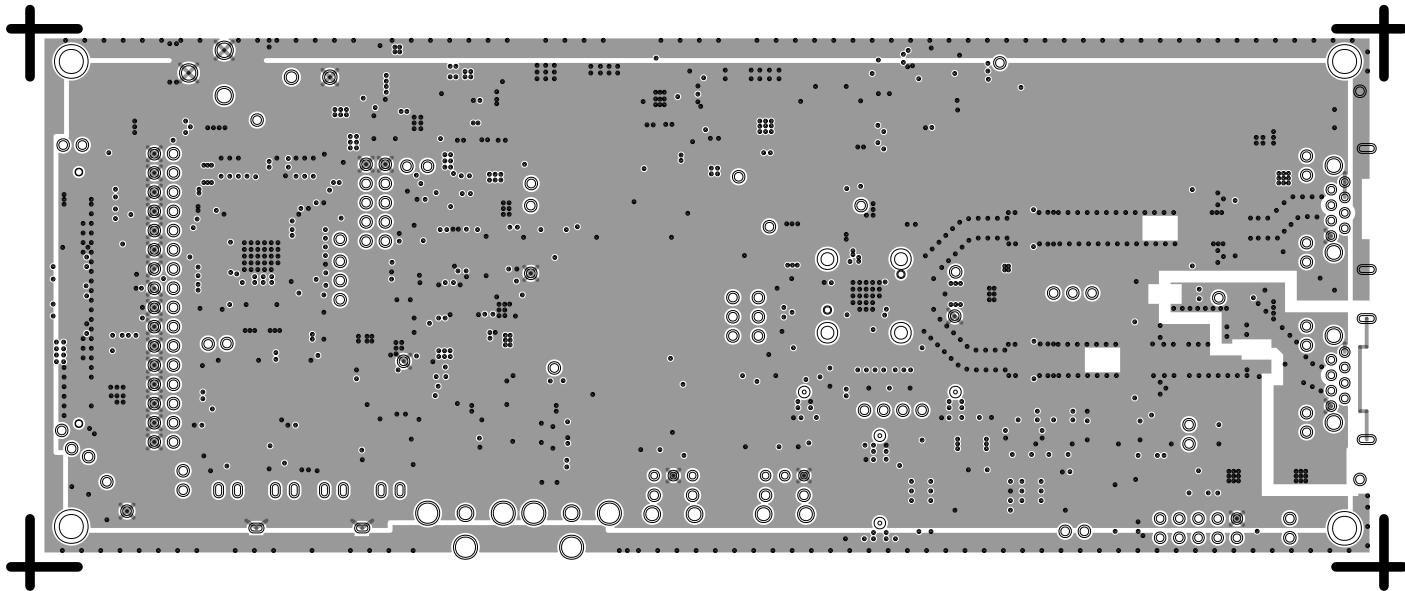


L4 PWR  
08-067221-09  
REV E





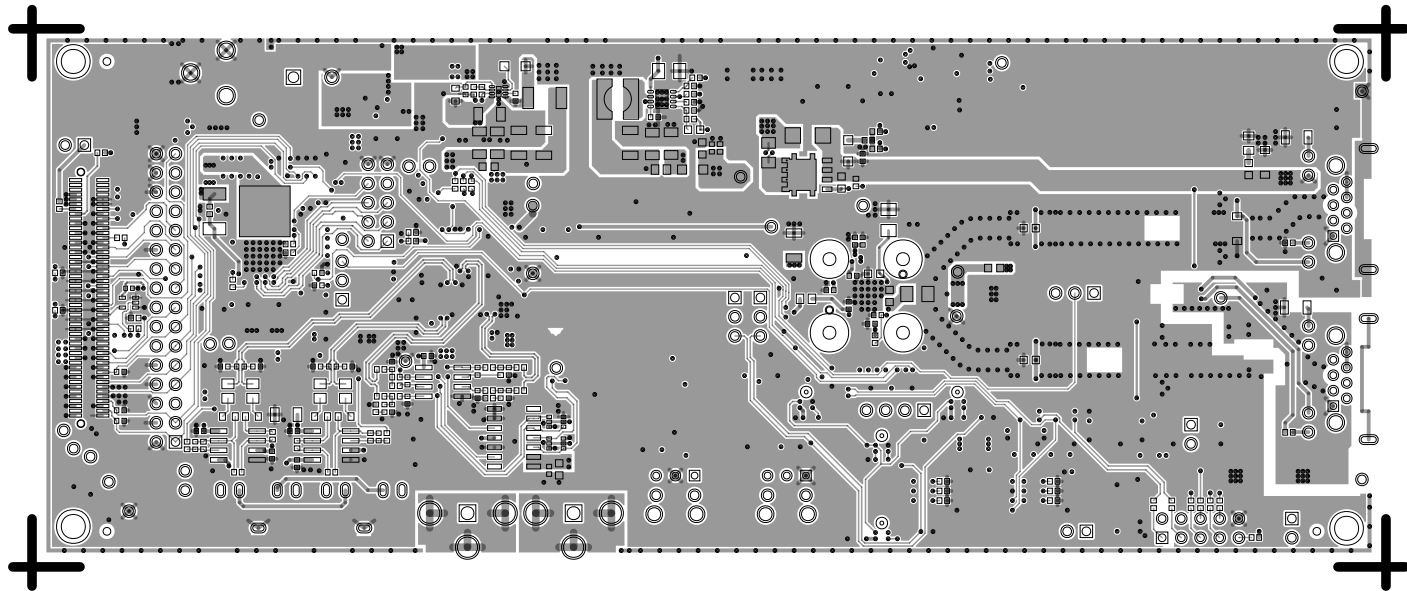
L5 GND  
08-067221-10  
REV E



L6 SECONDARY

08-067221-02

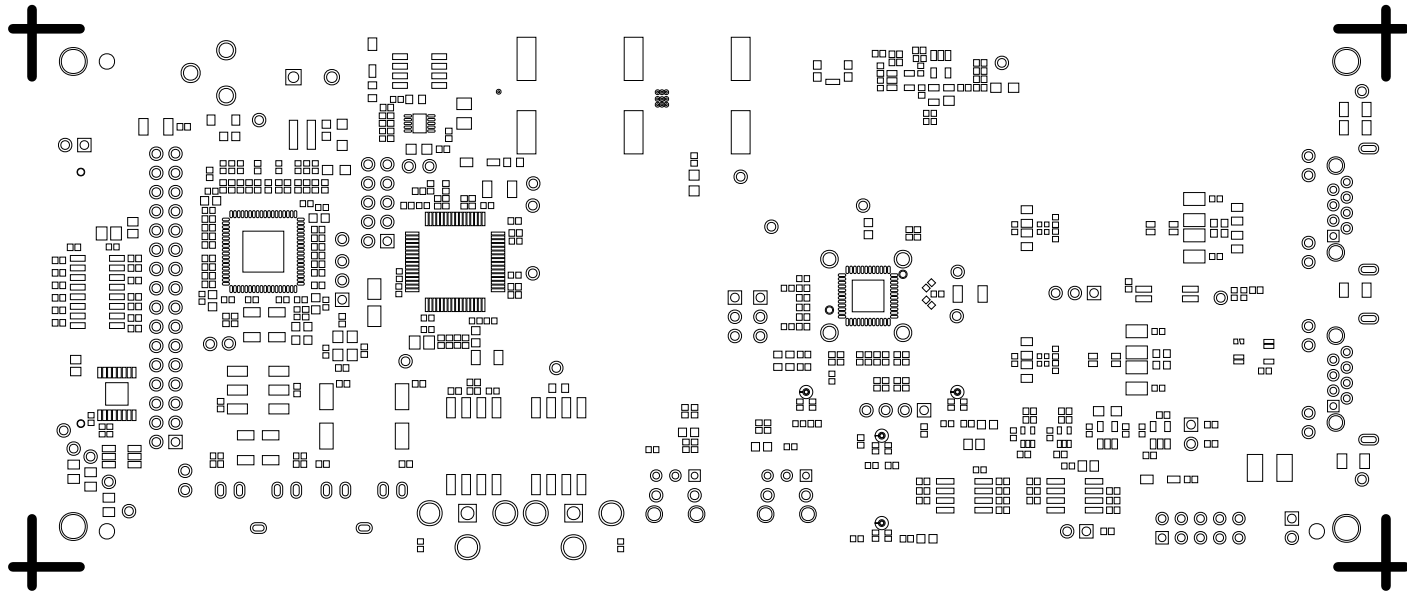
REV E



SOLDERMASK PRIMARY

08-067221-04

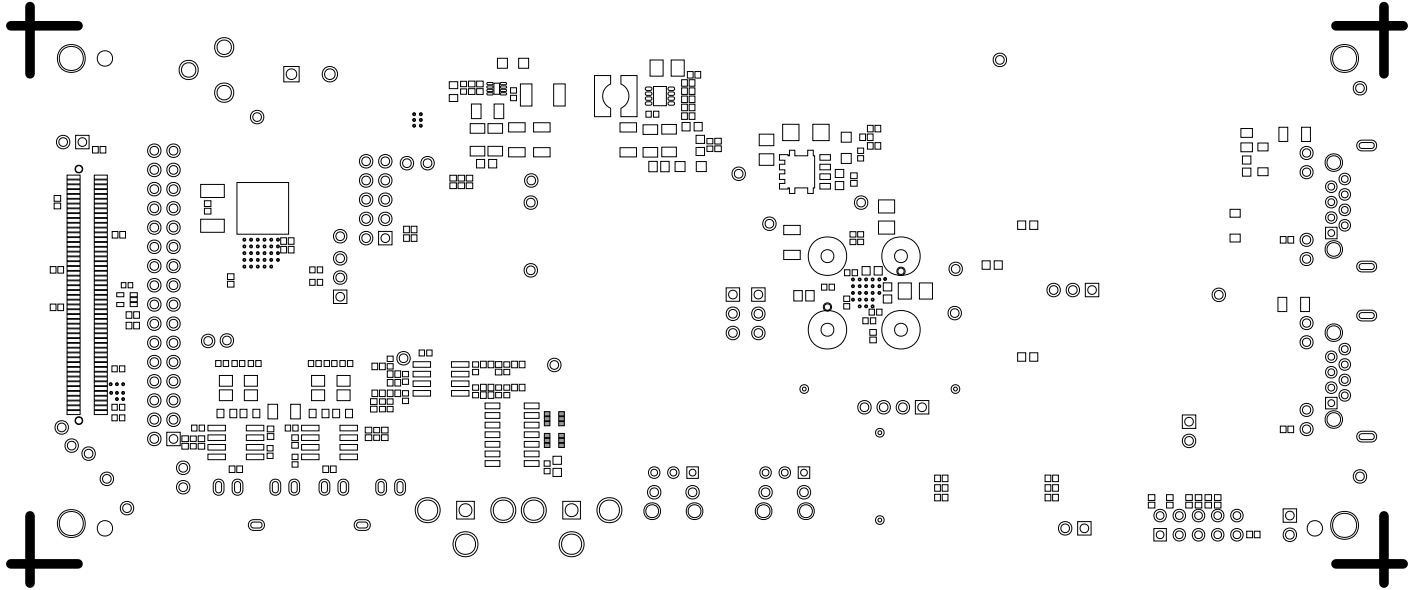
REV E



SOLDERMASK SECONDARY

08-067221-06

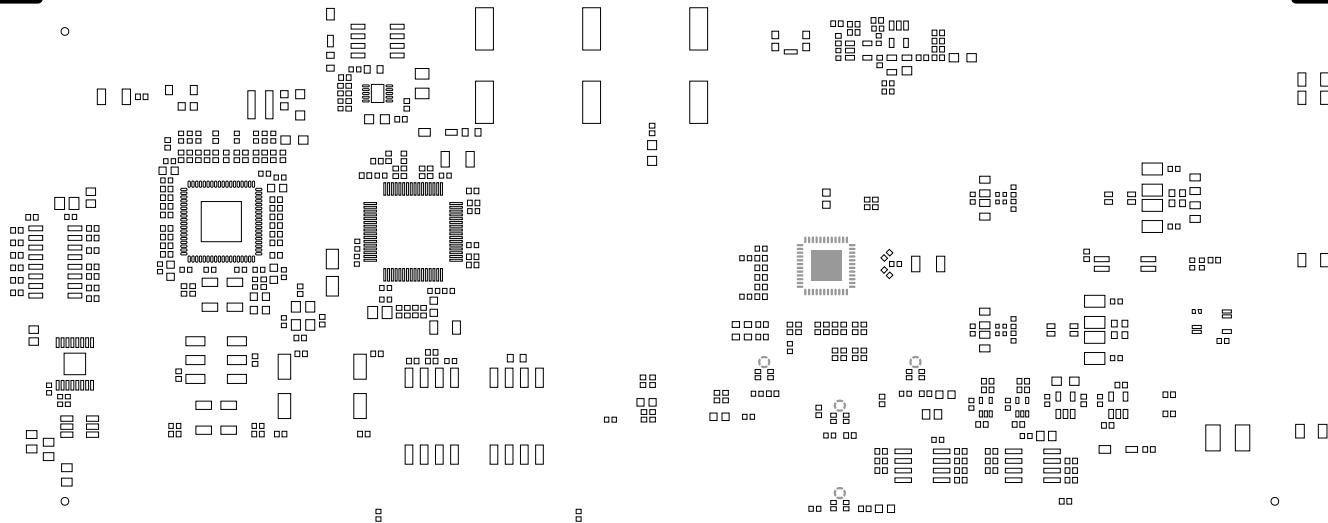
REV E



PASTEMASK PRIMARY

08-067221-11

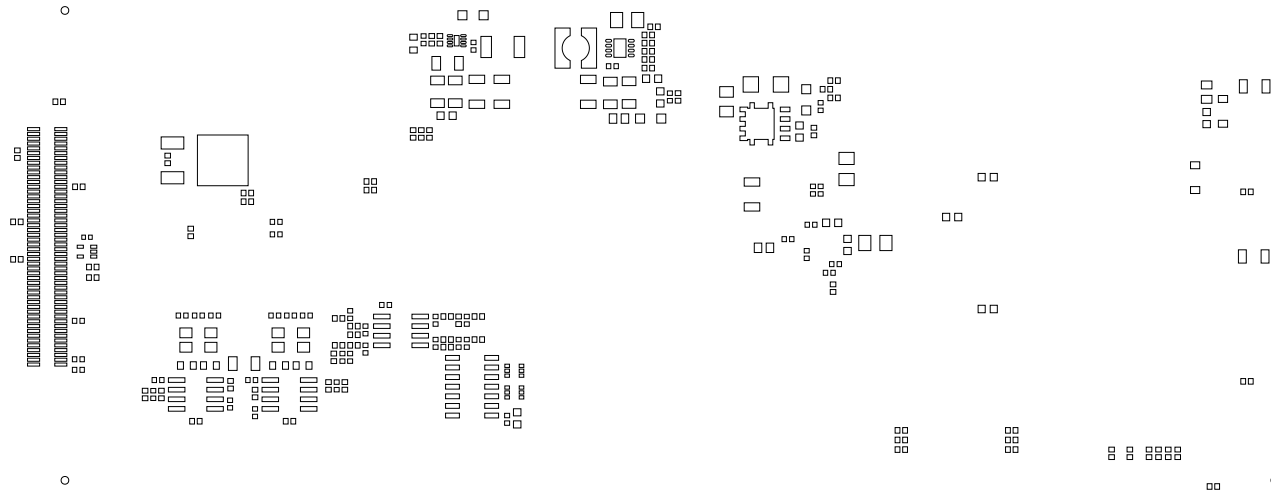
REV E



PASTEMASK SECONDARY

08-067221-12

REV E



SILKSCREEN PRIMARY

08-067221-03

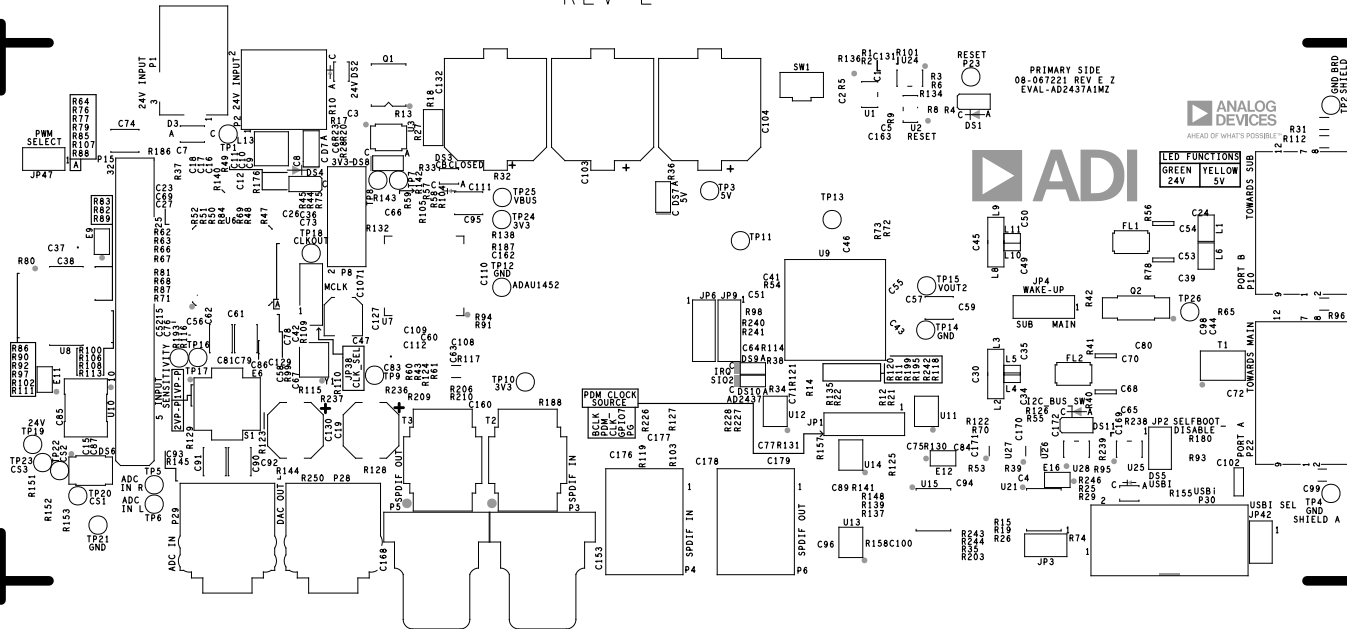
REV E

PRIMARY SIDE  
08-067221 REV E Z  
EVAL-AD2437A1MZ

ANALOG  
DEVICES  
AHEAD OF WHAT'S POSSIBLE

ADI

LED FUNCTIONS  
GREEN 24V  
YELLOW 5V



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