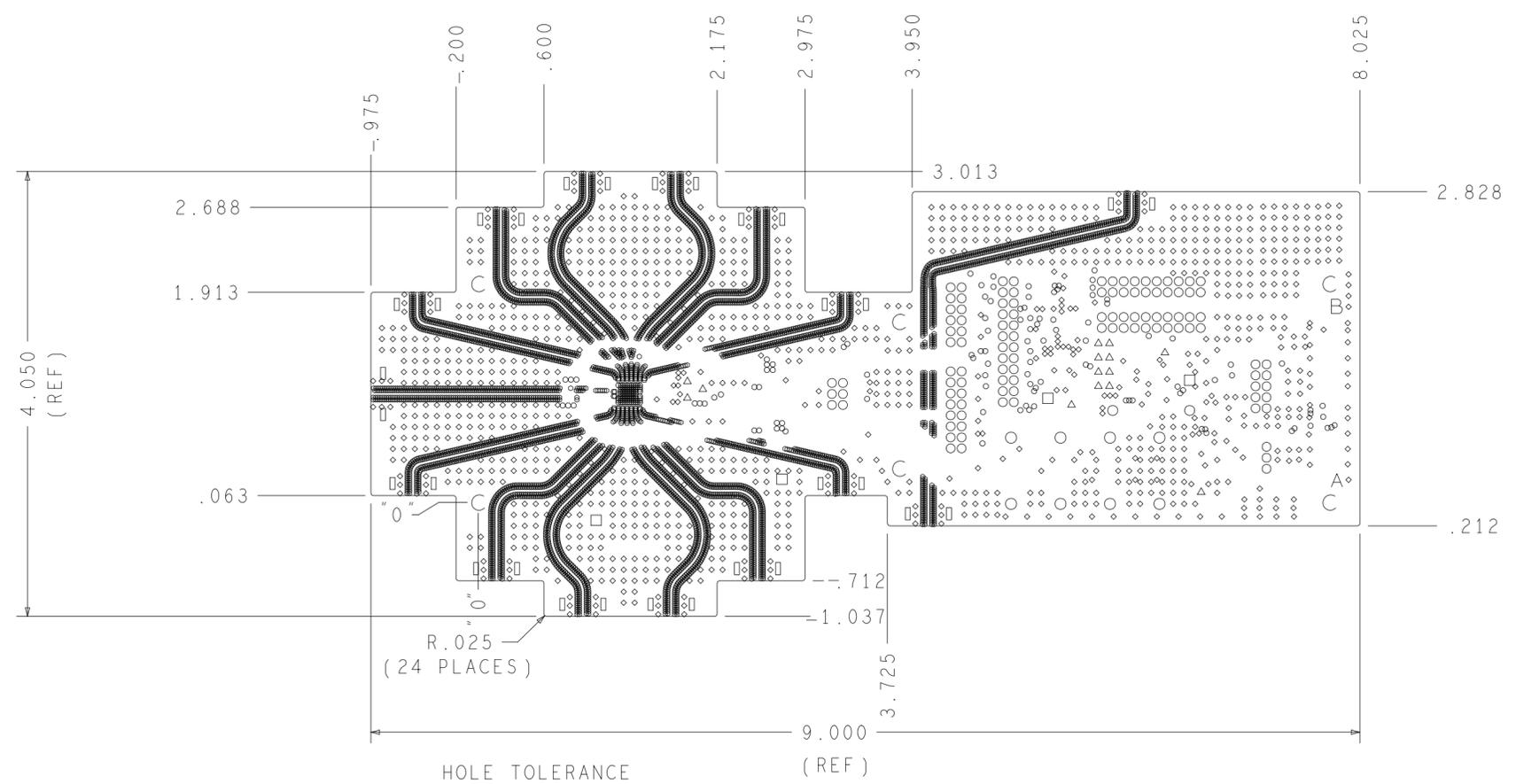


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	14NOV16	B. SAM
B	PER ECR-071337	29AUG17	B. SAM
C	PER ECR-091142	06NOV19	J.D.
D	PER ECR-092917	29JAN20	J.D.
E	PER ECR-110298	08SEP22	J.D.



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

DRILL CHART: TOP to BOTTOM				
FINISHED HOLES IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
o	6.0	PLATED	120	MAX DIA THRU
o	8.0	PLATED	5491	MAX DIA THRU
o	10.0	PLATED	109	MAX DIA THRU
o	16.0	PLATED	1237	MAX DIA THRU
△	40.0	PLATED	14	
o	45.0	PLATED	111	
o	55.0	PLATED	2	
□	63.0	PLATED	4	
o	75.0	PLATED	8	
□	83.0	PLATED	30	
A	28.0	NON-PLATED	1	
B	43.0	NON-PLATED	1	
C	145.0	NON-PLATED	6	

SEE NOTE 15
 SEE NOTE 15
 SEE NOTE 15
 SEE NOTE 15

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS .XX -- .010 .XXX -- .005 .XXXX -- .0050	APPROVAL G. CELEDONIO	DATE 14NOV16		WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887
	HARDWARE SERVICES R. MACDONALD	14NOV16		
MATERIAL	TEST ENGINEER		TITLE FABRICATION	
	COMPONENT ENGINEER A. CAUILAN	14NOV16	ADAR1000 X-KU BAND FLIP CHIP CUSTOMER EVAL BOARD Z	
FINISH	HARDWARE RELEASE R. AMARILLE	14NOV16	SIZE C	FSCM NO 24355
	DESIGNER G. AGUIRRI	14NOV16	DRAWING NUMBER 09-045107	REV E
	PTD ENGINEER B. SAM	14NOV16		
DO NOT SCALE DWG	CHECKER B. SAM	14NOV16	SCALE 1/1	SHEET 1 OF 3

ADAR1000 X-KU BAND FLIP CHIP CUSTOMER EVAL BOARD Z

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: ROGERS4350B & ISOLA370HR

CLADDING: EXTERNAL LAYERS .5 OZ. COPPER, OVERPLATE TO 1.5 OZ. 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

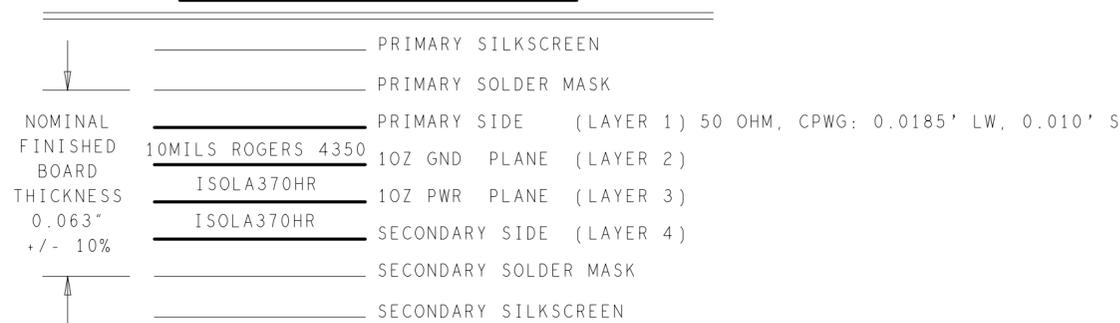
INTENTIONAL SHORTS: IF SUPPLIED DATA INCLUDES A FILE "READ_ME.2", THEN INTENTIONAL NET SHORTS EXIST. CUSTOMER REVIEW AND APPROVAL IS REQUIRED IF SUPPLIED DATA REPORTS ANY CONDITION THAT DOES NOT MATCH "READ_ME.2" FILE PROVIDED.

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:

1. REFER TO IPC-6010 SERIES (LATEST REV.), CLASS 2 FOR FABRICATION UNLESS OTHERWISE SPECIFIED.
2. ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00115. (LATEST REVISION.)
3. MODIFICATIONS TO THE ARTWORK ARE NOT ALLOWED WITHOUT WRITTEN AUTHORIZATION.
4. HOLE PATTERN TOLERANCES FOR UNDIMENSIONED HOLES SHALL BE A DIAMETER OF 0.005 INCHES FROM THEIR TRUE POSITION.
5. PLATED HOLE WALL THICKNESS SHALL NOT BE LESS THAN 0.001 INCH MINIMUM AVERAGE, WITH NO READING LESS THAN .0008 INCH BY CROSS SECTION.
6. HOLE DIAMETERS APPLY AFTER PLATING.
7. FINISHED CONDUCTOR WIDTHS SHALL NOT BE REDUCED FROM THE NOMINAL INDICATED ON THE MASTER PATTERN, BY MORE THAN THE CONDUCTOR THICKNESS.
8. MINIMUM DESIGN LINE WIDTH IS .005 INCH.
9. MINIMUM DESIGN SPACING IS .0045 INCH.
- ~~10. NON FUNCTIONAL PAD REMOVAL FROM INNER SIGNAL LAYERS MAY BE PERFORMED AFTER CUSTOMER APPROVAL.~~
11. 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.)
12. 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.
13. 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.
14. REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED. REPAIRS ARE NOT ALLOWED IN ANY AREA DEFINED ON GOLD_PRM AND/OR GOLD_SEC ARTWORK LAYERS WHEN PROVIDED IN GERBER OR ODB++ DATA.
15. THRU VIAS(6 AND 8 MILS) FILLED WITH NON-CONDUCTIVE EPOXY AND PLATED OVER, COPLANAR ON BOTH SIDES PRIOR TO FINAL PLATING. THIS SHOULD APPLY ON SPECIFIED AREA ONLY ON THE BOARD.

4 LAYER STACKUP



CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 5%
 ARTWORK LINE WIDTH FOR
 IMPEDANCE CONTROLLED LINES = 0.0185" LINE WIDTH, 0.010" SPACE

PRIMARY SIDE

		WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887	
C	24355	09-045107	E
SCALE 1/1		SHEET 2 OF 3	



BLIND VIAS
LAYER 1 TO LAYER 2

DRILL CHART: TOP to L2_GND				
FINISHED HOLES IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
·	5.0	PLATED	38	MAX DIA SEE NOTE 15
□	6.0	PLATED	6	MAX DIA SEE NOTE 15
◦	8.0	PLATED	863	MAX DIA SEE NOTE 15

PRIMARY SIDE

		WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887		
				SIZE
C	24355	09-045107		E
SCALE	1/1			SHEET 3 OF 3

ADAR1000 X-Ku BAND FLIP CHIP CUSTOMER EVALUATION BOARD Z