DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
·	10.0	+3.0/-10.0	PLATED	889
15 •	10.0	+3.0/-10.0	PLATED	87
•	12.0	+3.0/-12.0	PLATED	24
•	22.0	+3.0/-3.0	PLATED	11
◎	30.0	+3.0/-3.0	PLATED	10
△	50.0	+2.0/-2.0	NON-PLATED	2
△	106.0	+2.0/-2.0	NON-PLATED	4

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1B	INITIAL RELEASE	07MAY14	X
1C		30JUN14	
1D		25AUG14	

SPECIFICATIONS:

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: FR4

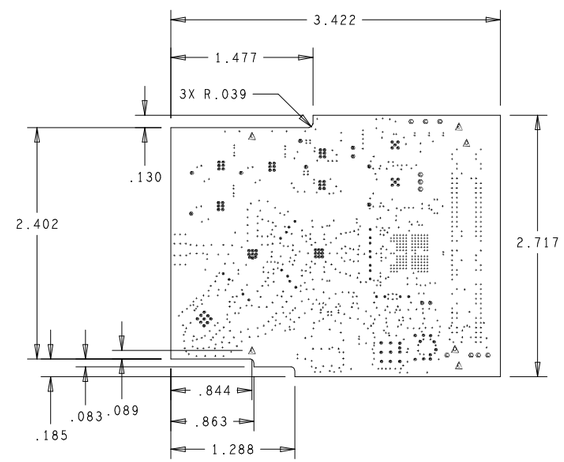
SOLDER MASK: SHALL BE LIQUID PHOTOIMAGEABLE (LPI) APPLIED ON BOTH SIDES OVER BARE COPPER OR GOLD AND SHALL MEET IPC-SM-840 (LATEST REV.) CLASS 3. COLOR BLUE

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

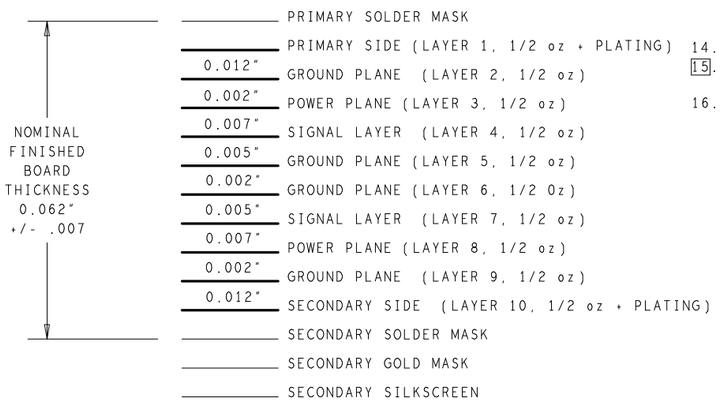
SURFACE FINISH: SURFACE TO BE HARD GOLD PLATE IN PRIMARY AND SECONDARY PROCESS PER MIL-G-45204B, CLASS I, GRADE C, TYPE I. PRIMARY GOLD TO BE 05-15 MICRO INCHES MAXIMUM OVER LOW STRESS NICKEL PLATING 200 MICRO INCHES MINIMUM PER QQ-N-290, CLASS I REPLATE SECONDARY PROCESS WITH 50 MICRO INCHES MINIMUM ON SELECTIVE AREA PROVIDED.

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.



10 LAYER STACKUP



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 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 .0042 INCH.
9. MINIMUM DESIGN SPACING IS .004 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, MFGR. 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. 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.
14. REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.
15. THRU VIAS FILLED WITH NON-CONDUCTIVE EPOXY AND PLATED OVER. COPLANAR ON BOTH SIDES WITHIN .001 INCH PRIOR TO FINAL PLATING.
16. CHARACTERISTIC IMPEDANCE SHALL BE 50 OHMS +/- 10% (19 MIL TRACES) ON LAYERS 1 AND 10.
    CHARACTERISTIC IMPEDANCE SHALL BE 50 OHMS +/- 10% (5 MIL TRACES) ON LAYERS 4 AND 7.
    DIFFERENTIAL IMPEDANCE SHALL BE 100 OHMS +/- 10% (14 MIL TRACES, 12 MIL SPACING) ON LAYERS 1 AND 10.
    DIFFERENTIAL IMPEDANCE SHALL BE 100 OHMS +/- 10% (4 MIL TRACES, 6 MIL SPACING) ON LAYERS 4 AND 7.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS .XX +-.010 .XXX +-.005 .XXXX +-.0050 FRACTIONS +-1/32 ANGLES +- 2	APPROVAL	DATE	ANALOG DEVICES WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887			
MATERIAL	TEMPLATE ENGINEER X	ddMMMyy	TITLE FABRICATION RADX1D CN0331			
	HARDWARE SERVICES X	ddMMMyy				
	HARDWARE SYSTEMS X	ddMMMyy				
	TEST ENGINEER X	ddMMMyy				
	COMPONENT ENGINEER X	ddMMMyy				
	TEST PROCESS X	ddMMMyy				
	HARDWARE RELEASE X	ddMMMyy				
FINISH	DESIGNER WAM	25AUG14	SIZE	FSCM NO	DRAWING NUMBER	REV
	PTD ENGINEER X	ddMMMyy	C	24355	RADX1D CN0331	1D
	CHECKER J.Liner	25AUG14				
DO NOT SCALE DWG			SCALE 1/1		SHEET 1 OF 2	