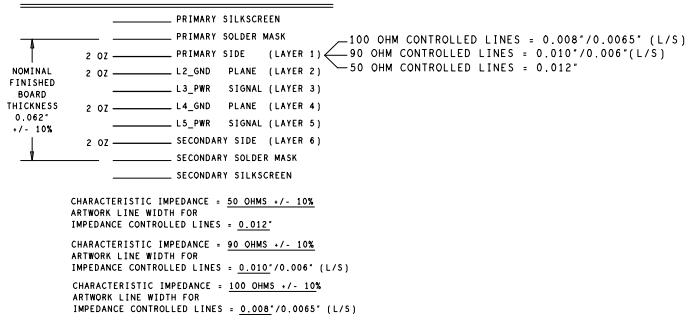
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	07APR14	ZHANGUO XI

6 LAYER STACKUP



CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 10%
ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.012"

CHARACTERISTIC IMPEDANCE = 90 OHMS +/- 10%
ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.010"/0.006" (L/S)

CHARACTERISTIC IMPEDANCE = 100 OHMS +/- 10%
ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.008"/0.0065" (L/S)

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: FR-408HR

CLADDING: EXTERNAL LAYERS .5 OZ. COPPER, OVERPLATE TO 2.0 OZ.
INTERNAL SIGNAL LAYERS 1 OZ. COPPER.
INTERNAL PLANE LAYERS 2 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 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 ENIG (100MICRO INCH NICKEL OVER 3-5MICRO INCH GOLD)

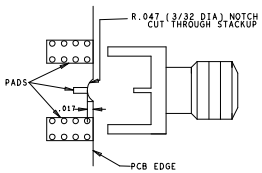
INTENTIONAL SHORTS: IF SUPPLIED DATA INCLUDES A FILE "READ_ME.2", THEN INTENTIONAL NET SHORTS EXIST. CUSTOMER REVIEW AND APPROVAL IS REQUIRED IF SUPPLIED DATA REPORTS ANY CONDITION THAT DOES NOT MATCH "READ_ME.2" FILE PROVIDED.

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.

ROHS COMPLIANCE NOTE: (Required for Customer Boards) Add to top of MATERIALS
HOMOGENOUS MATERIALS IN THIS BOARD SHALL BE COMPLIANT THE EU RoHS DIRECTIVE 2002/95/EC

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 .006 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 THE TOP SIDE PRIOR TO FINAL PLATING.
16. ALL GND LAYERS (L2 AND L4), BOTTOM, AND THE TOP LAYER WILL NEED TO HAVE TWO (2) OZ COPPER THICKNESS AS A REQUIREMENT FOR HEAT DISSIPATION. ANY RECOMMENDATIONS/SUGGESTIONS WILL NEED CUSTOMER APPROVAL.
17. PLEASE TAKE NOTE THAT THERE ARE TWO VERSIONS OF SOLDERMASK TOP AND BOTTOM FILMS FOR THIS BOARD. IT IS THE CUSTOMER'S DISCRETION TO CHOOSE WHICHEVER FILM TO USE FOR THE FABRICATION. CUSTOMER WILL INFORM THE FABHOUSE BEFOREHAND. (VERSION2 SOLDERMASKS ARE NAMED AS FOLLOWS: SOLDERMASK PRIMARY V2 AND SOLDERMASK SECONDARY V2.)



NOTCH CUT THROUGH DETAIL
1. DIMENSION ARE IN INCHES

DETAIL A

HOLE TOLERANCE

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

FINISHED HOLES IN MILS ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
▫	12.0	PLATED	426	MAX DIA
▪	12.01	PLATED	43	MAX DIA / FILL
◦	16.0	PLATED	80	MAX DIA
•	20.0	PLATED	659	MAX DIA
•	20.01	PLATED	16	MAX DIA / FILL
*	30.0	PLATED	3	
□	35.0	PLATED	11	
▪	40.0	PLATED	40	
◇	45.0	PLATED	68	
F	60.0	PLATED	25	
E	75.0	PLATED	3	
D	90.0	PLATED	2	
A	140.0	NON-PLATED	4	

see note 15 for VIA fill instruction

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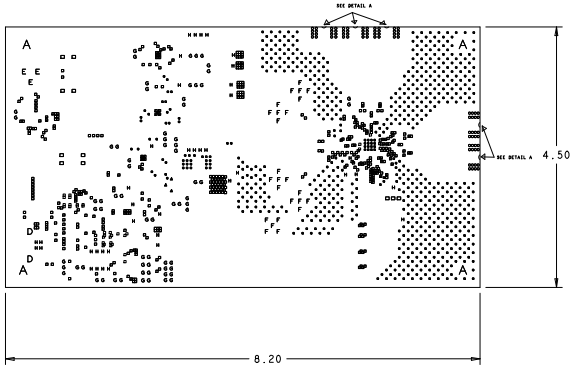

PRIMARY SIDE

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS .XX +-.02 .XXX +-.005 .XXXX +-.0050 FRACTIONS +-1/32 ANGLES +- 2	APPROVAL	DATE
	TEMPLATE ENGINEER	-
	HARDWARE SERVICES	-
	HARDWARE SYSTEMS	-
MATERIAL	TEST ENGINEER	-
	COMPONENT ENGINEER	-
	TEST PROCESS	-
	HARDWARE RELEASE	-
FINISH	DESIGNER V. JAYME II	03APR14
	PTD ENGINEER ZHANGUO XI	07APR14
	CHECKER -	-
DO NOT SCALE DWG		

ANALOG DEVICES
WWM DIVISION
804 WOBURN STREET
WILMINGTON, MA 01887

TITLE
FABRICATION
AD9530A CUSTOMER
EVALUATION BOARD

SIZE	FSCM NO	DRAWING NUMBER	REV
D	24355	09-039970-00	A

SCALE 1/1 SHEET 1 OF 1