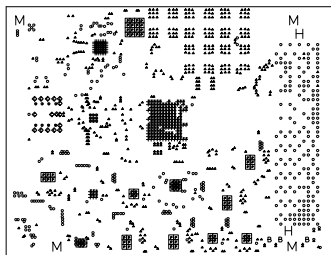


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	16MAR15	DML
B	CHANGED EXTERNAL CLOCK	13AUG15	JDB



SPECIFICATIONS:

MATERIALS;

ALL LAMINATES AND BONDING MATERIALS SHOULD BE SELECTED FROM
IPC-4101 OR IPC-4103, MINIMUM $T_g > 170^{\circ}\text{C}$, $T_d > 300^{\circ}\text{C}$,
U.L. RATING OF 94 V-0

MATERIAL FAMILY; ISOLA I-SPEED.

ISOLA I-SPEED.

CLADDING;

EXTERNAL LAYERS .5 OZ. COPPER, OVERPLATE TO 1.5 OZ.
INTERNAL SIGNAL LAYERS .5 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;

ENIG (Electroless Nickel/Immersion Gold)
100 MICRO INCHES NICKEL/
2-8 MICRO INCHES 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.

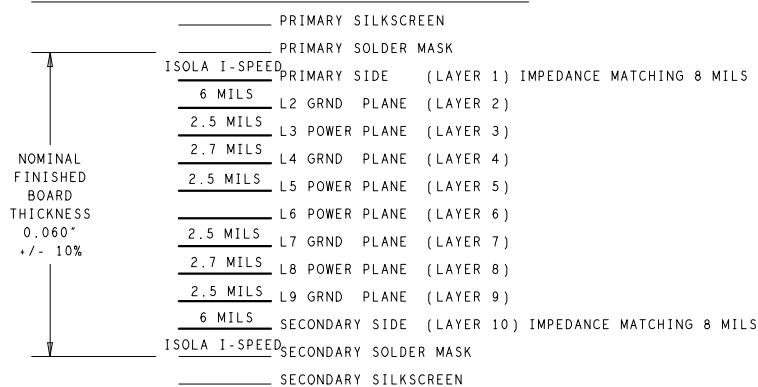
TEST REQUIREMENTS;

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.

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 WORKNET 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 .004 INCH.
9. MINIMUM DESIGN SPACING IS .005 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, MFRG. MAY REQUEST APPROVAL TO TEAR DROP PADS TO MAINTAIN ANNULAR RING. (AT PAD TO TRACE INTERSECTION ONLY AND ELECTRICAL INTEGRITY MUST BE MAINTAINED.)
12. THEIVING MAY BE ADDED TO COMPENSATE FOR LOW COPPER DENSITY AREAS ON THIS DESIGN ONLY AFTER REVIEW AND APPROVAL FROM THE CUSTOMER:
 - A. THEIVING TO CARD EDGE, FIDUCIALS, NON-PLATED THROUGH HOLES, ALL OTHER FEATURES TO BE 0.200 INCH MINIMUM.
 - B. THERE SHALL BE NO THEIVING IN ANY AREAS FREE OF SOLDER MASK OR INTERNAL COPPER PLANES.
13. MFRG. 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. MFRG 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 .003 INCH PRIOR TO FINAL PLATING.

10 LAYER STACKUP



CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 5%

ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.010"

CHARACTERISTIC IMPEDANCE = 100 OHMS +/- 10%

ARTWORK LINE WIDTH FOR
IMPEDANCE CONTROLLED LINES = 0.005 TRACE/0.0045 SPACE (.0095 CTR/CTR)

IMPEDANCE CONTROLLED LINES = 0.009 TRACE/0.009 SPACE (.021 CTR/CTR)

HOLE TOLERANCE

UNLESS SPECIFIED
PLATED: $\pm .003$
NON PLATED: $\pm .003$

FINISHED HOLES IN MILS				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
•	8.0	PLATED	49	SEE NOTE 15
•	10.0	PLATED	588	
•	10.01	PLATED	167	SEE NOTE 15
•	12.0	PLATED	368	
■	13.01	PLATED	76	SEE NOTE 15
	16.0	PLATED	48	SEE NOTE 15
•	16.01	PLATED	17	
•	20.1	PLATED	16	SEE NOTE 15
■	30.0	PLATED	3	
H	50.0	NON-PLATED	2	
M	105.0	NON-PLATED	4	

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVAL		DATE		<div><div><div></div></div><div>ANALOG DEVICES</div></div> <div>ASC DIVISION 804 WOBURN STREET WILMINGTON, MA 01887</div>	
	TEMPLATE ENGINEER X		ddMMyy			
	TOLERANCES					
	DECIMALS FRACTIONS ANGLES					
	.XX .XX .010 +-1/32 +- 2					
MATERIAL	TEST ENGINEER X		ddMMyy		TITLE FABRICATION AD-FMCADC7-EBZ BRD	
	HARDWARE SERVICES X		ddMMyy			
	HARDWARE SYSTEMS X		ddMMyy			
	COMPONENT ENGINEER X		ddMMyy			
	TEST PROCESS X		ddMMyy			
FINISH	HARDWARE RELEASE X		ddMMyy		SIZE FSCM NO DRAWING NUMBER REV D 24355 09_040403 B	
	DESIGNER J. BOWNE		13AUG15			
	PTD ENGINEER R. REEDER		13AUG15			
	CHECKER X		ddMMyy			
	DO NOT SCALE DWG					
		SCALE 1/1		SHEET 1 OF 1		