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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
E	Refreshed DUT symbol with QFN88_12x12_PAD_6x6	03/01/2012	M.S.

SPECIFICATIONS:

MATERIALS;

MATERIAL FAMILY;
CLADDING;

SOLDER MASK;

SILK SCREEN;
SURFACE FINISH;

TEST REQUIREMENTS;

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 AND MUST MEET EU RoHS DIRECTIVE 2002/95/EC.

FR408-HR

EXTERNAL LAYERS 1/2 OZ. COPPER, OVERPLATE TO 1 1/2 OZ.
INTERNAL SIGNAL LAYERS 1/2 OZ. COPPER.
INTERNAL PLANE LAYERS 1/2 OZ. COPPER.

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.

SHALL BE PERMANENT NON-CONDUCTIVE EPOXY INK, COLOR: WHITE

IMMERSION SILVER

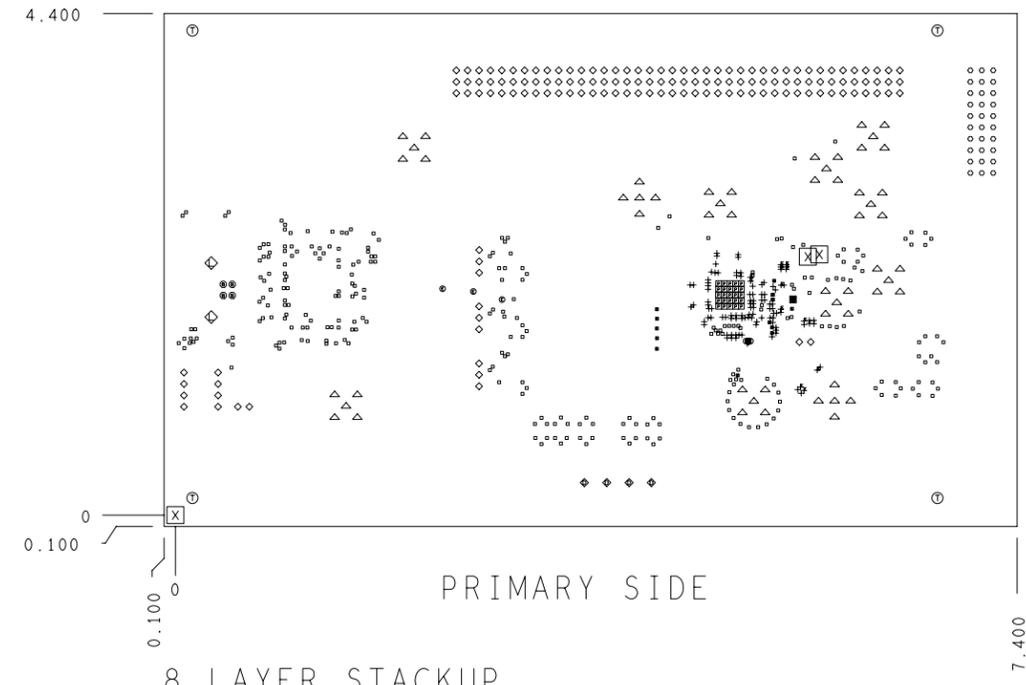
100% NETLIST ELECTRICAL VERIFICATION USING CUSTOMER SUPPLIED IPC-D-356 NETLIST FOR OPENS AND SHORTS WHEN "GERBER DATA" IS PROVIDED. THIS VERIFICATION ALSO REQUIRED FOR "ODB.." DATA PER EMBEDDED NETLIST.

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 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 .005 INCH.
- MINIMUM DESIGN SPACING IS .005 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. MFR. 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:
 - THIEVING TO CARD EDGE, FIDUCIALS, NON-PLATED THROUGH HOLES, ALL OTHER FEATURES TO BE 0.200 INCH MINIMUM.
 - THERE SHALL BE NO THIEVING IN ANY AREAS FREE OF SOLDER MASK OR INTERNAL COPPER PLANES.
- MFR. TO LEGIBLY ETCH OR STAMP/SCREEN WITH PERMANENT NON-CONDUCTIVE INK ON SECONDARY SIDE IN A CLEAR AREA UNLESS OTHERWISE INDICATED;
 - U.L. CODE-FLAMMABILITY RATING
 - DATE CODE (STAMP)
 - LOT NUMBER
 - MFR LOGO
 - SUCCESSFUL ELECTRICAL TEST.
- REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.
- VIAS ARE TO BE FILLED USING NON-CONDUCTIVE FILLER AND TO BE COPLANAR WITH THE SURFACE.

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- PRIMARY SILKSCREEN
 - PRIMARY SOLDER MASK
 - PRIMARY SIDE (LAYER 1)
 - GROUND PLANE (LAYER 2)
 - CORE .003" POWER PLANE (LAYER 3)
 - GROUND PLANE (LAYER 4)
 - GROUND PLANE (LAYER 5)
 - CORE .003" POWER PLANE (LAYER 6)
 - GROUND PLANE (LAYER 7)
 - SECONDARY SIDE (LAYER 8)
 - SECONDARY SOLDER MASK
 - SECONDARY SILKSCREEN
- NOMINAL FINISHED BOARD THICKNESS 0.062" +/- .005
- CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 10%
ARTWORK LINE WIDTH FOR IMPEDANCE CONTROLLED LINES = 0.0063"

FINISHED HOLES IN MILS				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
15	6.01	PLATED	6	
	8.0	PLATED	268	
15	8.01	PLATED	18	
	10.0	PLATED	92	
15	10.01	PLATED	14	
	13.0	PLATED	1	
	13.01	PLATED	25	
	20.0	PLATED	3	
	36.0	PLATED	4	
	40.0	PLATED	141	
	45.0	PLATED	30	
	50.0	PLATED	4	
	63.0	PLATED	55	
	91.0	PLATED	2	
	125.0	NON-PLATED	4	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES .XX -.010 --1/32 -- 2 .XXX -.005 .XXX -.0050	APPROVAL	DATE	 WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887	
	TEMPLATE ENGINEER X	ddMMMyy		
	HARDWARE SERVICES X	ddMMMyy		
	HARDWARE SYSTEMS X	ddMMMyy		
MATERIAL	TEST ENGINEER X	ddMMMyy	TITLE FABRICATION DRAWING 9914 ENGINEERING BD.	
COMPONENT ENGINEER X	ddMMMyy			
TEST PROCESS X	ddMMMyy			
HARDWARE RELEASE X	ddMMMyy			
FINISH	DESIGNER RW	13DEC11	SIZE C	FSCM NO 24355
	PTD ENGINEER X	ddMMMyy	DRAWING NUMBER	9914CE01
	CHECKER X	ddMMMyy	REV	E
DO NOT SCALE DWG			SCALE 1/1	SHEET 1 OF 1

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