

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

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 AND MUST MEET EU RoHS DIRECTIVE 20002/95/EC.

MATERIAL FAMILY; FR-408HR OR EQUIVALENT.

CLADDING; 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.

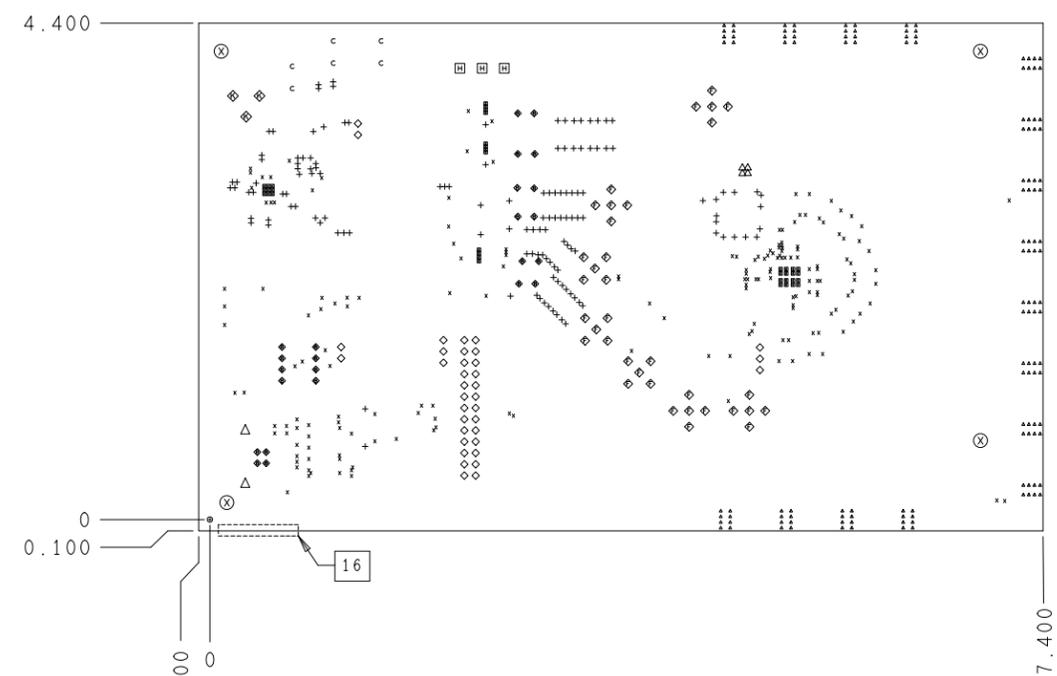
SOLDER MASK; SHALL BE LIQUID PHOTOIMAGEABLE (LPI) APPLIED ON BOTH SIDES OVER BARE COPPER OR GOLD AND SHALL MEET IPC-SM-480 (LATEST REV.) CLASS 3. COLOR BLUE.

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

SURFACE FINISH; SURFACE TO BE SILVER IMMERSION.

TEST REQUIREMENTS; 100% NETLIST ELECTRICAL VERIFICATION USING CUSTOMER SUPPLIED IPC-D-356 NETLIST FOR OPENS AND SHORTS WHEN "GERBER DATA" IS PROVIDED.

- 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.
  - COPPER IS INTENTIONALLY EXTENDED PAST THE BOARD EDGE.



**8 LAYER STACKUP**

- 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

DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
*	8.0	PLATED	180
15	8.01	PLATED	37
+	13.0	PLATED	135
.	16.0	PLATED	128
o	20.0	PLATED	1
△	20.0	PLATED	4
c	35.0	PLATED	6
◆	40.0	PLATED	24
◇	45.0	PLATED	36
◇	60.0	PLATED	35
⊠	65.0	PLATED	3
◇	75.0	PLATED	3
△	90.0	PLATED	2
⊗	125.0	NON-PLATED	4

CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 10%  
ARTWORK LINE WIDTH FOR IMPEDANCE CONTROLLED LINES = 0.0063"

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				TMIC DIVISION 831 WOBURN STREET WILMINGTON, MA 01887	
<small>DECIMALS .XX +/- .010</small> <small>FRACTIONS .XXX +/- .005</small> <small>TOLERANCES</small> <small>ANGLES +/- 2</small>		APPROVAL DATE 15DEC11		TITLE FABRICATION DRAWING	
CHECKED APPROVED MFG ENGINEER		SIZE C	FSCM NO	DRAWING NUMBER FAB_9525CE02	REV A
DO NOT SCALE DWG		SCALE 1/1	SHEET 1 OF 1		