

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;

ROGRES 4350 OR 9159, ISOLA IS410, POLYCLAD 370HR.

CLADDING;

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

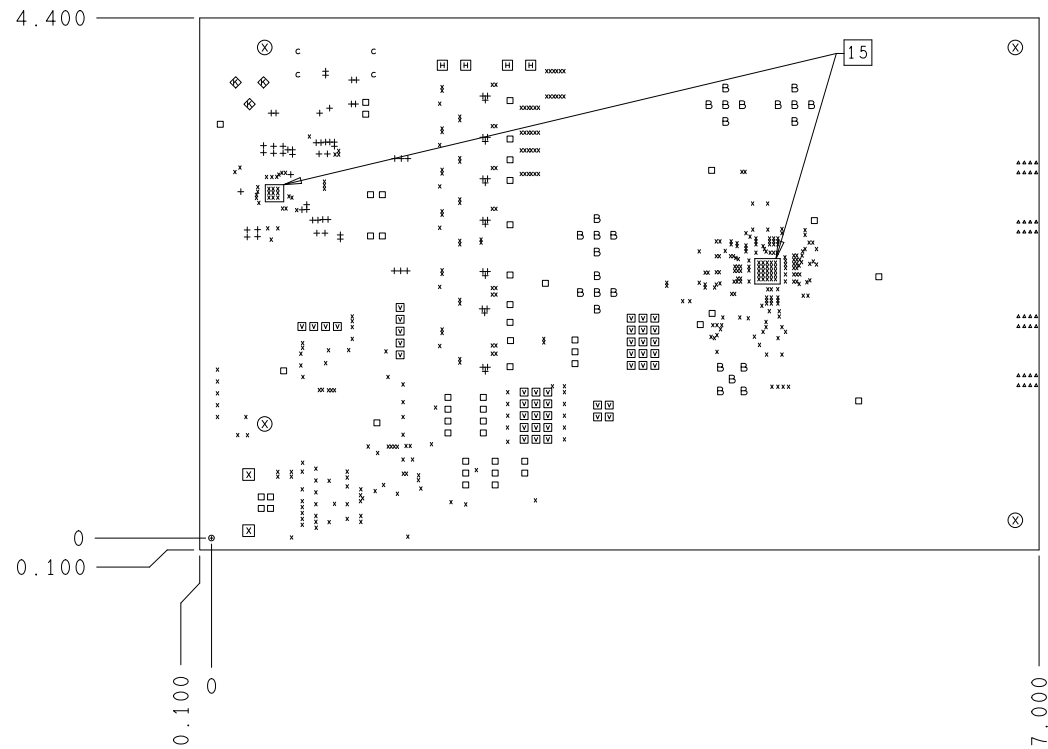
SURFACE TO BE ENIG ELECTROLESS Ni (120-200u INCH); IMERSION GOLD (3-8u INCH).

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:

- 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 IN AREA INDICATED.



6 LAYER STACKUP

PRIMARY SILKSCREEN	PRIMARY GOLD MASK	PRIMARY SOLDER MASK	PRIMARY SIDE (LAYER 1)
Rogers 4350 (.004)	370HR (.004)	370HR	GROUND PLANE (LAYER 2)
370HR	370HR (.004)	370HR	SPLIT POWER PLANE (LAYER 3)
370HR	370HR	370HR	SPLIT POWER PLANE (LAYER 4)
370HR	370HR	370HR	GROUND PLANE (LAYER 5)
370HR	370HR	370HR	SECONDARY SIDE (LAYER 6)
SECONDARY SOLDER MASK	SECONDARY GOLD MASK	SECONDARY SILKSCREEN	

NOMINAL FINISHED BOARD THICKNESS 0.062" +/- .005

CHARACTERISTIC IMPEDANCE = 50 OHMS +/- 10%
ARTWORK LINE WIDTH FOR IMPEDANCE CONTROLLED LINES = 0.00675" ON LAYER 1 ONLY

DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
*	8.0	PLATED	406
+	13.0	PLATED	71
.	16.0	PLATED	32
o	20.0	PLATED	1
c	35.0	PLATED	4
□	40.0	PLATED	49
⊠	45.0	PLATED	43
⊞	63.0	PLATED	25
⊠	65.0	PLATED	4
⊞	75.0	PLATED	3
⊠	90.0	PLATED	2
⊞	125.0	NON-PLATED	4

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				TMC DIVISION 831 WOBURN STREET WILMINGTON, MA 01887	
DECIMALS	TOLERANCES	FRACTIONS	ANGLES		
.XX	-.010	XX	+/-.2		
.XXX	-.005	XX	+/-.2		
APPROVAL	DATE	TITLE			
DESIGNED		FABRICATION DRAWING			
CHECKED		SIZE	FSCM NO	DRAWING NUMBER	REV
APPROVED		C		FAB_9557EE01	C
MFG ENGINEER		DO NOT SCALE DWG		SCALE 1/1	SHEET 1 OF 1