

SPECIFICATIONS:

ROHS COMPLIANCE NOTE: HOMOGENOUS MATERIALS IN THIS BOARD SHALL BE COMPLIANT

THE EU ROHS DIRECTIVE 2002/95/EC

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, ISOLA 370HR

CLADDING; EXTERNAL LAYERS .5 OZ. COPPER, OVERPLATE TO 1.5 OZ.

> INTERNAL SIGNAL LAYERS .5 OZ. COPPER. INTERNAL PLANE LAYERS 1 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: IMMERSION SILVER

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.

10 LAYER STACKUP

_ PRIMARY SILKSCREEN

SECONDARY SOLDER MASK

SECONDARY SILKSCREEN

IMPEDANCE TABLE

SE = SINGLE ENDED, DP = DIFFERENTIAL PAIR

NOTE: ALL IMPEDANCE TOLERANCE +/-10%

PRIMARY SOLDER MASK PRIMARY SIDE (LAYER 1) PREPREG 2.9MILS L2 GND PLANE (LAYER 2) CORE 3MILS __L3 PWR PLANE (LAYER 3) PREPREG 2.98MILS L4_GND PLANE (LAYER 4) NOMINAL FINISHED CORE 3MILS • L5_SIG SIGNAL (LAYER 5) BOARD THICKNESS L6 SIG SIGNAL (LAYER 6) 0.062" CORE 3MILS _ L7_GND PLANE (LAYER 7) + / - 10% PREPREG 2.98MILS L8_PWR PLANE (LAYER 8) CORE 3MILS L9_GND PLANE (LAYER 9) PREPREG 2.9MILS SECONDARY SIDE (LAYER 10)

LAYER IMPEDANCE REFERENCE LINE WIDTH SPACE L 1 50 OHMS SE L 2 4MILS N/A19MILS 50 OHMS SE N/A6.5MILS N/AL 1 40 OHMS SE L 2 100 OHMS DP L 4 9 M I L S 7 M I L S L 1 4MILS L 1 90 OHMS DP L 2 6.5MILS L 5 40 OHMS SE L4,L7 6.5MILS N/A50 OHMS SE 4.5MILS L4,L7 N/A80 OHMS DP 5.5MILS 7 M I L S L4,L7 L 6 40 OHMS SE L4,L7 6.5MILS N/A4.5MILS 50 OHMS SE L4,L7 N/AL 6 80 OHMS DP L4,L7 5.5MILS 7 M I L S L 6

L 9

L 9

L 9

ART FILM - fab2

REQUIREMENTS:

- 1. 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 .004 INCH.
- MINIMUM DESIGN SPACING IS .004 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, MFGR. 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:
 - 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.
- 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 D. MFGR LOGO
 - B. DATE CODE (STAMP).

C. LOT NUMBER

- E. SUCCESSFUL ELECTRICAL TEST.
- REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED. REPAIRS ARE NOT ALLOWED IN ANY AREA DEFINED ON GOLD PRM AND/OR GOLD_SEC ARTWORK LAYERS WHEN PROVIDED IN GERBER OR ODB++ DATA.

PRIMARY SIDE



DIVISION 804 WOBURN STREET WILMINGTON, MA 01887

SIZE | FSCM NO DRAWING NUMBER |24355|09-043758 1 / 1 SHEET 2 OF 2 SCALE

N/A

N/A

6MILS

L 1 0

L 1 0

L 1 0

50 OHMS SE

40 OHMS SE

80 OHMS DP

4MILS

6.5MILS

5MILS