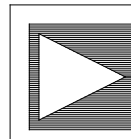


BLIND VIA L1-L2

DRILL CHART: TOP to L2_GND				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
+	4.0	PLATED	36	DIAMAX

SEE NOTE 16

PRIMARY SIDE

	ANALOG DEVICES	WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887	REV D
SIZE C	FSCM NO 24355	DRAWING NUMBER 09-070361	
SCALE	1/1		SHEET 3 OF 3

4321

D

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 GREEN.

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)
PER IPC-4552 LATEST REVISION

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:

FABRICATION UNLESS OTHERWISE SPECIFIED.

2. ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00115, (LATEST REVISION.)

3. MODIFICATIONS TO THE ARTWORK 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 INCH 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 0.0035 INCH.

9. MINIMUM DESIGN SPACING IS 0.005 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, MFR. MAY REQUEST APPROVAL TO TEAR DROP PADS TO MAINTAIN ANNULAR RING. (AT PAD TO TRACE INTERSECTION ONLY AND ELECTRICAL INTEGRITY MUST BE MAINTAINED.)

12. 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.

13. MFR. 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. MFR 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.

16. LASER VIAS TO BE COPPER FILLED (PLATED SHUT) AND PLANARIZED.

C

B

8 LAYER STACKUP

NOMINAL FINISHED BOARD THICKNESS
62 MILS
+/- 10%

PRIMARY SILKSCREEN

PRIMARY SOLDER MASK

3 MILS

PRIMARY SIDE (LAYER 1)

5 MILS

L2_GND PLANE (LAYER 2)

7 MILS

L3_SIG SIGNAL (LAYER 3)

7 MILS

L4_GND PLANE (LAYER 4)

7 MILS

L5_PWR PLANE (LAYER 5)

5 MILS

L6_SIG SIGNAL (LAYER 6)

5 MILS

L7_GND PLANE (LAYER 7)

3 MILS

SECONDARY SIDE (LAYER 8)

SECONDARY SOLDER MASK

SECONDARY SILKSCREEN

IMPEDANCE TABLE

NOTE: ALL IMPEDANCE TOLERANCE +/-5%

SE = SINGLE ENDED, DP = DIFFERENTIAL PAIR

LAYER	IMPEDANCE	REFERENCE	LINE WIDTH	SPACE
L1	50 OHMS SE	L2	5 MILS	N/A
L3	50 OHMS SE	L2 & L4	5.5 MILS	N/A
L1	100 OHMS DP	L2	3.5 MILS	10 MILS
L1	90 OHMS DP	L2	4 MILS	10 MILS
L8	100 OHMS DP	L7	3.5 MILS	10 MILS
L8	90 OHMS DP	L7	4 MILS	10 MILS
L8	50 OHMS SE	L7	5 MILS	N/A

PRIMARY SIDE

ANALOG DEVICES

WWM

DIVISION

804 WOBURN STREET

WILMINGTON, MA 01887

SIZE

FSCM NO

DRAWING NUMBER

REV

C

24355

09-070361

D

SCALE

1/1

SHEET 2 OF 3

4321