

87654321

PRIMARY SIDE

REVISION

REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	21-MAY-21	M.BRYCHTA
B	ECR-104500	02-SEP-21	M.BRYCHTA

SPECIFICATIONS:

MATERIALS:

ALL LAMINATES AND BONDING MATERIALS SHOULD BE SELECTED FROM IPC-4101 OR IPC-4103, MINIMUM Tg>130degC, Td>300degC, U.L. RATING OF 94 V-0

MATERIAL FAMILY:

ISOLA 370HR, VT-481 OR EQUIVALENT

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)
2.54um (100 MICRO INCHES) NICKEL/
0.0762um - 0.127um (3-5 MICRO INCHES) GOLD

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:

1.

REFER TO IPC-6010 SERIES (LATEST REV.), CLASS 2 FOR 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 0.127mm (0.005 INCHES) FROM THEIR TRUE POSITION.

5.

PLATED HOLE WALL THICKNESS SHALL NOT BE LESS THAN 25um (0.001 INCH) MINIMUM AVERAGE, WITH NO READING LESS THAN 20um (.0008) 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 0.09 MM.

9.

MINIMUM DESIGN SPACING IS 0.08 MM.

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, MFG. 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 5.08MM (0.200 INCH) MINIMUM.

B.

THERE SHALL BE NO THIEVING IN ANY AREAS FREE OF SOLDER MASK OR INTERNAL COPPER PLANES.

13.

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).

E.

SUCCESSFUL ELECTRICAL TEST.

C.

LOT NUMBER

14.

REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.

15.

FOR VIA IN PAD INSTANCES VIAS TO BE FILLED WITH NON-CONDUCTIVE EPOXY AND PLATED OVER.

4 LAYER STACKUP

NOMINAL
FINISHED
BOARD
THICKNESS
1.6mm
+/- 10%

PRIMARY SILKSCREEN

PRIMARY GOLD MASK

PRIMARY SOLDER MASK

PRIMARY SIDE (LAYER 1)

GROUND PLANE (LAYER 2)

PWR/GND PLANE (LAYER 3)

SECONDARY SIDE (LAYER 4)

SECONDARY SOLDER MASK

SECONDARY GOLD MASK

SECONDARY SILKSCREEN

150

70

C

D

E

A

F

A

A

A

B

B

B

A

C

F

DRILL CHART: TOP to BOTTOM

ALL UNITS ARE IN MILLIMETERS

FIGURE	FINISHED SIZE	TOLERANCE DRILL	PLATED	QTY
.	0.1524	+0.0/-0.0	PLATED	66
.	0.2032	+0.0/-0.0	PLATED	151
.	0.254	+0.0/-0.0	PLATED	214
.	0.4064	+0.0/-0.0	PLATED	255
.	0.508	+0.0/-0.0	PLATED	35
^	0.889	+0.0/-0.0	PLATED	20
o	1.016	+0.0/-0.0	PLATED	12
o	1.143	+0.0/-0.0	PLATED	126
▣	1.27	+0.0/-0.0	PLATED	6
o	1.524	+0.0762/-0.0762	PLATED	1
A	1.6002	+0.0/-0.0	PLATED	6
B	1.651	+0.0/-0.0	PLATED	4
C	3.2004	+0.0/-0.0	PLATED	2
D	1.6	+0.0/-0.0	NON-PLATED	1
E	1.803	+0.0/-0.0	NON-PLATED	1
F	3.175	+0.0/-0.0	NON-PLATED	2

HOLE TOLERANCE

UNLESS SPECIFIED

PLATED: +/- 0.0762mm

NON PLATED: +/- 0.05mm

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ASSEMBLY

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MM
TOLERANCES
DECIMALS FRACTIONS ANGLES
<30 <0.25 <160
>30 >0.25 >160

APPROVAL
DESIGNED
CHECKED
DRAWN
MFG ENGINEER

DATE
03-SEP-21

TITLE
EVAL-ADIN1110EBZ

SIZE
A2

FSCM NO

DRAWING NUMBER
01-067642-01

REV
B

DO NOT SCALE DWG

SCALE
1/1

SHEET 1 OF 1

ANALOG
DEVICES

ANALOG DEVICES INTERNATIONAL
ERDC Building
Robert Building Park
Rahway, LIMERICK, IRELAND