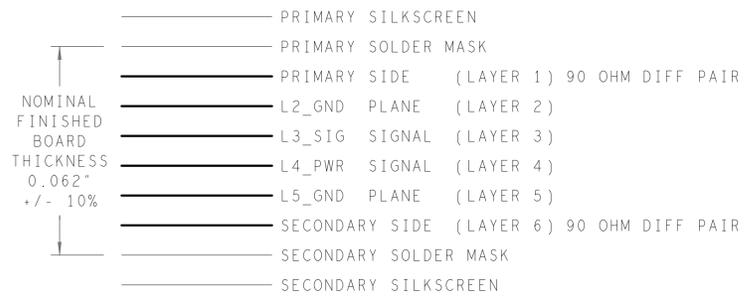
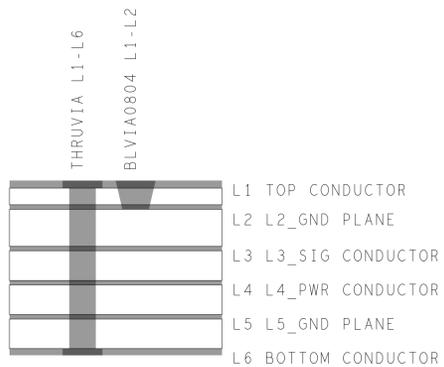


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02MAR20	A HERNANDEZ
A2	ECR-095506	01JUN20	A HERNANDEZ

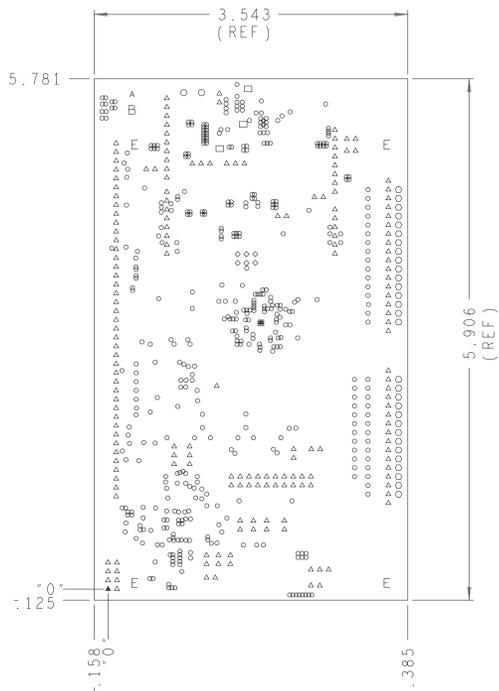
6 LAYER STACKUP



CHARACTERISTIC IMPEDANCE = 90 OHMS +/- 10%
 ARTWORK LINE WIDTH FOR IMPEDANCE CONTROLLED LINES = 0.0045"
 DIFFERENTIAL CONTROLLED LINES SPACING = 0.009"



DESIGN CROSS SECTION CHART
 TOTAL THICKNESS 62 MIL



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:

- 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 .0036 INCH (U1 AREA ONLY).
- MINIMUM DESIGN SPACING IS .004 INCH (U1 AREA ONLY).
- 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
 - MFGR LOGO
 - 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.~~
- THRU VIAS FILLED WITH NON-CONDUCTIVE EPOXY AND PLATED OVER.
- LASER VIA TO BE COPPER FILLED AND PLATED SHUT

HOLE TOLERANCE

UNLESS SPECIFIED
 PLATED: +/- 3 MILS
 NON PLATED: +/- 2 MILS

TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
*	6.0	PLATED	8	DIA MAX
o	10.0	PLATED	457	DIA MAX
o	20.0	PLATED	30	
o	40.0	PLATED	6	
△	45.0	PLATED	185	
o	50.0	PLATED	2	
□	63.0	PLATED	3	
A	63.0	NON-PLATED	1	
B	71.0	NON-PLATED	1	
E	125.0	NON-PLATED	4	

SEE NOTE 15
 SEE NOTE 15

PRIMARY SIDE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVAL	DATE	ANALOG DEVICES		WWM DIVISION 804 WOBURN STREET WILMINGTON, MA 01887
TOLERANCES	TEMPLATE ENGINEER M BATALLA	20FEB20	TITLE FABRICATION EVAL - ADuCM410QSPZ		
DECIMALS FRACTIONS ANGLES	HARDWARE SERVICES M JOSE	20FEB20			
.XX . . .010	HARDWARE SYSTEMS N/A	N/A			
.XXX . . .005	TEST ENGINEER N/A	N/A			
.XXXX . . .0050	COMPONENT ENGINEER A AGENA	20FEB20	SIZE FSCM NO DRAWING NUMBER REV D 24355 09-064139 A2		
MATERIAL	TEST PROCESS N/A	N/A			
	HARDWARE RELEASE K JABATAN	20FEB20			
	DESIGNER N. CORDOVA	20FEB20			
FINISH	PRO ENGINEER A HERNANDEZ	20FEB20	SCALE 1/1 SHEET 1 OF 2		
	CHECKER N/A	N/A			
DO NOT SCALE DWG					

ADuCM410EBZ BGA CUSTOMER EVAL BOARD Z

ART FILM - FAB2

8 7 6 5 4 3 2 1

D

D

C

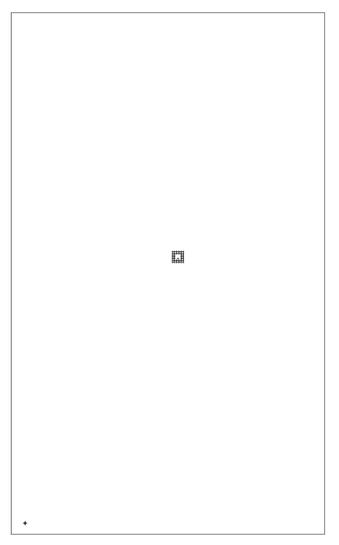
C

B

B

A

A



BLVIA0804 L1-L2

TOP to L2_GND				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
.	4.0	PLATED	41	SEE NOTE 16

ADuCM410EBZ BGA CUSTOMER EVAL BOARD Z

PRIMARY SIDE



SIZE	FSCM NO	DRAWING NUMBER	REV
D	24355	09-064139	A2
SCALE 1/1		SHEET 2 OF 2	

8 7 6 5 4 3 2 1

ART FILM - FAB2