**Title:** ADA4505-2 EVALUATION BOARD  
**Date:** 23APR14  
**Rev:** 09  

**Hole Tolerance:**  
_unless specified_  
_plated: +/- 3 mils_  
_non-plated: +/- 2 mil_  

**Figure 2.025:**  

**Dimensions:**  
- All units are in mils  
- Decimal places: .XXX +.0050  
- .XX +.010  
- .XX +.010  
- .XX +.010  
- .XX +.010  
- .XX +.010  
- .XX +.010  

**Notes:**  
- DO NOT SCALE DWG  
- REV A: INITIAL RELEASE  
- REV B: AS PER ECR NO.046984  
- REV C: AS PER ECR NO.058605  

**Drawing Information:**  
- TEMPLATE ENGINEER: G. AGUIRRE  
- HARDWARE SERVICES: R. MACDONALD  
- HARDWARE SYSTEMS: J. KEANNE  
- COMPONENT ENGINEER: J. RAMOS  
- TEST ENGINEER: R. AMARILLE  
- TEST PROCESS: G. CELEDONIO  
- DESIGNER: J. CHUA  
- PTD ENGINEER: C. PETERS  
- CHECKER: J. CHUA  
- APPROVED: J. CHUA  

**Material Finish:**  
- N/A  
- N/A  
- N/A  
- N/A  
- N/A  
- N/A  
- N/A  

**Revision History:**  
- REV A: INITIAL RELEASE  
- REV B: AS PER ECR NO.046984  
- REV C: AS PER ECR NO.058605  

**Diameter Notations:**  
- 4.250 (REF)  
- 2.100 (REF)  
- 4.175 (REF)  
- 0.075  

**Table:**  

<table>
<thead>
<tr>
<th>Figure</th>
<th>Size</th>
<th>Plated</th>
<th>Tolerance/Notes</th>
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<tr>
<td>12.0</td>
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<td>Plated</td>
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<tr>
<td>125.0</td>
<td>Non-plated</td>
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</table>
SPECIFICATIONS:

MATERIALS: ALL LAMINATES AND BONDING MATERIALS SHOULD BE SELECTED FROM IPC-4101 OR IPC-4103. MINIMUM Tg>170 degC, Td>300 degC, UL RATING OF 94 V-0

MATERIAL FAMILY: FR4

CLADDING: EXTERNAL LAYERS .5 oz. COOPER. OVERPLATE TO 1.5 oz.

NOTE: IF THE LAYER STACKUP CONFLICTS WITH THE ABOVE CLADDING SPECIFICATIONS THEN THE LAYER STACKUP SHALL TAK PRIORITY

SOLDER MASK: SMALL BE LIQUID PHOTOMAINGAIBLE (LPI) APPLIED ON BOTH SIDES OVER BASE COOPER OR GOLD. COLOR GREEN

SILK SCREEN: SMALL BE PERMANENT NON-CONDUCTIVE EPOXY INK. COLOR: WHITE SYNTHETIC INKJET PRINTING ALLOWED FOR DENSE BOARDS. COLOR: WHITE

SURFACE FINISH: ENIG (Electroless Nickel/Immersion Gold)
100 MICRO INCHES NICKEL/
3.5 MICRO INCHES GOLD

INTENTIONAL SHORTS: NO INTENTIONAL SHORTS FOR THIS DESIGN.

TEST REQUIREMENTS: 100% NETLIST ELECTRICAL VERIFICATION USING CUSTOMER SUPPLIED IPC-6010 NETLIST FOR OPENS AND SHORTS WHEN "GERBER DATA" IS PROVIDED. THIS VERIFICATION ALSO REQUIRED FOR "ODB++" DATA PER EMBEDDED NETLIST

ROHS COMPLIANCE NOTE: HOMOGENOUS MATERIALS IN THIS BOARD SHALL BE COMPLIANT THE EU ROHS DIRECTIVE 2002/95/EC

4 LAYER STACKUP

PRIMARY SOLDER MASK
PRIMARY SILKSCREEN
NONAL FINISHED BOARD THICKNESS 0.062" +/- 10%

NOMINAL FINISHED BOARD THICKNESS 0.062"

SECONDARY SILKSCREEN
SECONDARY SOLDER MASK
L3_PWR PLCANE (LAYER 3)
L2_GND PLANE (LAYER 2)
L3_PWR PLANE (LAYER 3)
L2_GND PLANE (LAYER 2)

REQUIREMENTS:

1. REFER TO IPC-6010 SERIES (LATEST REV.), CLASS 2 FOR FABRICATION UNLESS OTHERWISE SPECIFIED.
2. ACCEPTABILITY PER ANALOG DEVICES, INC. SPECIFICATION TST00115.
3. MODIFICATIONS TO THE ARTWORK ARE NOT ALLOWED WITHOUT WRITTEN AUTHORIZATION.
4. HOLES PATTERN TOLERANCES FOR UNDIMENSIONED HOLES SHALL BE 0.003 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 BY CROSS SECTION.
6. HOLES 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 .010 INCH.
9. MINIMUM DESIGN SPACING IS .0075 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, MANUFACTURER MAY REQUEST APPROVAL TO 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. MANUFACTURER TO LEGIBLY ETCH OR STAMP SCREEN WITH PERMANENT NON-CONDUCTIVE INK ON SECONDARY SIDE IN A CLEAR AREA UNLESS OTHERWISE INDICATED:
   A. UL CODE-FLAMMABILITY RATING
   B. MANUFACTURER LOGO
   C. DATE CODE
   D. SUCCESSFUL ELECTRICAL TEST.
14. REPAIRS PER IPC-7711/21 (LATEST REV.) ARE ALLOWED.

AD4505-2 CUSTOMER EVALUATION BOARD

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Assembly Notes:

Don't cut the excess pins of the following connectors:
DIG1, DIG0, POWER, ANALOG, ICSP
L4 SECONDARY
08-038118-02
REV C
SOLDERMASK SECONDARY
08-038118-06
REV C
PASTEMASK PRIMARY
08-038118-09
REV C