**AD4505-2 CUSTOMER EVALUATION BOARD**

**SPECIFICATIONS:**

**MATERIALS:**

- All laminates and bonding materials should be selected from IPC-410 or IPC-4103. Minimum Ts = 200°C. Td = 300°C.
- UL rating of 94 V-0

**MATERIAL FAMILY:**

- FR4

**CLADDING:**

- External layers: 0.5 oz. Copper, overplate to 1.5 oz.
- Note: If the layer stackup conflicts with the above cladding specifications then the layer stackup shall take preference.

**SOLDER MASK:**

- Small area liquid photoimageable (LPI) applied on both sides over base copper or gold. 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)
  - 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-4502 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

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+----------------+            +----------------+            +----------------+            +----------------+
| NOMINAL |            | FINISHED BOARD |            | THICKNESS | [LAYER 5] |            | 0.082" |            | 0.10" |            | 0.10" |
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**REQUIREMENTS:**

1. Refer to IPC-6012D 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 0.005 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 0.0005 inch by cross section.
6. Multidiameters apply after plating.
7. Finishing 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 0.010 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, manufacturer may request approval to tear drop pads to maintain annular ring. (At pad to trace intersection only and electrical integrity must be maintained.)
12. Threading may be added to compensate for low copper density areas on this design only after review and approval from the customer.
   - A. Threading to card edge, fiducials, non-plated through holes, and all other features to be 0.200 inch minimum.
   - B. There shall be no threading 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. U.L. code-flammability rating
   - B. Manufacturer's logo
   - C. Date code (stamp)
   - D. Successful electrical test
   - E. Lot number
14. Repairs per IPC-7711/21 (latest rev.) are allowed.
L2 GND

08-038118-07

REV B