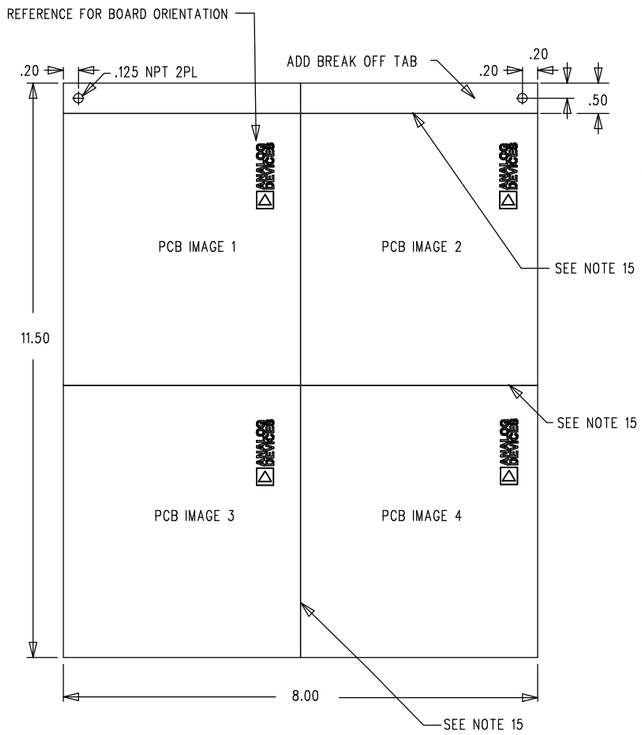
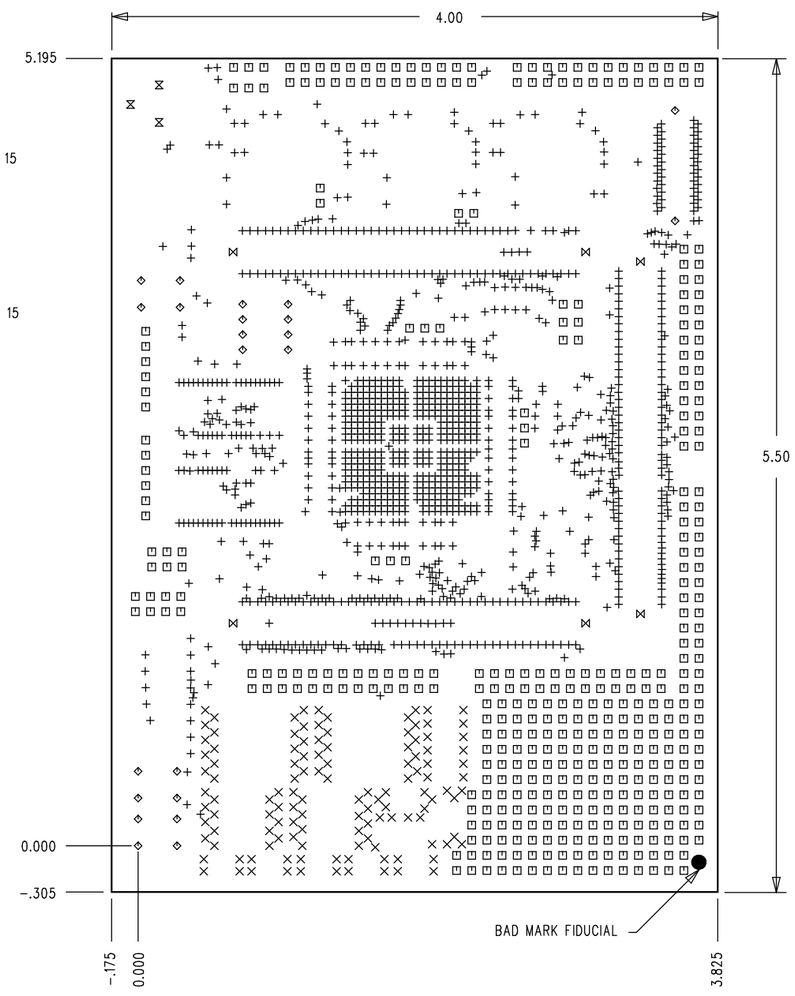
| REVISIONS | | | | |
|---|---|---|---|---|
| REV | DESCRIPTION OF CHANGE | DRFTR | DATE | APPROVED |
| 1.0 | NEW RELEASE | EASTERN CIRCUITS | 09/26/05 | |

## PANEL DETAIL



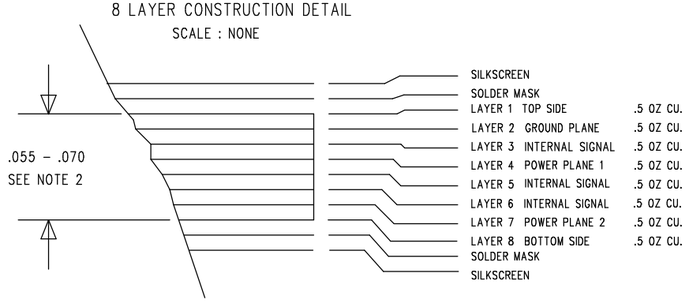

UNLESS OTHERWISE SPECIFIED

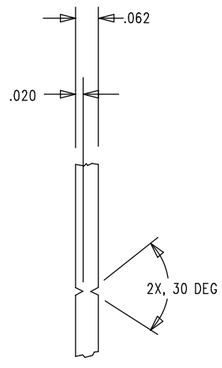
1. BOARD TO BE FABRICATED PER IPC-6012A, CLASS 2.
2. MATERIAL: POLYCLAD FR-370HR OR EQUIVALENT. OUTER LAYERS 1/2 OZ/SQFT CU INNER LAYERS 1/2 OZ/SQFT CU FINISHED .062 (.055 MIN .070 MAX SEE DETAIL). VENDOR MAY ADJUST THICKNESS TO FULFILL NOTE 9.
3. PLATING: ADDITIONAL CU PLATING 1 OZ/SQFT ALL HOLES PLATED THROUGH, EXCEPT AS NOTED IN HOLE LEGEND. MINIMUM PTH BARREL THICKNESS = 0.0008" MINIMUM AVERAGE PER IPC-6012A WITH AMENDMENT 1, CLASS 2 REQUIREMENTS. WITH NO SINGLE MEASUREMENT LESS THAN 0.00071 IN THE PLATED HOLES.
4. FINISH: SURFACES TO BE COATED BY ENIG OF 2 TO 10 MICROINCHES OVER A MINIMUM OF 60-200 MICROINCHES OF LOW STRESS NICKEL.
5. SOLDERMASK: SOLDER MASK TO BE TRANSPARENT GREEN LPI BOTH SIDES PER GERBER FILES.
6. SILKSCREEN: WHITE EPOXY INK, APPLY TO TOP SIDE PER GERBER FILE.
7. ARTWORK: MINIMUM FEATURE SIZE = 0.00394 MINIMUM AIR GAP = 0.00394
8. ALL DIMENSIONS ARE IN INCHES.
9. CONTROLLED IMPEDANCE: BOARD TO BE BUILT TO YIELD CONTROLLED IMPEDANCE OF 50 OHMS - 70 OHMS ON ALL .00394" LINE WIDTHS
10. DO NOT ADD NON-FUNCTIONAL COPPER THIEVING ON OPEN AREAS OF OUTER LAYERS.
11. VIAS SHOULD BE COVERED ACCORDING TO ONE OF THE FOLLOWING METHODS. METHOD 1 IS PREFERRED.
    METHOD 1: VIAS MUST BE FILLED WITH SOLDERMASK MATERIAL AFTER ELECTROLESS NICKEL/IMMERSION GOLD AND BEFORE PRIMARY LPI MASK. AFTER THE FILL IS CURED, THE PRIMARY MASK IS THEN APPLIED WITH NO VIA APERATURES BOTH SIDES.
    METHOD 2: AFTER APPLICATION OF FULL BODY ELECTROLESS NICKEL/IMMERSION GOLD, APPLY PRIMARY MASK WITH REDUCED VIA APERTURES THAT ARE 6 MILS LARGER THAN DRILLED HOLE DIAMETER BOTH SIDES. THEN APPLY SOLDER MASK PLUG ON COMPONENT SIDE.
12. VIA HOLES (.010) REQUIRE TANGENCY ONLY, INSTEAD OF ANNULAR RING.
13. TEARDROP PADS ARE ACCEPTABLE WHERE NEEDED.
14. USE IPC-D-356A NETLIST AS SUPPLIED FOR CHECKING.
15. V SCORE 3 LINES ON BOTH SIDES OF THE PANEL. SEE DETAIL.
16. SEE PANEL DETAIL FOR PANALIZATION.
17. WHEN STEP AND REPEAT IS COMPLETE A SOLDERPASTE MASK (GERBER FILE) IS NEED FOR THE ASSEMBLY HOUSE FOR THE PANEL.
    PLEASE SUPPLY TO CHIRAG PATEL AT ANALOG DEVICES.

| HOLE SIZE CHART | | | |
|---|---|---|---|
| SYMBOL | DIAMETER | QTY | PLATE |
| + | .010 +.003/-.010 | 1371 | YES |
| X | .028 +/- .003 | 122 | YES |
| square | .037 +/- .003 | 397 | YES |
| diamond | .041 +.003/-.000 | 22 | YES |
| hourglass | .125 +/- .005 | 3 | YES |
| bowtie | .053 +.003/-.000 | 6 | NO |

## 8 LAYER CONSTRUCTION DETAIL

SCALE : NONE




SCORING DETAIL

| | | | |
|---|---|---|---|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE : .XX +/- .010 .XXX +/- .005 | CONTRACT NO. | | |
| | APPROVALS | DATE | |
| MATERIAL SEE NOTES | DRAWN EASTERN CIRCUITS | 09/26/05 | |
| | CHECKED | | |
| FINISH SEE NOTES | ENGINEERING | | |
| | QUALITY | | |
| DO NOT SCALE THIS DRAWING | MANUFACTURING | | |


ANALOG DEVICES
20 Cotton Road
Nashua, New Hampshire 03063
(603) 883-2430 FAX (603) 882-2655


FABRICATION DRAWING

BLACKFIN FPGA EZ-EXTENDER

| SIZE | DWG. NO. | REV. |
|---|---|---|
| B | A0199-2005 | 1.0 |
| SCALE 1 : 1 | | SHEET 1 OF 1 |