

CONTACT INFO:

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BROOKHAVEN
National Laboratory

DRAWN: JMH

CHECKED: RAS

QUALITY CONTROL: QC By

INST TICKET #:

DATED: 05/24/2016

DATED: 03/10/2016

DATED: QC Date

UNITS: Inch

COMPANY: Brookhaven Natinoal Laboratory

TITLE: ITPC Inner Pad Plane

EXPERIMENT: STAR

SIZE: D

DRAWING NO: TPC-ITPC_PP-PCB-D.pcb

REV: D

SCALE: 1 : 1

SHEET: 1 OF 1

FABRICATION NOTES:

1. FINISHED TRACE AND LINE WIDTHS SHOULD MATCH SUPPLIED GERBER FILES WITHIN +/- 0.001"
2. MATERIAL : Hologen/Bromide-Free G10
3. COPPER WEIGHT : INNER LAYERS = 1oz
OUTER LAYERS = 1oz
4. SOLDER MASK : NONE
5. OVERALL BOARD THICKNESS: 0.093" +/- 0.005"
6. HOLE DIAMETER TOLERANCES : +/- 0.003"
7. ELECTRICAL TEST TO GERBER DATA
8. SILK SCREEN : NONE
9. MINIMUM ANNULAR RING = 0.003"
10. PLANE REGISTRATION : +/- 0.003" TO TOP PLANE FOR ALL LAYERS
11. WARP AND TWIST NOT TO EXCEED 0.007" PER INCH ACROSS THE DIAGONAL OF PCB
12. ACCEPTABILITY PER LATEST REVISION OF IPC-A-600, CLASS 2
13. QUANTITY = 3 PIECES
14. TOTAL # OF HOLES = 10,503 (includes blind/buried vias)
15. MIN LINE: 0.005", MIN SPACE: 0.005". Tolerance: +/- 0.0002"
16. SMT PADS, TOP: 4290, BOTTOM: 0, PITCH: 1.0mm
17. BOARD FINISH = TIN PLATING (TOP ONLY), BOTTOM SHOULD BE BARE COPPER
18. TURN TIME 12-15 DAYS
19. NO MODIFICATIONS PERMITTED TO COPPER LAYERS, EXCEPT UPON EXPLICIT REVIEW AND APPROVAL
20. HOLE LOCATION TOLERANCES : +/- 0.002"
21. SMALL SCRAP PIECE OF PCB (2-3in.) TO TEST FOR OUT GASSING.

| SIZE | QTY | SYM | PLATED | THR/PRTL | TOL |
|-------|------|-----|--------|----------|----------|
| 10 | 3440 | + | YES | P2-3 | +/-0.003 |
| 10 | 3440 | ⊠ | YES | P1-2 | +/-0.003 |
| 16 | 3440 | ⊠ | YES | P3-4 | +/-0.003 |
| 22 | 71 | × | YES | THR | +/-0.003 |
| 40.16 | 110 | ◇ | NO | THR | +/-0.003 |
| 125 | 2 | ⊠ | NO | THR | +/-0.003 |

Size 40.16 hole is a partial via, P1-3.
NOT A THRU HOLE!
Hole must be min depth of 0.055", doesn't need to go to L3

LAYER 1 (TOP/GND)

LAYER 2 (SIGNAL)

LAYER 3 (SIGNAL)

LAYER 4 (BOT/PAD PLANE)

0.093" +/- 0.005"

Prepreg (9mil)

Core (68mil)

Prepreg (9mil)

1oz Copper Layers 1-4 (1.4mil)
Suggested Stackup (May be modified if necessary)
BNL must be notified if modifications are made