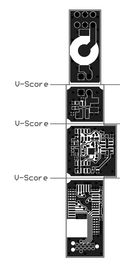
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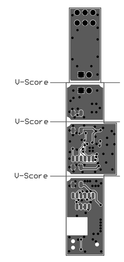
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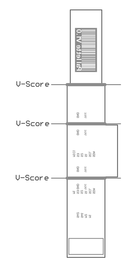
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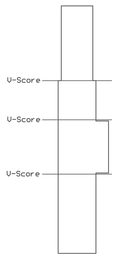
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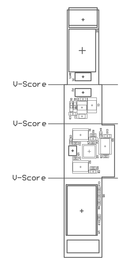
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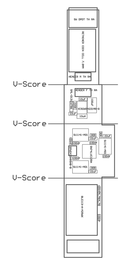
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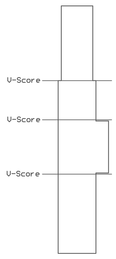
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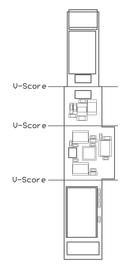
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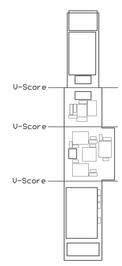
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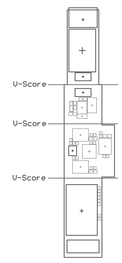
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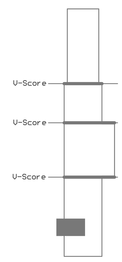
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# MASTER FABRICATION DRAWING

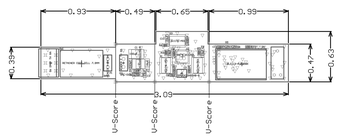
## VIEWED FROM PRIMARY SIDE (LAYER 1)

## NOTES:

1. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH FILE: Pallette_Rev1_ FABRICATION.ZIP.
2. MANUFACTURING PROCESS: TO IPC-6012B (UNLESS OTHERWISE STATED).
3. ACCEPTANCE: TO IPC-A-600H CLASS 2 (UNLESS OTHERWISE STATED).
4. FINISHED PCB THICKNESS: 0.014"
5. MATERIAL TYPE: ISOLA PCL-FR-370HR
6. LAYER CONSTRUCTION ARE SHOWN IN VIEW 'A'.
7. SURFACE FINISH: ELECTROLESS NICKEL/IMMERSION GOLD (ENIG) AS PER IPC-4552, MINIMUM EN / IG THICKNESS TO BE 3um / 0.05um.
8. ALL HOLE SIZES DESCRIBED IN THIS DOCUMENT ARE FINISHED HOLE SIZES (FHS).
9. MINIMUM CONDUCTOR WIDTH = 0.005", MINIMUM CONDUCTOR SPACING = 0.005".
10. WHITE LPI SOLDER MASK OVER BARE COPPER ON PRIMARY AND SECONDARY SIDE, SOLDER MASK TO CONFORM TO IPC-SM-840D CLASS T.
11. SILKSCREEN ON BOTH SIDES. SILKSCREEN COLOUR: BLACK REMOVE ALL SILKSCREEN WITHIN 0.006" OF EXPOSED CONDUCTORS.
12. MARK VENDOR LOGO, DATE CODE, COUNTRY OF MANUFACTURE, ETC LOCATION AT VENDOR DISCRETION USING WHITE EPOXY INK.
13. PROFILING METHODS: ROUTE AND/OR V-GROOVE/SCORE.
14. 30 DEGREE (+/- 5 DEGREE) V-GROOVE/SCORE, MINIMUM 0.02" (+/-0.004") THICKNESS MUST REMAIN.
15. ALL PCB EDGES SHALL BE CLEAN CUTS AND WITHOUT METALLIC BURRS.
16. REJECTS: MAXIMUM OF 25% X (CROSS) OUTS ALLOWED AT VENDOR COST.
17. ALL PCBs SUPPLIED ARE TO BE COMPLIANT TO RoHS / EU DIRECTIVE 2002/95/EC & OTHER SIMILAR LEGISLATION RESTRICTING THE USE OF HAZARDOUS SUBSTANCES.
18. MANUFACTURING TOLERANCES:
    - GENERAL MANUFACTURING: +/- 0.004"
    - CONDUCTOR WIDTH: > 0.004" +/-20%, < 0.004" +/- 20%
    - CONDUCTOR PATTERN REGISTRATION: +/- 0.004"
    - SOLDERMASK PATTERN REGISTRATION: +/-0.00315"
    - FINISHED PCB/PANEL ARRAY THICKNESS TOLERANCE: > +/-10%
    - HOLE DIAMETER: PTH > 0.118" +/-0.004", 0.118" - 0.004" +/-0.00315", 0.004" +0.002"/-0.004"
      NPTH > 0.157" +/-0.004", < 0.157" +0.002"/-0.002"
    - HOLE LOCATION: +/-0.004"
    - ROUTE: PTH/NPTH +/-0.005"
    - V-GROOVE/SCORE ALIGNMENT: +/-0.005"

## MANUFACTURING FILE LIST

| | FABRICATION FILES | FILE NAME |
|---|---|---|
| ■ | TOP OVERLAY | Pallette _Rev1 .GTO |
| ■ | TOP SOLDER MASK | Pallette _Rev1 .GTS |
| ■ | TOP COPPER LAYER (L1) | Pallette _Rev1 .GTL |
| ■ | BOTTOM COPPER LAYER (L2) | Pallette _Rev1 .GBL |
| ■ | BOTTOM SOLDER MASK | Pallette _Rev1 .GBS |
| ■ | BOTTOM OVERLAY | Pallette _Rev1 .GBO |
| ■ | V-SCORE DRAWING | Pallette _Rev1 .GM12 |
| ■ | KEEPOUT | Pallette _Rev1 .GKO |
| ■ | APERTURE FILE | Pallette _Rev1 .APR |
| ■ | DRILL REPORT - TOOL FILE | Pallette _Rev1 .DRR |
| ■ | DRILL - PLATED | Pallette _Rev1-Plated.TXT |
| ■ | DRILL - NONPLATED | Pallette _Rev1-NonPlated.TXT |
| ■ | DRILL - BINARY FILE | Pallette _Rev1 .DRL |
| ■ | FABRICATION DRAWING | Drill Drawing.PDF |
| □ | | |
| □ | | |
| | ASSEMBLY FILES | |
| ■ | TOP PASTE MASK | Pallette _Rev1.GTP |
| □ | BOTTOM PASTE MASK | Pallette _Rev1.GBP |
| ■ | PICK PLACE FILE | Pick Place for Pallette_Rev1.CSV |
| ■ | TOP DESIGNATOR | Pallette _Rev1.GM2 |
| ■ | TOP VALUES | Pallette _Rev1.GM3 |
| ■ | ASSEMBLY | Pallette _Rev1.GM13 |
| ■ | COURTYARD | Pallette _Rev1.GM15 |
| ■ | DATUM CROSS | Pallette _Rev1.GM16 |
| ■ | ASSEMBLY DRAWING | Assembly Drawings.PDF |
| ■ | BOM | Bill of Materials.PDF |
| □ | | |
| □ | | |
| □ | | |
| □ | | |
| | GENERAL FILES | |
| ■ | BOARD OUTLINE | Pallette _Rev1.GM1 |
| □ | BOARD INFORMATION | Pallette _Rev1.GM10 |
| □ | ALTIUM PCB FILE | Pallette _Rev1.PcbDoc |
| □ | READ ME FILE | Pallette _Rev1.TXT |
| □ | | |




## VIEW 'A': STACKUP STRUCTURE

FINISHED PCB/PANEL ARRAY THICKNESS: 0.014"

DIELECTRIC CONSTANT FOR FR4 CORE AND PrePREG: Er = 4.0 - 4.5.

### 0.014" - 2 Layer Stackup

| | | |
|---|---|---|
| | | LAYER 1 (PRIMARY SIDE) |
| A | | HALOGEN FREE PCB 35um COPPER CLAD LAMINATE |
| | | LAYER 2 (SECONDARY SIDE) |

## MATERIALS & SPECIFICATIONS

A. BASE MATERIAL - 35um (1.0oz) Cu CLAD DOUBLE SIDED LAMINATE, MUST MEET IPC4101B/24 OR EQUIVALENT (MINIMUM Tg 135 AND Td 280 DEGREES C, SUITABLE FOR A LEAD FREE PROCESS).

B. PrePREG MATERIAL - MATERIAL SELECTED TO MATCH THE ABOVE LAMINATE, PrePREG TO ICP4101B/24 OR EQUIVALENT (MINIMUM Tg 135 AND Td 280 DEGREES C, SUITABLE FOR A LEAD FREE PROCESS). 2 SHEETS MINIMUM BETWEEN BONDING LAYERS. GLASS STYLE, RESIN FLOW AND GEL TIMES OPTIONAL.

C. 18um (0.5oz) Cu FOIL LAYERS TO IPC-MF-150F/3. OUTER LAYERS TO BE PLATED TO 35um (1oz) FINISHED WEIGHT.

| Symbol | Hit Count | Tool Size | Plated | Hole Type |
|---|---|---|---|---|
| ▽ | 121 | 14.961mil (0.38mm) | PTH | Round |
| ○ | 4 | 27.559mil (0.7mm) | PTH | Round |
| ⌘ | 6 | 35.433mil (0.9mm) | PTH | Round |
| ☼ | 3 | 39mil (0.991mm) | NPTH | Round |
| ◌ | 4 | 39.37mil (1mm) | PTH | Round |
| ⊠ | 4 | 118.11mil (3mm) | NPTH | Round |
| | 142 Total | | | |

| REVISION | | | | |
|---|---|---|---|---|
| ISSUE | DATE | ECO No | BY | |
| 1 | Aug 29th 2016 | FIRST ISSUE | JZ | |

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCH
TOLERANCES ARE:
DECIMALS .X ±0.02 .XX ±0.01
ANGLES ±5°

MATERIAL 4 5 6

FINISH 7 10 11

DO NOT SCALE DRAWING

# Pallette

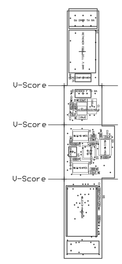
DESCRIPTION

## Tongue Controlled Interface

SIZE A1 | DRAWN JZ 08-29-2016 | REV. 1

SCALE 1 : 1 | SHT 1 OF 1

2:51:39 PM 9/13/2016 DRAWING SIZE A1


V-Score
V-Score
V-Score