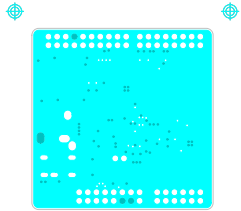
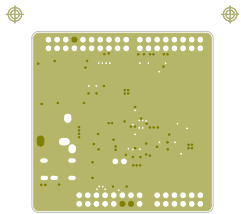


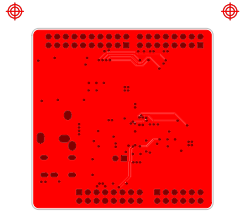
|   |                  |
|---|------------------|
|  | PROJECT          |
|   | ARD-AUDIO-DA7212 |
| DRAWING NUMBER 190-03-B_C1  |                  |
| LAYER   | TOP SIDE TRACK   |



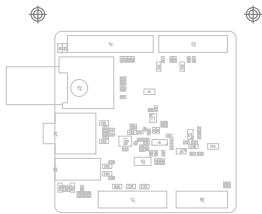
|   |                  |
|---|------------------|
|  | PROJECT          |
|   | ARD-AUDIO-DA7212 |
| DRAWING NUMBER 190-03-B C2  |                  |
| LAYER   | INNER LAYER 2    |



|   |                  |
|---|------------------|
|  | PROJECT          |
|   | ARD-AUDIO-DA7212 |
| DRAWING NUMBER 190-03-B_C3  |                  |
| LAYER   | INNER LAYER 3    |



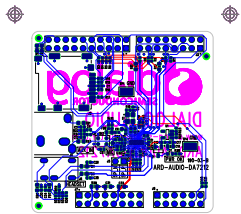
|   |                   |
|---|-------------------|
|  | PROJECT           |
|   | ARD-AUDIO-DA7212  |
| DRAWING NUMBER 190-03-B C4  |                   |
| LAYER   | BOTTOM SIDE TRACK |



|   |                        |
|---|------------------------|
|  | PROJECT                |
|   | ARD-AUDIO-DA7212       |
| DRAWING NUMBER 190-03-B_C1  |                        |
| LAYER   | TOP SIDE TRACK DRAWING |

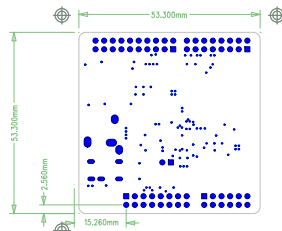


|   |                  |
|---|------------------|
|  | PROJECT          |
|   | ARD-AUDIO-DA7212 |
| DRAWING NUMBER 190-03-B   |                  |
| LAYER   |                  |



|   |  |
|---|--|
|  | PROJECT                                |
|   | ARD-AUDIO-DA7212                       |
| DRAWING NUMBER 190-03-B <b>TS</b>   |  |
| LAYER   | <b>TOP SILKSCREEN</b> Y <b>DRAWING</b> |

IF IN DOUBT ASK!



|                                |                            |
|--------------------------------|----------------------------|
| <b>dialog</b><br>SEMICONDUCTOR | PROJECT                    |
|                                | ARD-AUDIO-DA7212           |
|                                | DRAWING NUMBER 190-03-B_MC |
| LAYER                          | MANUFACTURE DETAIL         |

DRILL DETAIL NOTES

ALL PLATED HOLES ARE FINISHED SIZES WITH +/-0.075mm TOLERANCE

ALL NON-PLATED HOLES ARE FINISHED SIZES WITH +/-0.050mm TOLERANCE

ALL VIAS ARE DRILLED SIZES WITH +0/-DRILL TOLERANCE

|                           |     |
|---------------------------|-----|
| TOTAL PLATED HOLE QTY     | 175 |
| TOTAL NON-PLATED HOLE QTY | 0   |

**PREFERRED PANELISATION REQUIREMENTS**

REFER TO THE PANEL DRAWING IF SUPPLIED OTHERWISE USE DETAILS BELOW

**PRINTED CIRCUIT BOARDS THAT REQUIRE PANELISATION**

|    |  |
|----|--|
| 01 | ANY PCB THAT DOES NOT HAVE A 5mm CLEARANCE FROM PCB EDGE TO COPPER/COMPONENTS ALONG THE LONGEST PARALLEL EDGES |
| 02 | ANY 'ODD' SHAPE PCB e.g. ROUND   |

PANEL SIZE, WASTE EDGE (BORDER) AND WEBBING

|    |   |
|----|---|
| 01 | PREFERRED PANEL SIZE TO BE 300mm X 230mm (MAXIMUM 450mm SQUARE)                   |
| 02 | PANEL BORDER TO BE 10mm ON ALL SIDES, FULLY CROSS HATCHED IN COPPER ON BOTH SIDES |
| 03 | BOARD EDGE TO BOARD EDGE INTERNAL WEBBING TO BE 10mm                              |

**TOOLING HOLES**

|    |   |
|----|---|
| 01 | ADD 3 TOOLING HOLES 2.5mm +/-0.05 DIA. TO PANEL BORDER 5mm FROM BORDER EDGE |
|----|---|

**FIDUCIALS**

|    |   |
|----|---|
| 01 | ADD 3 FIDUCIALS ON BOTH SIDES (1mm DIA./2mm DIA. CLEARANCE) 5mm FROM PANEL EDGE |
|----|---|

RATBITES (FOR REFERENCE SEE ROUTING DETAIL BELOW)

|    |   |
|----|---|
| 01 | ADD RATBITES IN SAFE AREAS AWAY FROM TRACKS, TOOLING HOLES, SM PADS, VIAS, TEST PADS, GROUND PLANES, VITAL SILKSCREEN, THROUGH HOLES, OVERHANGING COMPONENTS ETC. |
| 02 | USE LOCATIONS SHOWN BY '+' IF PRESENT   |
| 03 | THERE MUST BE SUFFICIENT RATBITES TO ENSURE PCB STABILITY   |
| 04 | THE SPACING BETWEEN RATBITES SHOULD BE BETWEEN 40mm TO 50mm   |

**PREFERRED ROUTING / V-SCORING REQUIREMENTS**

|         |                              |
|---------|------------------------------|
| ROUTING | REQUIRED                     |
| 01      | USE A 2.40mm (+/-0.1mm) ROUT |

**V-SCORING NOT REQUIRED**

WHEN V-SCORING IS APPLIED TO THE BOARD AS A METHOD OF REMOVING THE BREAK-OFF STRIPS THE FOLLOWING RULES ARE TO BE APPLIED

|    |  |
|----|--|
| 01 | SOLDER MASK TO EDGE CLEARANCE = 0.50mm (20thou)                          |
| 02 | COPPER TO EDGE CLEARANCE (ON ALL LAYERS) = 1.00mm (40thou)               |
| 03 | SCORE ANGLE = 30 deg   |
| 04 | REMAINING WEB AFTER SCORING IS AS ONE THIRD OF THE PCB NOMINAL THICKNESS |

**NOTES**

|    |  |                                   |
|----|--|-----------------------------------|
| 01 | BOARD TO BE MANUFACTURED TO IPC-A-600 CLASS 2  |                                   |
| 02 | BOARD IS TO MEET UL94V0 APPROVAL   |                                   |
| 03 | ALL BOARD'S MUST BE 100% TESTED FOR ELECTRICAL CONTINUITY AND ISOLATION  |                                   |
| 04 | NO REPAIRS MAY BE PERFORMED ON ANY IMPEDANCE CRITICAL TRACKS (WHERE APPLICABLE)  |                                   |
| 05 | ALIGNMENT OF ALL LAYERS TO BE SUCH THAT NO BREAKOUT OCCURS   |                                   |
| 06 | SUPPLIER'S UL IDENTIFICATION MARK, FLAMMABILITY RATING AND DATACODE MUST BE APPLIED TO THE BOARD   |                                   |
| 07 | VARIATION IN TRACK WIDTH AND GAP TO MEET IMPEDANCE REQUIREMENTS ARE PERMISSABLE, SO LONG AS THESE ARE MINIMAL, AND THE OVERALL BOARD THICKNESS IS NOT COMPROMISED. |                                   |
| 08 | MATERIAL TO BE RoHS COMPLIANT FR4, SUITABLE FOR LEAD-FREE PROCESSING   |                                   |
| 09 | BOW AND TWIST TO BE NO GREATER THAN 0.75% ACROSS DIAGONALS   |                                   |
| 10 | NON-FUNCTIONAL PADS MAY BE REMOVED FROM INTERNAL LAYERS (WHERE APPLICABLE)   |                                   |
| 11 | ALL STUBS MAY BE REMOVED   |                                   |
| 12 | REMOVE SILKSCREEN FROM EXPOSED COPPER (WHERE APPLICABLE)   |                                   |
| 13 | CHECK BUILD ORDER AGAINST PLOTS  |                                   |
| 14 | ALL DIMENSIONS IN mm (UNLESS STATED)   |                                   |
| 15 | FINISHED BOARD THICKNESS   | 1.60mm +/-10%                     |
| 16 | SURFACE FINISH   | ELECTROLESS NICKEL/IMMERSION GOLD |
| 17 | SOLDER RESIST  | GREEN PHOTO-IMAGABLE              |
| 18 | SILKSCREEN COLOUR  | WHITE                             |
| 19 | MINIMUM TRACK WIDTH  | 0.300mm                           |
| 20 | MINIMUM GAP  | 0.075mm                           |
| 21 | MINIMUM P.T.H. PAD SIZE  | 0.450mm                           |
| 22 | MINIMUM PITCH OF SURFACE MOUNT PADS  | 0.400mm                           |
| 23 | No. TOP SIDE SURFACE MOUNT PADS  | 228                               |
| 24 | No. BOTTOM SIDE SURFACE MOUNT PADS   | 0                                 |

**ADDITIONAL NOTES**

| PCB LAYER | MANUFACTURING DETAIL                            | GERBER FILES    |
|-----------|---|-----------------|
|           | TOP SILKSCREEN                                  | 190-03-B_TS.GER |
|           | TOP RESIST                                      | 190-03-B_TR.GER |
| LAYER 1   | TOP SIDE TRACK                                  | 190-03-B_C1.GER |
| LAYER 2   | INNER LAYER 2                                   | 190-03-B_C2.GER |
| LAYER 3   | INNER LAYER 3                                   | 190-03-B_C3.GER |
| LAYER 4   | BOTTOM SIDE TRACK                               | 190-03-B_C4.GER |
|           | BOTTOM RESIST                                   | 190-03-B_BR.GER |
|           | BOTTOM SILKSCREEN                               | 190-03-B_BS.GER |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           |   |                 |
|           | CNC DRILL FILE (PLATED/NON-PLATED THROUGH HOLE) | 190-03-B.DRT    |
|           | CNC DRILL TOOLING (PLATED/NON-PLATED THRU HOLE) | 190-03-B.TOL    |
|           | MANUFACTURE DETAIL                              | 190-03-B_MC.GER |

| LAYER/<br>LAYER TYPE | BOARD STACK | COPPER WEIGHT |
|----------------------|-------------|---------------|
| 01 MIXED             |             | 305g/m        |
| 02 GROUND            |             | 152g/m        |
| 03 GROUND            |             | 152g/m        |
| 04 MIXED             |             | 305g/m        |



COMPANY CONFIDENTIAL

|  |                |                  |  |                  |
|--|----------------|------------------|--|------------------|
| TOLERANCES UNLESS OTHERWISE STATED<br>0 PLACE DECIMALS +/- 1<br>1 PLACE DECIMALS +/- 0.5<br>2 PLACE DECIMALS +/- 0.1 | DRAWN BY<br>BL | DATE<br>05/12/13 | DIALOG SEMICONDUCTOR UK LTD<br>2 MULTREES WALK<br>EDINBURGH<br>EH1 3DQ | © COPYRIGHT 2013 |
|  | CHK'D BY<br>WF | DATE<br>05/12/13 |  |                  |