

NOTES (UNLESS OTHERWISE SPECIFIED):

- THIS DRAWING SPECIFIES THE REQUIREMENTS FOR A PRINTED WIRING BOARD IN ACCORDANCE WITH SPECIFICATION IPC-A-600 CLASS 2 (LATEST REVISION).
- THE PWB MUST BE LEAD FREE ASSEMBLY PROCESS COMPATIBLE AND MUST BE ABLE TO HANDLE A MINIMUM OF 5 CYCLES AT 260 DEGREES CELSIUS FOR 10 SECONDS.
- BASE MATERIAL - LAMINATE AND PREPREG SHALL MEET IPC-4101B-26, 83 or 98
Tg - MUST BE GREATER THAN OR EQUAL TO 150 DEGREES CELSIUS.
Td - MUST BE GREATER THAN OR EQUAL TO 330 DEGREES CELSIUS.
- COPPER FOIL WEIGHT - SEE STACKUP DETAIL 'A'
- CHARACTERISTIC IMPEDANCE - SEE DETAIL 'B'
- MINIMUM CONDUCTIVE WIDTH/SPACING TO BE .004"/.00375"
- PLATING FINISH - BOTH SIDES ENIG (ELECTROLESS NICKEL IMMERSION GOLD):
.05080-.232 MICRON (2-8 MICROINCH) OF GOLD OVER
2.540-6.350 MICRON (100-250 MICROINCH) OF NICKEL.

b. THE PCI CARD EDGE CONNECTOR GOLD FINGERS, PLATING REQUIREMENTS:
30U OVER HARD GOLD OVER 100x250U NICKEL BOTH SIDES OF THE BOARD.

8. ALL THROUGH HOLE VIAS MAY BE PLATED SHUT.

- SOLDERMASK - RED COLOR (TAIYO OR EQUIVALENT), BOTH SIDES.
COMPONENT U9 REQUIRES LDI SOLDER MASK
MODIFICATION OF SOLDERMASK IS NOT ALLOWED WITHOUT WRITTEN PERMISSION FROM FREESCALE.
- SILKSCREEN - WHITE EPOXY INK, BOTH SIDES. NO SILK ON PADS.

11. ELECTRICAL TEST - 100% IPCD356.

12. PRINTED WIRING BOARD IS TO BE INDIVIDUALLY BAGGED.

13. DRC'S MUST BE RUN ON THE GERBER BEFORE BUILDING BOARDS.
UNLESS PRIOR APPROVAL IS GIVEN IN WRITING BY FREESCALE.

14. TEARDROPS MAYBE ADDED AT THE FAB HOUSE TO ALL SIGNAL LAYERS.

15. TWO SOLDER SAMPLES TO BE PROVIDED.

16. BASIC GRID INCREMENT AT 1:1 IS .0001.

17. SUPPLIER MARKINGS - ON SOLDER SIDE ONLY, WHERE SHOWN.
- MUST BE UL RECOGNIZED AND MUST HAVE AN ID THAT CONFORMS TO UL94V-0

18. THE PWB WILL BE MARKED AS LEAD FREE BY USE OF AN INK STAMP **(Pb)**

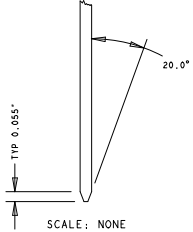
19. THE PWB WILL BE MARKED AS LEAD FREE PROCESS COMPATIBLE BY USE OF AN INK STAMP **(260°C)**

20. ALL PLATED AND NON-PLATED THROUGH HOLES ARE TO BE DRILLED AT PRIMARY DRILL STEP.
ALL HOLE LOCATION TOLERANCES ARE TO BE +/- .002 IN REFERENCE TO THE PRIMARY DATUM.

21. FINISHED PCB MUST BE PANELIZED FOR ASSEMBLY ACCORDING TO CONTRACT MANUFACTURERS REQUIREMENTS.
THE ADDITION OF RAILS AND .125"NON-PLATED TOOLING HOLES ARE AT THE DISCRETION OF
CONTRACT MANUFACTURER.PANELIZATION MUST BE APPROVED BY CONTRACT MANUFACTURER.

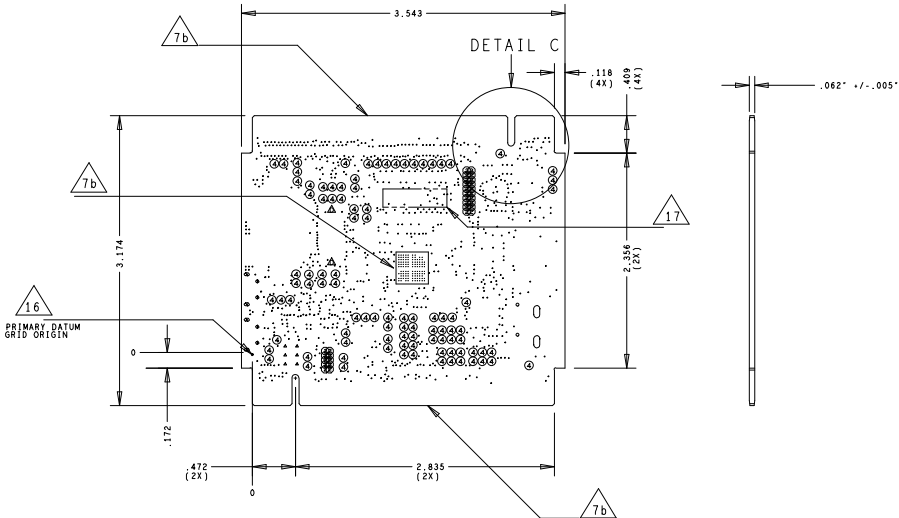
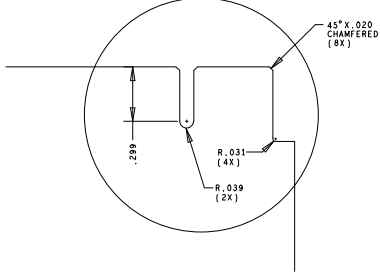
22. INTENTIONAL SHORTS AT:
- SH1 V_TGTMCU & V_BRD
 - SH2 P3V3_ELEV & 3V3_BRD
 - SH3 P3V3_SDA & SDA_VOUT33
 - J27 SDA_RST_TGTMCU_U_B & SDA_RST_TGTMCU_B

PCI Express Card Edge Connector Bevel Information.
EDGE CONNECTOR TO BE GOLD PLATED



DETAIL C

SCALE: NONE



VIEW FROM PRIMARY SIDE

DRILL CHART: TOP to BOTTOM

ALL UNITS ARE IN MILS

| FIGURE | SIZE | TOLERANCE | PLATED | QTY |
|--------|------------|------------|------------|-----|
| 8 | 6.0 | +0.0/-6.0 | PLATED | 110 |
| 8 | 8.0 | +0.0/-8.0 | PLATED | 24 |
| 8 | 10.0 | +0.0/-10.0 | PLATED | 898 |
| * | 12.0 | +0.0/-12.0 | PLATED | 2 |
| ⊙ | 28.0 | +2.0/-2.0 | PLATED | 30 |
| * | 35.0 | +2.0/-2.0 | PLATED | 6 |
| ⊙ | 40.0 | +3.0/-3.0 | PLATED | 96 |
| * | 25.0 | +2.0/-2.0 | NON-PLATED | 1 |
| Δ | 53.0 | +3.0/-0.0 | NON-PLATED | 2 |
| * | 34.0x30.0 | +2.0/-2.0 | PLATED | 4 |
| * | 59.0x33.0 | +2.0/-2.0 | PLATED | 4 |
| 0 | 140.0x70.0 | +2.0/-2.0 | NON-PLATED | 2 |

FINISHED Cu WEIGHT

| | | |
|----------|----------|--------------|
| LAYER 1 | L1_PS | 1/2 to 1 oz. |
| LAYER 2 | L2_GND_1 | 1 oz. |
| LAYER 3 | L3_INT_1 | 1/2 oz. |
| LAYER 4 | L4_PWR_1 | 1 oz. |
| LAYER 5 | L5_INT_2 | 1/2 oz. |
| LAYER 6 | L6_INT_3 | 1/2 oz. |
| LAYER 7 | L7_GND_2 | 1 oz. |
| LAYER 8 | L8_INT_4 | 1/2 oz. |
| LAYER 9 | L9_PWR_2 | 1 oz. |
| LAYER 10 | L10_SS | 1/2 to 1 oz. |

DETAIL A
LAYER STACKUP

SCALE: NONE

DETAIL B
IMPEDANCE REQUIREMENTS
IMPEDANCE TOLERANCE IS 10%

| Layers | Single Ended | | Differential | | |
|----------|--------------------|------------------|--------------------|-------------------------------|------------------|
| | Trace Width (Mils) | Impedance (Ohms) | Trace Width (Mils) | Trace Spacing "Airgap" (Mils) | Impedance (Ohms) |
| L1_PS | 7.00 | 50 | 5.00 | 5.00 | 90 |
| L3_INT_1 | 5.00 | 50 | X.XX | X.XX | 90 |
| L5_INT_2 | 5.00 | 50 | X.XX | X.XX | 90 |
| L6_INT_3 | 5.00 | 50 | 6.00 | 5.00 | 90 |
| L8_INT_4 | 5.00 | 50 | X.XX | X.XX | 90 |
| L10_SS | 7.00 | 50 | 5.00 | 5.00 | 90 |

| | | | |
|---|--|--|--|
| PART NO. 170-28608 | | FREESCALE | |
| THIS DOCUMENT CONTAINS INFORMATION PROPRIETARY TO FREESCALE AND SHALL NOT BE USED FOR ENGINEERING DESIGN PROCEDURE OR MANUFACTURE IN WHOLE OR IN PART WITHOUT THE CONSENT OF FREESCALE. | | 6501 WILLIAM CANNON DRIVE WEST AUSTIN, TEXAS 78735 USA | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES (MM) TOLERANCES ARE: DECIMALS ANGLES .XX .01 .0-30° .XXX .005 ✓ RMS ALL MACHINED SURFACES BREAK ALL SHARP EDGES AND CORNERS. REMOVE BURRS. UNDERLINED DIM. NOT TO SCALE. THIRD ANGLE ORTHOGRAPHIC PROJECTION IS USED. | | TITLE: PRINTED WIRING BOARD X-TWR-K80F150M | |
| APPROVALS DRAWN: ionDesign CHECKED: DAVID C DESIGN ENGINEER: BALA [LnT] | | DATE 06-15-15 11-20-14 11-20-14 | |
| SCALE | | DO NOT SCALE DRAWING | |
| SHEET 1 OF 1 | | REV B | |