

87654321

UNLESS OTHERWISE SPECIFIED. ALL NOTES ARE APPLICABLE.

1. APPLICATION DESIGN, MANUFACTURING AND INSPECTION DOCUMENTS.  
IPC-2221A & IPC-2222 / DESIGN STANDARD FOR RIGID PRINTED CIRCUIT BOARDS AND RIGID PRINTED BOARD ASSEMBLIES.  
IPC-6012 / QUALIFICATION AND PERFORMANCE SPECIFICATION FOR RIGID PRINTED BOARD, CLASS 2, CURRENT REVISION.  
IPC-A-600 / ACCEPTABILITY OF PRINTED BOARDS, CLASS 2, CURRENT REVISION.

2. VIA SIZE APPLY AFTER PLATING. TOLERANCE TO BE +.003/- .010.  
HOLE SIZE APPLY AFTER PLATING. TOLERANCE TO BE +/- .003.

3. REGISTRATION TOLERANCE: ARTWORK +/- .002.  
ALL HOLE CENTERS +/- .005 FROM DIMENSION DATUM.

4. MINIMUM COPPER WALL THICKNESS SHALL BE .001 INCH.  
FOR ALL PLATED THROUGH HOLES. BREAKOUT NOT ALLOWED.

5. PROCESS AND MATERIAL MUST CONFORM TO UL 796. MATERIAL MUST MEET OR EXCEED UL FLAMMABILITY RATING 94V-0.  
MATERIAL: MULTI-LAYER MEGTRON 6 & FR4  
SEE LAYER STACKUP FOR ALL PRE-PREG & CORE THICKNESSES, COPPER OZ AND MATERIAL. FINISHED BOARD THICKNESS: .121 +/- 10%

6. MANUFACTURE'S UL MARKING, FLAMMABILITY RATING, LOGO AND DATE CODE TO BE PLACED IN SILKSCREEN ON BOTTOM SIDE OF THE BOARD.

7. SMOBC/IMMERSION GOLD: 2 - 5 uIN OVER 118-236 uIN NICKEL PLATING.

8. SOLDERMASK BOTH SIDES USING TAIYO (OR EQUIVALENT) COLOR = RED.

9. SILKSCREEN BOTH SIDES USING WHITE NPI LEADFREE.  
REGISTRATION TOLERANCE TO BE +/- .005.  
INK IS NOT ALLOWED ON EXPOSED PLATED AREA.

10. P.C. BOARD TO BE FREE OF DIRT, OIL, FINGER PRINTS, ETC.

11. BOARD WARPAGE: WARP AND TWIST SHALL NOT EXCEED .007 INCH PER INCH MEASURED AT ANY LOCATION OR DIRECTION ON THE BOARD.

12. BOARD MUST BE 100% ELECTRICALLY TESTED TO ENSURE NO SHORTS OR OPEN CIRCUITS AT 20V.

13. ALL OUTER LAYERS USING A 6.2MIL TRACE WIDTH SHALL BE 50 OHMS SINGLE ENDED +/- 10%.

14. ALL OUTER LAYERS USING A 4MIL TRACE WIDTH AND 6MIL SPACING SHALL BE 100 OHMS DIFFERENTIAL +/- 10%.

15. ALL INNER LAYERS USING A 4MIL TRACE WIDTH AND 5.8MIL SPACING SHALL BE 100 OHMS DIFFERENTIAL +/- 10%.

16. MINIMUM COPPER CONDUCTOR WIDTH IS: 4MIL.  
MINIMUM COPPER CONDUCTOR SPACING IS: 4MIL.

17. ALL INNER LAYER UNCONNECTED PADS SHALL BE REMOVED.

18. PWB MUST BE ROHS COMPLIANT AND SURVIVE LEAD FREE ASSEMBLY,  
MAX REFLOW OF 260 DEGREES C (6 PASSES).

19. ALL THROUGH VIAS TO BE PLUGGED WITH NON-CONDUCTIVE EPOXY MATERIAL.  
PLUGGED VIAS TO BE PLATED AFTER PLUGGING TO PRESENT FLAT SURFACE TO DEVICE.  
NO POTHOLE.

20. THERE IS ONE NET (GND SIGNAL) THAT WILL SHOW NO CONNECTION. 5 PLACES..  
THIS IS INTENTIONAL.

10.000

9.000

1.000

1.075

5.000

1.050

DRILL CHART: TOP to BOTTOM  
ALL UNITS ARE IN MILS

FIGURE	SIZE	PLATED	QTY
.	6.0	PLATED	144
.	8.0	PLATED	1262
.	10.0	PLATED	1974
*	12.0	PLATED	70
*	32.0	PLATED	12
o	38.0	PLATED	80
e	40.0	PLATED	61
j	50.0	PLATED	2
o	55.0	PLATED	6
g	62.0	PLATED	17
g	67.0	PLATED	20
⊕	106.0	PLATED	4
⊗	120.0	PLATED	2
Ⓢ	140.0	PLATED	1
y	39.37	NON-PLATED	2
v	50.0	NON-PLATED	4
Y	125.0	NON-PLATED	7
o	60.0x34.0	PLATED	2

15

SECTION DRILL SECTION COUNT  
TOTAL THICKNESS 121.38 MIL

• SURFACE - AIR 0 MIL

• DIELECTRIC - PREPREG-0.060 0.0 MIL

1.17. TOP LAYER - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.9 MIL

1.2. 12-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - CORE-0.100 0.94 MIL

1.3. 13-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - CORE-0.100 0.94 MIL

1.4. 14-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - CORE-0.100 0.94 MIL

1.5. 15-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - CORE-0.100 0.94 MIL

1.6. 16-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - CORE-0.100 0.94 MIL

1.7. 17-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.8. 18-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.9. 19-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.10. 110-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.11. 111-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.12. 112-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.13. 113-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.14. 114-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.15. 115-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.16. 116-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.17. 117-ON PLANE - COPPER 1.000 0.7 MIL

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1.18. 118-ON PLANE - COPPER 1.000 0.7 MIL

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1.19. 119-ON PLANE - COPPER 1.000 0.7 MIL

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1.20. 120-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

1.21. 121-ON PLANE - COPPER 1.000 0.7 MIL

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1.22. 122-ON PLANE - COPPER 1.000 0.7 MIL

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1.23. 123-ON PLANE - COPPER 1.000 0.7 MIL

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1.24. 124-ON PLANE - COPPER 1.000 0.7 MIL

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1.98. 198-ON PLANE - COPPER 1.000 0.7 MIL

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1.99. 199-ON PLANE - COPPER 1.000 0.7 MIL

• DIELECTRIC - FULL\_WESTRON\_4.7 0.94 MIL

2. SURFACE - AIR 0 MIL

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
FRACTIONS DECIMALS ANGLES  
+/- .XX +/- .01 +/-  
.XXX +/- .005 +/-

MATERIAL  
SEE NOTE 5

FINISH  
SEE NOTE 7, 8, 9

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS  
DRAWN KRYPTON  
ENG J SETON

DATE  
11-11-17  
11-11-17

TEXAS INSTRUMENTS INC.

FABRICATION DRAWING  
TSW14DL3200

SIZE D CODE IDENT NO. DRAWING NO. REV. A  
DC036

SCALE NONE SHEET 1 OF 1