

TEXAS INSTRUMENTS  
DAC31X1 EVM REV A  
LAYER 8 (BOTTOM SIDE)  
SILKSCREEN BOTTOM

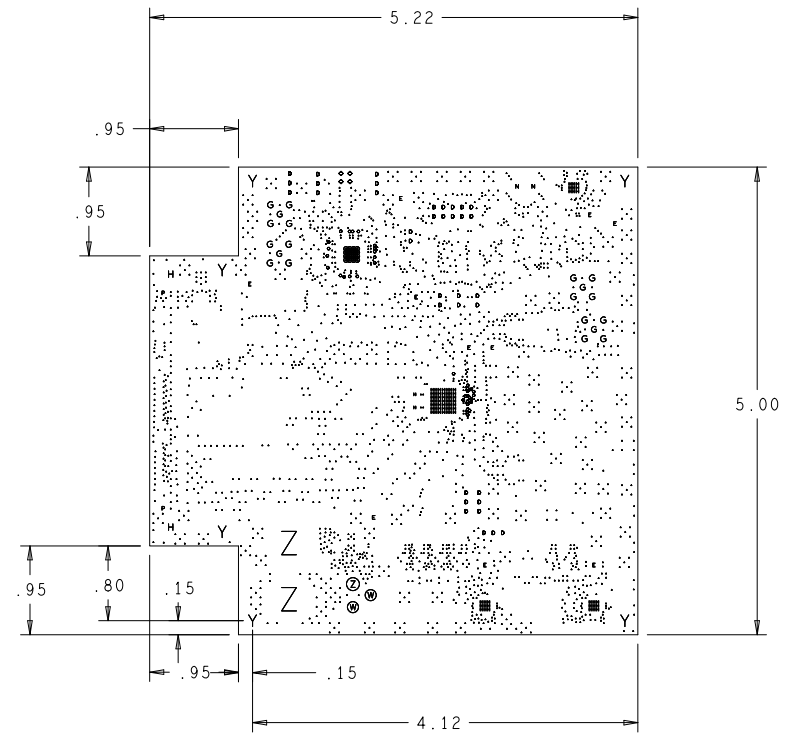


REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

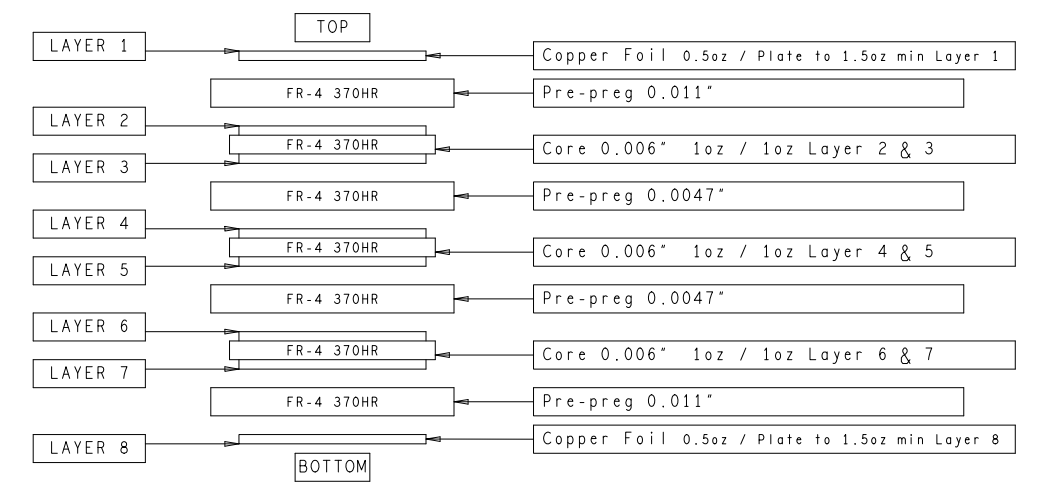
UNLESS OTHERWISE SPECIFIED, ALL NOTES ARE APPLICABLE.

- APPLICATION DESIGN, MANUFACTURING AND INSPECTION DOCUMENTS.  
IPC-2221A & IPC-2222 / DESIGN STANDARD FOR RIGID PRINTED CIRCUIT BOARDS AND RIGID PRINTED BOARD ASSEMBLIES.  
IPC-6012B / QUALIFICATION AND PERFORMANCE SPECIFICATION FOR RIGID PRINTED BOARD.  
IPC-A-600G / ACCEPTABILITY OF PRINTED BOARDS.
- HOLE SIZE APPLY AFTER PLATING. TOLERANCE TO BE  $\pm .003/- .010$ .
- REGISTRATION TOLERANCE: ARTWORK  $\pm .005$ .  
ALL HOLE CENTERS  $\pm .005$  FROM DIMENSION DATUM.
- MINIMUM COPPER WALL THICKNESS SHALL BE  $.001$  INCH.  
FOR ALL PLATED THROUGH HOLES. BREAKOUT NOT ALLOWED.
- PROCESS AND MATERIAL MUST CONFORM TO UL 796. MATERIAL MUST MEET OR EXCEED UL FLAMMABILITY RATING 94V-0.  
MATERIAL: MULTI-LAYER (SEE DETAIL 'A')  
FINISHED BOARD THICKNESS:  $.062 \pm 10\%$
- MANUFACTURE'S UL MARKING, FLAMMABILITY RATING, LOGO AND DATE CODE TO BE PLACED IN SILKSCREEN ON BOTTOM SIDE OF THE BOARD.
- SMOBC/IMMERSION GOLD:  $3 - 8 \mu\text{IN}$  OVER  $100-200 \mu\text{IN}$  NICKEL PLATING.
- SOLDERMASK BOTH SIDES USING TAIYO (OR EQUIVALENT)  
COLOR = RED ( $0.001$  TO  $002$ " THICK OVER METAL).
- SILKSCREEN BOTH SIDES USING WHITE NPI LEADFREE.  
REGISTRATION TOLERANCE TO BE  $\pm .005$ .  
INK IS NOT ALLOWED ON EXPOSED PLATED AREA.
- P.C. BOARD TO BE FREE OF DIRT, OIL, FINGER PRINTS, ETC.
- BOARD WARPAGE: WARP AND TWIST SHALL NOT EXCEED  $.007$  INCH PER INCH MEASURED AT ANY LOCATION OR DIRECTION ON THE BOARD.
- BOARD MUST BE 100% ELECTRICALLY TESTED TO ENSURE NO SHORTS OR OPEN CIRCUITS AT 20V.

- TOP LAYER USING A 19MIL TRACE WIDTH SHALL BE 50 OHMS SINGLE ENDED  $\pm 10\%$ .
- ALL OUTER LAYERS USING A 7.5MIL TRACE WIDTH AND 6MIL SPACING SHALL BE 100 OHMS DIFFERENTIAL  $\pm 10\%$ .
- MINIMUM COPPER CONDUCTOR WIDTH IS: 5MIL.  
MINIMUM COPPER CONDUCTOR SPACING IS: 5MIL.
- ALL INNER LAYER UNCONNECTED PADS SHALL BE REMOVED.
- PWB MUST BE ROHS COMPLIANT AND SURVIVE LEAD FREE ASSEMBLY.  
MAX REFLOW OF 260 DEGREES C (6 PASSES).
- ALL 6MIL, 10MIL AND 12MIL THROUGH VIAS TO BE PLUGGED WITH NON-CONDUCTIVE EPOXY MATERIAL.  
PLUGGED VIAS TO BE PLATED AFTER PLUGGING TO PRESENT FLAT SURFACE TO DEVICE.  
NO POTHOLES.



DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
•	6.0	PLATED	36
•	10.0	PLATED	2279
•	12.0	PLATED	78
•	12.0	PLATED	16
•	38.0	PLATED	36
•	40.0	PLATED	10
•	45.0	PLATED	4
•	62.0	PLATED	4
•	67.0	PLATED	16
H	68.0	PLATED	2
⊙	120.0	PLATED	2
⊙	140.0	PLATED	1
Z	250.0	PLATED	2
•	39.0	NON-PLATED	2
•	40.0	NON-PLATED	2
Y	125.0	NON-PLATED	6



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES +/- .XX +/- .01 +/- +/- .XXX +/- .005 +/-	CONTRACT NO.		TEXAS INSTRUMENTS INC.	
	APPROVALS	DATE		
MATERIAL SEE NOTE 5	DRAWN	JV SMITH	04-18-12	FABRICATION DRAWING DAC31X1
	ENG	KW NAM	04-18-12	
FINISH SEE NOTE 7, 8, 9	SCALE	NONE	REV. A	DO NOT SCALE DRAWING
DO NOT SCALE DRAWING			SIZE B	SHEET 1 OF 1