

8

7

6

5

4

3

2

1

REVISIONS		
REV #	DESCRIPTION	DATE
REV #	CCN #	DDMMYY

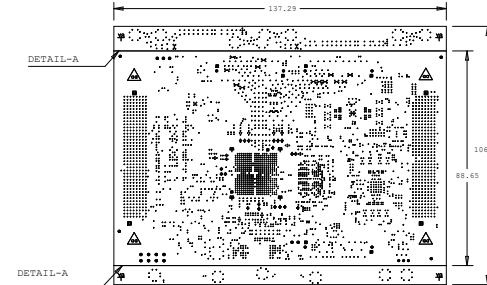
FABRICATION NOTES:

- FABRICATE PCB IN ACCORDANCE WITH IPC-6012C, CLASS 2; PER IPC-6011.
PCB SHALL BE MANUFACTURED USING 1-SPEED OR EQUIVALENT.
 - MATERIALS:
 - LAMINATE AND PREPREG (B-STAGE) TO BE IN ACCORDANCE WITH IPC-4101/126. (MIN.TG 180)
 - COPPER FOIL TO BE IN ACCORDANCE WITH IPC-MP-150, UNLESS OTHERWISE SPECIFIED, ALL COPPER WEIGHT FOR INNER SIGNAL LAYERS TO BE 1.5oz (0.5 OZ.) AND INNER PLANE LAYERS TO BE 35um (1 OZ.). FOR OUTER LAYERS 1.53 OZ. COPPER WEIGHT IS TO BE CONSIDERED "FINISHED".
THE COPPER FOIL THICKNESS TOLERANCES SHALL BE AS PER IPC 6012C TABLE NO.1-7 AND 3-8.
 - ALL HOLES SHALL BE LOCATED WITHIN 0.15MM DIAMETER OF TRUE POSITION.
LAYER TO LAYER REGISTRATION SHALL BE WITHIN 0.125MM.
 - BOW AND TWIST SHALL NOT EXCEED MORE THAN 0.75% OF THE DESIGN LENGTH.
 - CONDUCTOR WIDTH SHALL NOT BE LESS THAN 20% FROM ITS ORIGINAL DATA. INCREASE FOR MATCHING IMPEDANCE MISTRAL SHALL APPROVE THE MODIFIED WIDTHS AND SPACING.
TRACE WIDTH SHALL BE MEASURED ON THE SURFACE IN CONTACT WITH THE LAMINATE.
 - AUTOMATED OPTICAL INSPECTION OF ALL THE LAYERS IS REQUIRED.
 - FINISH:
 - ALL EXPOSED CONDUCTIVE PATTERN AREAS NOT COVERED WITH SOLDER MASK OR OTHER PLATING SHALL BE ENIG, ELECTROLESS NICKEL/IMMERSION GOLD, ELECTROLESS NICKEL SHALL BE 3-4 MICRONS, TYPICAL IMMERSION GOLD THICKNESS SHALL BE 0.04-0.06 MICRONS OF SOLDERABLE IMMERSION GOLD SURFACE.
 - APPLY LIQUID PHOTO IMAGEABLE SOLDER MASK PER IPC-BM-840, CLASS H, TO BOTH SIDES OF THE BOARD OVER BARE COPPER. VIA HOLES THAT HAVE MASK OPEN SHALL BE FILLED WITH NON CONDUCTIVE INK AND CAP PLATED, ALL OTHER VIA HOLES SHALL BE FILLED WITH NON CONDUCTIVE INK AND COVERED WITH SOLDER MASK, ONLY SOLDERMASK IMAGES THAT ARE 0.08(0.003") PER SIDE SHALL BE REDUCED IF REQUIRED.
ALL OTHER SOLDER MASK IMAGES SHALL NOT BE ENLARGED. DEFAULT COLOR OF SOLDER MASK SHALL BE GREEN.
 - SILKSCREEN SHALL BE WHITE, PERMANENT, ORGANIC, NON-CONDUCTIVE INK. THERE SHALL BE NO SILKSCREEN ON ANY SOLDERABLE COMPONENT PAD. CLIPPING OF SILK SCREEN SHALL BE ALLOWED IF THE SILK SCREEN FALLS ON SOLDERABLE AREAS.
 - SURFACE AND VIA HOLES FINISH SHALL NOT BE LESS THAN 20UM (0.00079"), INCREASE OF LASER VIA'S, BLIND VIA'S SHALL NOT BE LESS THAN 12UM (0.00047") AND BURIED VIA'S SHALL NOT BE LESS THAN 15UM (0.0006").
 - ALL HOLES SURROUNDED BY LAND <=0.010" SHALL BE COMPLAINT TO IPC6012, CLASS 2.
 - MARKING:
 - BOARD SHALL MEET THE REQUIREMENTS OF UL-796E WITH FLAMMABILITY RATING OF MINIMUM 94V-0. UL LOGO,UL FILE NUMBER, MANUFACTURER'S IDENTIFICATION AND DATE CODE LETTER SHALL BE RENDERED IN SILKSCREEN.
 - TEST REQUIREMENTS:
 - 100% NET LIST ELECTRICAL VERIFICATION USING MISTRAL SUPPLIED IPC-D-356 NET LIST FOR OPENS AND SHORTS.
 - THIEVING IS ALLOWED ONLY IN THE PANEL FRAME, NOT IN THE CIRCUIT AREA.
 - TEAR DROPS SHALL BE ADDED ON INTERNAL AND EXTERNAL LAYER FOR ALL THE VIA'S AND THROUGH HOLE PADS.
 - FINISHED PCB THICKNESS SHALL BE 0.064" +/-10%.
 - MIN TRACE WIDTH/SPACING ON BOARD IS 0.003"/0.0032".
 - ALL THE IMPEDANCE SHALL BE MATCHED AS PER IMPEDANCE TABLE WITH +/-10% TOLERANCE.
 - ALL UNCONNECTED VIA'S SHALL BE SUPPRESSED IN INTERNAL LAYERS.
- [16] BACKDRILLING TO BE DONE FROM L01 TO L06.
- ENSURE THAT UL REGISTERED E-FILE NUMBER SHALL BE PRINTED ON PCB SILKSCREEN.
 - FOR DETAILED STACKUP, PROC109_1-SPEED_STACKUP_UP.PDF SHALL BE REFERRED.

		STUB LENGTH	MUST NOT CUT		
		2-10 MILS	L6		
16	BACKDRILL: TOP TO L7-PWR/GND				
ALL UNITS ARE IN MILS					
FIGURE	SIZE	TOLERANCE	PLATED	QTY	
•	7.96	+3.0/-3.0	PLATED	24	

NOTES:
- DRILL SIZES LISTED IN LEGEND ARE CONSIDERED FINISHED.
- VENDOR IS REQUIRED TO SELECT TOOLING FOR OVERDRILLING.
- LEGEND DOES NOT SPECIFY DEPTH INTO ADJACENT DIELECTRIC LAYER.

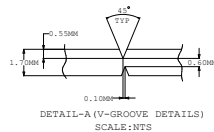
DRILL CHART: TOP TO BOTTOM					
ALL UNITS ARE IN MILS					
FIGURE	SIZE	TOLERANCE	PLATED	QTY	
1	7.96	+3.0/-3.0	PLATED	24	
2	7.96	+3.0/-3.0	PLATED	140	
3	8.0	+3.0/-3.0	PLATED	2720	
4	10.0	+3.0/-3.0	PLATED	430	
5	12.0	+3.0/-3.0	PLATED	67	
6	36.0	+3.0/-3.0	PLATED	3	
7	40.0	+2.0/-2.0	PLATED	6	
8	40.0	+3.0/-3.0	PLATED	2	
9	40.0	+3.0/-3.0	PLATED	12	
10	44.0	+2.0/-2.0	PLATED	3	
11	34.0	+1.0/-1.0	NON-PLATED	2	
12	42.0	+2.0/-2.0	NON-PLATED	6	
13	58.0	+3.0/-3.0	NON-PLATED	4	
14	66.0	+3.0/-3.0	NON-PLATED	4	
15	108.0	+3.0/-3.0	NON-PLATED	4	
16	250.0	+3.0/-3.0	NON-PLATED	4	


**IMPEDANCE SPECIFICATIONS**

SL#	TYPE	LAYER	TRACEWIDTH(Mils)	SPACING(Mils)	IMPEDANCE(Ohms)	REF LAYER
01	EDGE COUPLED MICROSTRIP	L1/L12	4.18	6.32	100	L2/L11
02	EDGE COUPLED MICROSTRIP	L1/L12	5.1	5.4	90	L2/L11
03	EDGE COUPLED MICROSTRIP	L1/L12	6	5.5	85	L2/L11
04	MICROSTRIP	L1/L12	6.5	-	50	L2/L11
05	MICROSTRIP	L1	10.4	-	40	L2
06	MICROSTRIP	L1	9.9	-	38	L2
07	EDGE COUPLED STRIPLINE	L8, L10	4.07	7.93	100	L7/L9
08	EDGE COUPLED STRIPLINE	L8, L10	4.82	6.18	90	L7/L9
09	EDGE COUPLED STRIPLINE	L8, L10	5.35	6.15	85	L7/L9
10	EDGE COUPLED STRIPLINE	L9, L5	5.93	6.07	80	L2/L4
11	EDGE COUPLED STRIPLINE	L10	6.4	5.6	76	L9/L11
12	EDGE COUPLED MICROSTRIP	L1	7.2	8.3	120	L4
13	STRIPLINE	L3, L5, L8, L10	4	-	50	L2/L4, L4/L6
14	STRIPLINE	L3, L5, L8	6.25	-	40	L2/L4, L4/L6, L7/L9
15	STRIPLINE	L10	6.8	-	38	L9/L11

LAYER STACKUP

LAYER NAME	FINISHED Cu	X-SECTION	DIELECTRIC THICKNESS [INCHES]
PRIMARY SIDE SILKSCREEN			
PRIMARY SIDE SOLDERMASK			
L01 PRIMARY SIDE	1.53oz		0.0037
L02 GROUND-PLANE-1	1oz		0.0035
L03 INNER-SIGNAL-1	0.5oz		0.0043
L04 GROUND-PLANE-2	1oz		0.0035
L05 INNER-SIGNAL-2	0.5oz		0.0042
L06 POWER-PLANE-1	1oz		0.0100
L07 POWER-PLANE-2	1oz		0.0043
L08 INNER-SIGNAL-3	0.5oz		0.0035
L09 GROUND-PLANE-3	1oz		0.0043
L10 INNER-SIGNAL-4	0.5oz		0.0035
L11 GROUND-PLANE-4	1oz		0.0035
L12 SECONDARY SIDE	1.53oz		0.0037
SECONDARY SIDE SOLDERMASK			
SECONDARY SIDE SILKSCREEN			



SIGNATURES		DATE		TEXAS INSTRUMENTS	PROC105E7
LAYOUT BY	UD	070521			
REVIEWED BY	ZA	070521			
APPROVED BY	AMB	070521			
			J7200X SOM 941x+8764x BRD		
			SIZE D	Rev E7	
			SCALE: NONE		SHEET 1 OF 19

8

7

6

5

4

3

2

1