

FABRICATE PCB IN ACCORDANCE WITH IPC-6012C, CLASS 2; PER IPC-6011.
PCB SHALL BE MANUFACTURED USING 1-SPEED OR EQUIVALENT.

2. MATERIALS:

1. LAMINATE AND PREPREG (B-STAGE) TO BE IN ACCORDANCE WITH IPC-4101/126.
(MIN. TO 150)
2. COPPER FOIL TO BE IN ACCORDANCE WITH IPC-MP-150, UNLESS OTHERWISE SPECIFIED,
FOR OUTER LAYERS 1.45 OZ. COPPER WEIGHT IS TO BE CONSIDERED "THINNEST".
3. THE COPPER FOIL THICKNESS TOLERANCE SHALL BE AS PER IPC 6012B TABLE NO.3-7 AND 3-8.

3. ALL HOLES SHALL BE LOCATED WITHIN 0.15MM DIAMETER OF TRUE POSITION.
LAYER TO LAYER REGISTRATION SHALL BE WITHIN 0.125MM.

4. BOW AND TWIST SHALL NOT EXCEED MORE THAN 0.75% OF THE DESIGN LENGTH.

5. CONDUCTOR WIDTH SHALL NOT BE LESS THAN 20% FROM ITS ORIGINAL DATA. INCASE FOR MATCHING
IMPERFECT MISTRAL SHALL APPROVE THE MODIFIED WIDTHS AND SPACING.
TRACE WIDTH SHALL BE MEASURED ON THE SURFACE IN CONTACT WITH THE LAMINATE.

6. AUTOMATED OPTICAL INSPECTION OF ALL THE LAYERS IS REQUIRED.

7. FINISH:

1. ALL EXPOSED CONDUCTIVE PATTERN AREAS NOT COVERED WITH SOLDER MASK OR OTHER PLATING SHALL BE ENIG,
ELECTROLESS NICKEL/IMMERGION GOLD, ELECTROLESS NICKEL SHALL BE 3-6 MICRONS, TYPICAL IMMERSION GOLD
THICKNESS SHALL BE 0.040-0.06 MICRONS OF SOLDERABLE IMMERSION GOLD SURFACE.
2. APPLY LIQUID HOT IMAGABLE SOLDER MASK PER IPC-M-840, CLASS B, TO BOTH SIDES OF THE BOARD OVER BARE COPPER.
VIA HOLES THAT HAVE MASK OPEN SHALL BE FILLED WITH NON CONDUCTIVE INK AND CAP FLATTED,
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 COLOUR OF SOLDER MASK SHALL BE GREEN.

8. 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.

9. SURFACE AND VIA HOLES FINISH SHALL NOT BE LESS THAN 20UM (0.0007"). INCASE OF LASER
VIA, BLIND VIAS SHALL NOT BE LESS THAN 12UM (0.00047") AND SURFID VIAS SHALL NOT BE LESS THAN 15UM (0.0006").
ALL HOLES SURROUNDED BY LAND <0.10" SHALL BE COMPLAINT TO IPC612, CLASS 2.

8. MARKING:

1. BOARD SHALL MEET THE REQUIREMENTS OF UL-796E WITH FLAMMABILITY RATING OF MINIMUM 94V-0. UL LOGOO,UL FILE NUMBER,
MANUFACTURER'S IDENTIFICATION AND DATE CODE LETTER SHALL BE RENDERED IN SILKSCREEN.

9. TEST REQUIREMENTS:

1. 100% NET LIST ELECTRICAL VERIFICATION USING MISTRAL SUPPLIED IPC-D-356 NET LIST FOR OPENS AND SHORTS.

10. TIEVING IS ALLOWED ONLY IN THE PANEL FRAME, NOT IN THE CIRCUIT AREA.

11. TEAR DROPS SHALL BE ADDED ON INTERNAL AND EXTERNAL LAYER FOR ALL THE VIAS* AND THROUGH HOLE PADS.

12. FINISHED PCB THICKNESS SHALL BE 0.0850" +/-10%.

13. MIN TRACE/SPACING ON BOARD IS 0.0031"(0.0003").

14. ALL THE IMPEDANCE SHALL BE MATCHED AS PER IMPEDANCE TABLE WITH +/-10% TOLERANCE.

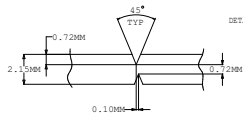
15. ALL UNCONNECTED VIA'S SHALL BE SUPPRESSED IN INTERNAL LAYERS.

16. V-SCORE TO BE DONE AS PER DETAIL'A'.

17. FOR STAPUP DETAILS "PROC411 STAPUP.PDF" SHALL BE REFERRED.

0.7266


45°
278



LAYER NAME	FINISHED Cu	X-SECTION	DIELECTRIC THICKNESS
			[INCHES]
PRIMARY SIDE SILKSREEN			
PRIMARY SIDE SOLDERMASK			
L01 PRIMARY SIDE	1.67oz		0.0034
L02 GROUND-PLANE-1	0.5oz		0.0038
L03 INNER-SIGNAL-1	0.5oz		0.0038
L04 GROUND-PLANE-2	0.5oz		0.0038
L05 INNER-SIGNAL-2	0.5oz		0.0038
L06 GROUND-PLANE-3	1oz		0.0046
L07 INNER-SIGNAL-3	1oz		0.005
L08 POWER-PLANE-1	1oz		0.005
L09 POWER-PLANE-2	1oz		0.0052
L10 INNER-SIGNAL-4	1oz		0.005
L11 GROUND-PLANE-4	1oz		0.0046
L12 INNER-SIGNAL-5	0.5oz		0.005
L13 GROUND-PLANE-5	0.5oz		0.0038
L14 INNER-SIGNAL-6	0.5oz		0.0038
L15 GROUND-PLANE-6	0.5oz		0.0038
L16 SECONDARY SIDE	1.67oz		0.0034
SECONDARY SIDE SOLDERMASK			
SECONDARY SIDE SILKSREEN			

IMPEDANCE SPECIFICATIONS						
SL#	TYPE	LAYER	TRACEWIDTH (Mils)	SPACING (Mils)	IMPEDANCE (Ohms)	REF LAYER
01	EDGE COUPLED MICROSTRIP	11/116	3.7	7.3	100	12/115
02	EDGE COUPLED MICROSTRIP	11/116	4.7	9.4	120	12/115
03	EDGE COUPLED MICROSTRIP	11/116	4.5	6	90	12/115
04	EDGE COUPLED MICROSTRIP	11/116	5.2	5.8	85	12/115
05	STRIPLINE	11/116	5	-	107/116	12/115
06	EDGE COUPLED STRIPLINE	13/114	3.3	6.5	100	12/14, 13/115
07	EDGE COUPLED STRIPLINE	15/112	3.5	5	100	14/16, 11/113
08	EDGE COUPLED STRIPLINE	11/10	1.0	1.5	90	12/115
09	EDGE COUPLED STRIPLINE	15/114	3.6	5	90	12/14, 13/115
10	EDGE COUPLED STRIPLINE	15/112	4.6	5	90	14/16, 11/113
11	EDGE COUPLED STRIPLINE	11/10	7	7	14/16	12/115
12	EDGE COUPLED STRIPLINE	13/114	4.1	5	85	12/14, 13/115
13	EDGE COUPLED STRIPLINE	13/114	4.3	5.3	87/86	12/14, 13/115
14	EDGE COUPLED STRIPLINE	13	5.3	6.9	80	16/14
15	EDGE COUPLED STRIPLINE	15	5.5	5.5	80	14/16
16	EDGE COUPLED STRIPLINE	11/4	1.4	-	60	11/16
17	STRIPLINE	15/114	3.5	-	90	12/14, 13/115
18	STRIPLINE	15/112	4	-	90	14/16, 11/113
19	STRIPLINE	11/4	4.1	-	60/68	11/16
20	STRIPLINE	13	5.5	-	40	16/14
21	STRIPLINE	11/4	4.1	-	60	11/16
22	STRIPLINE	13	7.5	-	33	16/14
23	EDGE COUPLED MICROSTRIP	11/116	-	15.3	100	12/115
24	EDGE COUPLED MICROSTRIP	11/116	3.3	5.7	100/88	12/14, 13/115
25	EDGE COUPLED MICROSTRIP	15/112	4	10	100/88	14/16, 11/113
26	EDGE COUPLED STRIPLINE	13/114	3	8	132	16/14
27	STRIPLINE	11/4	1.4	-	60	11/16

SIGNATURES	
LAYOUT BY	C

SIGNATURES		DATE		 TEXAS INSTRUMENTS		PROC184E1	
LAYOUT BY GR		020224					
REVIEWED BY ZA		020224		J742S2 EVALUATION MODULE			
APPROVED BY AMB		020224					
		SIZE D					Rev E1
		SCALE: NONE			SHEET 1 OF 23		