

1. FABRICATE PCB IN ACCORDANCE WITH IPC-6012C, CLASS 2; PER IPC-6011.
PCB SHALL BE MANUFACTURED USING IT180A Er 4.

2. MATERIALS:

1. LAMINATE AND PREPREG (B-STAGE) TO BE IN ACCORDANCE WITH IPC-4101/126 (MIN.TG 170)
2. COPPER FOIL TO BE IN ACCORDANCE WITH IPC-MF-150. UNLESS OTHERWISE SPECIFIED, ALL COPPER WEIGHT FOR INNER SIGNAL LAYERS AND INNER PLANE LAYERS TO BE 35UM (1 OZ.). FOR OUTER LAYERS 35UM (1.0 OZ). COPPER WEIGHT IS TO BE CONSIDERED "FINISHED".
THE COPPER FOIL THICKNESS TOLERANCES 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 IMPEDANCE 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/IMMERSION GOLD, ELECTROLESS NICKEL SHALL BE 3-6 MICRONS, TYPICAL IMMERSION GOLD THICKNESS SHALL BE 0.04-0.06 MICRONS OF SOLDERABLE IMMERSION GOLD SURFACE.
2. APPLY LIQUID PHOTO IMAGEABLE SOLDER MASK PER IPC-SM-840, CLASS H, TO BOTH SIDES OF THE BOARD OVER BARE COPPER. VIA HOLES SHALL BE FILLED WITH NON CONDUCTIVE INK AND COVERED WITH SOLDER MASK. ONLY SOLDER MASK 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.
3. SILKSREEN SHALL BE WHITE, PERMANENT, ORGANIC, NON-CONDUCTIVE INK. THERE SHALL BE NO SILKSREEN ON ANY SOLDERABLE COMPONENT PAD. CLIPPING OF SILK SCREEN SHALL BE ALLOWED IF THE SILK SCREEN FALLS ON SOLDERABLE AREAS.
4. SURFACE AND VIA HOLES FINISH SHALL NOT BE LESS THAN 20UM [0.00079"],
5. ALL HOLES SURROUNDED BY LAND $\leq 0.010"$ SHALL BE COMPLAIN TO IPC6012, CLASS 2.

8. MARKING:

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

9. TEST REQUIREMENTS:

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

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


11. FINISHED PCB THICKNESS SHALL BE 0.0686" +/-10%.

12. MIN TRACE WIDTH/SPACING ON BOARD IS 0.004"/0.0045".

13. TEAR DROPS SHALL BE ADDED ON INTERNAL AND EXTERNAL LAYER FOR ALL THE VIA'S AND THROUGH HOLE PADS.

SL#	TYPE	LAYER	TRACEWIDTH(Mils)	SPACING(Mils)	IMPEDANCE(Ohms)	REF	LAYER
01	EDGE COUPLED MICROSTRIP	L1, L6	4.00	6.50	100	L2, L5	
02	MICROSTRIP	L1, L6	6.00	--	50	L2, L5	
03	STRIPLINE	L3	4.50	--	50	L2, L4	
04	EDGE COUPLED MICROSTRIP	L1, L6	4.00	6.00	120	L3, L4	

LAYER NAME	FINISHED Cu	X-SECTION	DIELECTRIC THICKNESS
PRIMARY SIDE SILKSCREEN			[INCHES]
PRIMARY SIDE SOLDERMASK			
L01 PRIMARY SIDE	1oz.		
L02 GROUND-PLANE-1	1oz.		
L03 INNER-SIGNAL-1	1oz.		
L04 POWER-PLANE-1	1oz.		
L05 GROUND-PLANE-2	1oz.		
L06 SECONDARY SIDE	1oz.		
SECONDARY SIDE SOLDERMASK			
SECONDARY SIDE SILKSCREEN			

SIGNATURES		DATE		 TEXAS INSTRUMENTS	PROC064
LAYOUT BY SK/JA		030918			
REVIEWED BY ZA		030918			
APPROVED BY AMB		030918			
				AM6-IDKAPPEVM	
		SIZE D			Rev E4
		SCALE: NONE			SHEET 1 OF 13