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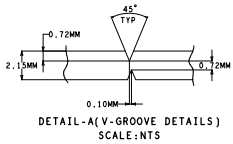
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FABRICATION NOTES:

- 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 TO 180)
 - COPPER FOIL TO BE IN ACCORDANCE WITH IPC-MF-150. UNLESS OTHERWISE SPECIFIED, FOR OUTER LAYERS 1.45 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.
- 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. INCASE FOR MATCHING IMPEDANCE MISTRAL SHALL APPROVE THE MODIFIED WIDTHS AND SPACINGS. 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 3-6 MICRONS. TYPICAL IMMERSION GOLD THICKNESS SHALL BE 0.04-0.06 MICRONS OF SOLDERABLE IMMERSION GOLD SURFACE.
 - APPLY (VOID PHOTO IMAGEABLE) SOLDER MASK PER IPC-SM-840, CLASS N, 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 COLOUR 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"], INCASE 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 0.0850" +/-10%.
- MIN TRACE WIDTH/SPACING ON BOARD IS 0.0031"/0.0033".
- ALL THE IMPEDANCE SHALL BE MATCHED AS PER IMPEDANCE TABLE WITH +/-10% TOLERANCE.
- ALL UNCONNECTED VIA'S SHALL BE SUPPRESSED IN INTERNAL LAYERS.
- V-SCORE TO BE DONE AS PER DETAIL "A".
- FOR STACKUP DETAILS "PROC141_STACKUP.PDF" SHALL BE REFERRED.



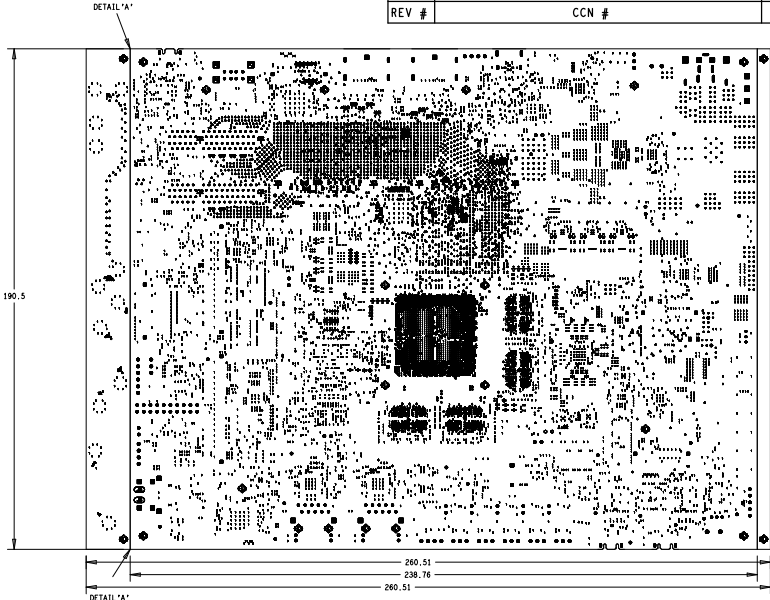
LAYER STACKUP

LAYER NAME	FINISHED Cu	X-SECTION	DIELECTRIC THICKNESS
PRIMARY SIDE SILKSCREEN			[INCHES]
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		0.005
L06 GROUND-PLANE-3	1oz		0.0046
L07 INNER-SIGNAL-3	1oz		0.005
L08 POWER-PLANE-1	1oz		0.0052
L09 POWER-PLANE-2	1oz		0.005
L10 INNER-SIGNAL-4	1oz		0.0046
L11 GROUND-PLANE-4	1oz		0.005
L12 INNER-SIGNAL-5	0.5oz		0.0038
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 SILKSCREEN			

IMPEDANCE SPECIFICATIONS

SL#	TYPE	LAYER	TRACEWIDTH(Mils)	SPACING(Mils)	IMPEDANCE(Ohms)	REF LAYER
01	EDGE COUPLED MICROSTRIP	L1/L16	3.7	7.3	100	L2/L15
02	EDGE COUPLED MICROSTRIP	L1	5.2	8	120	L3
03	EDGE COUPLED MICROSTRIP	L17/L16	4.5	8	90	L2/L15
04	EDGE COUPLED MICROSTRIP	L17/L16	5.2	5.8	85	L2/L15
05	MICROSTRIP	L1/L16	5	-	50	L2/L15
06	EDGE COUPLED STRIPLINE	L3/L12	3.1	6.5	100	L2/L15/L13/L14
07	EDGE COUPLED STRIPLINE	L3/L12	3.1	6.5	100	L2/L15/L13/L14
08	EDGE COUPLED STRIPLINE	L10	3.5	8.3	100	L9/L11
09	EDGE COUPLED STRIPLINE	L3/L12	3.6	5	90	L2/L15/L13/L14
10	EDGE COUPLED STRIPLINE	L5/L12	4.25	5	80	L4/L6/L11/L13
11	EDGE COUPLED STRIPLINE	L1	5	7	90	L2/L15
12	EDGE COUPLED STRIPLINE	L3/L14	4.1	5	85	L2/L15/L13/L14
13	EDGE COUPLED STRIPLINE	L5/L12	4.75	5	85	L4/L6/L11/L13
14	EDGE COUPLED STRIPLINE	L3	5.1	6.9	80	L2/L15
15	EDGE COUPLED STRIPLINE	L3	5.5	5.5	80	L4/L6
16	EDGE COUPLED STRIPLINE	L14	7	8	65	L13/L15
17	STRIPLINE	L3/L14	3.5	-	50	L2/L15/L13/L14
18	STRIPLINE	L5/L12	4	-	50	L4/L6/L11/L13
19	STRIPLINE	L3	4.3	-	50	L2/L15/L13/L14
20	STRIPLINE	L3	5.5	-	40	L2/L15
21	STRIPLINE	L3	6	-	40	L2/L15
22	STRIPLINE	L3	7.5	-	35	L2/L15
23	EDGE COUPLED MICROSTRIP	L17/L16	15.5	15.5	100 DS1	L2/L15
24	EDGE COUPLED STRIPLINE	L3/L16	3.3	-	100 DS1	L2/L15/L13/L14
25	EDGE COUPLED STRIPLINE	L5/L12	4	10	100 DS1	L4/L6/L11/L13
26	EDGE COUPLED STRIPLINE	L3	3	8	125	L2/L15
27	STRIPLINE	L3	3	-	66	L2/L15


REVISIONS		
REV #	DESCRIPTION	DATE
REV #	CCN #	DDMMYY



DRILL CHART: TOP TO BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	8.0	+3.0/-3.0	PLATED	8115
-	10.0	+3.0/-3.0	PLATED	874
-	10.0	+3.0/-3.0	PLATED	276
-	28.0	+3.0/-3.0	PLATED	128
-	32.0	+2.0/-2.0	PLATED	4
-	32.0	+3.0/-3.0	PLATED	3
-	36.0	+3.0/-3.0	PLATED	31
-	40.0	+2.0/-2.0	PLATED	12
-	40.0	+3.0/-3.0	PLATED	72
-	44.0	+2.0/-2.0	PLATED	33
-	48.0	+3.0/-3.0	PLATED	6
-	48.0	+3.0/-3.0	PLATED	2
-	56.0	+3.0/-3.0	PLATED	2
-	60.0	+3.0/-3.0	PLATED	6
-	68.0	+3.0/-3.0	PLATED	6
-	68.0	+3.0/-3.0	PLATED	3
-	86.0	+3.0/-3.0	PLATED	2
-	90.0	+3.0/-3.0	PLATED	4
-	34.0	+1.0/-1.0	NON-PLATED	2
-	34.0	+2.0/-2.0	NON-PLATED	4
-	40.0	+1.97/-1.97	NON-PLATED	2
-	40.0	+3.0/-3.0	NON-PLATED	11
-	52.0	+3.0/-3.0	NON-PLATED	1
-	58.0	+3.0/-3.0	NON-PLATED	2
-	92.0	+2.0/-2.0	NON-PLATED	4
-	108.0	+3.0/-3.0	NON-PLATED	4
-	126.0	+3.0/-3.0	NON-PLATED	22
-	52.0x24.0	+3.0/-3.0	PLATED	6
-	82.0x24.0	+2.0/-2.0	PLATED	2
-	70.0x24.0	+2.0/-2.0	PLATED	4
-	82.0x24.0	+2.0/-2.0	PLATED	2
-	86.0x24.0	+3.0/-3.0	PLATED	1
-	86.0x24.0	+3.0/-3.0	PLATED	2
-	90.0x24.0	+2.0/-2.0	PLATED	4
-	98.0x24.0	+3.0/-3.0	PLATED	4
-	158.0x78.0	+3.0/-3.0	NON-PLATED	2

DRILL CHART: L2-GND1 to L3-SIGNAL1				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	1246
DRILL CHART: L3-SIGNAL1 to L4-GND2				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	593
DRILL CHART: L4-GND2 to L5-SIGNAL2				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	330
DRILL CHART: L4-GND3 to L13-GND5				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	8.0	+3.0/-3.0	PLATED	326

DRILL CHART: L12-SIGNAL5 to L13-GND5				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	714
DRILL CHART: L13-GND5 to L14-SIGNAL6				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	1115
DRILL CHART: L14-SIGNAL6 to L15-GND6				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	1144
DRILL CHART: L15-GND6 to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
-	5.0	+2.0/-2.0	PLATED	621

SIGNATURES		DATE		 TEXAS INSTRUMENTS	PROC141E3
LAYOUT BY SM/RK		020822			
REVIEWED BY ZA		020822			
APPROVED BY AMB		020822			
				TDA4AP, TDA4VP, TDA4AH, & TDA4VH EVALUATION BOARD	