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IMPEDANCE TABLE

LAYER	TRACE WIDTH	IMPEDANCE +/- 10%	REFERENCE LAYER
TOP	6 MILS	50 OHM	LAYER-2
Layer-3	4 MILS	50 OHM	LAYER-4
Layer5	4.5 MILS	50 OHM	LAYER-4
Layer-6	4.5 MILS	50 OHM	LAYER-7
Layer-8	4 MILS	50 OHM	LAYER-9
Bottom	6 MILS	50 OHM	LAYER-9

LAYER	TRACE WIDTH	SPACING	IMPEDANCE +/- 10%	REFERENCE LAYER
TOP	4.99 MILS	6.01 MILS	90 OHM	LAYER-2
BOTTOM	4.99 MILS	6.01 MILS	90 OHM	LAYER-9

LAYER	TRACE WIDTH	SPACING	IMPEDANCE +/- 10%	REFERENCE LAYER
TOP	5.01 MILS	8.99 MILS	100 OHM	LAYER-2
Layer-3	4.01 MILS	11.99 MILS	100 OHM	LAYER-4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.80mil	1	
3	Top Layer	Copper	1.80mil		
4	Dielectric1	FR-4	3.87mil	4.02	
5	L2-GND	Copper	1.20mil		
6	Dielectric 2	FR-4	4.00mil	4.26	
7	L3-SIG1	Copper	1.20mil		
8	Dielectric 3	FR-4	8.70mil	4.06	
9	L4-GND	Copper	1.20mil		
10	Dielectric 4	FR-4	4.00mil	4.26	
11	L5-PWR/SIG	Copper	1.20mil		
12	Dielectric 5	FR-4	13.51mil	4.06	
13	L6-SIG2	Copper	1.20mil		
14	Dielectric 6	FR-4	4.00mil	4.26	
15	L7-PWR2	Copper	1.20mil		
16	Dielectric 7	FR-4	8.42mil	4.06	
17	L8-SIG3	Copper	1.20mil		
18	Dielectric 8	FR-4	4.00mil	4.26	
19	L9-GND	Copper	1.20mil		
20	Dielectric 9	FR-4	3.87mil	4.02	
21	Bottom Layer	Copper	1.80mil		
22	Bottom Solder	Solder Resist	0.80mil	1	
23	Bottom Overlay				

DESIGN INFORMATION

MIN. TRACK WIDTH: 4 MIL
MIN. CLEARANCE: 4 MIL
MIN. VIA PAD SIZE: 15.78MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL
HOLE SIZE TOLERANCE (UNLESS OTHERWISE SPECIFIED): +/- 3 MIL

MATERIAL:
☐ FR-408 ☐ FR-4 High Tg ☒ OTHER FR-4
THICKNESS: ☐ 62 MIL (1.6mm) +/-10% ☒ OTHER 69.17MILS +/-10%
TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-
BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH COPPER THICKNESS: ☒ 20-30 um ☐ OTHER

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER
SOLDER RESIST COLOR: ☐ GREEN ☒ OTHER RED
☐ MATTE ☐ SEMI-GLOSS

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG) ☐ ENEPIG
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER M1 BOARD OUTLINE
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ RoHS ☐ OTHER PER ORDER

ALL BOARDS MUST MEET OR EXCEED UL94-V0 REQUIREMENTS.
PCB MUST BEAR THE UL94V-0 UL REGISTERED MATERIAL ID NUMBER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
☐ XX MIL VIAS REQUIRE NON-CONDUCTIVE FILL AND PLANARIZE
☐ XX MIL VIAS REQUIRE CONDUCTIVE FILL AND PLANARIZE
☐ OUTER XX MIL TRACES REQUIRE 50 OHM SINGLE-ENDED IMPEDANCE
☐ LAYER 2 & 3 (INNER LAYERS) XX MIL WIDE, XX MIL SPACE
TRACES REQUIRE 100 OHM DIFFERENTIAL IMPEDANCE

TEXAS INSTRUMENTS

PROJECT TITLE:
MMWAVEICBOOST

DESIGNED FOR:
Public Release

FILE NAME:
PROC074A-PCB.PcbDoc

ENGINEER:
Chethan Kumar Y.B

LAYOUT BY:
TESSOLVE

SCALE: 1.00

ALTUM DESIGNER VERSION:
17.1.5.472

2.76 (in)

5.30 (in)

1000.00mil

ALL ARTWORK VIEWED FROM TOP SIDE

LAYER NAME = Drill Drawing

PLOT NAME = Fabrication Drawing

BOARD #: PROC074

REV: A

SUN REV: Not In VersionControl

TID #: N/A

GENERATED : 9/4/2018 5:43:42 PM

TEXAS INSTRUMENTS

Slot definitions : Routed Path Length = Calculated from tool start centre position to tool end centre position.
Hole Length = Routed Path Length + Tool Size = Slot length as defined in the PCB layout

Drill tolerances:
FOR PTH +/- 3MIL
FOR NPTH +/- 2MIL
For 12.2 mil drill via +0/-12.2 mil
For 7.87 mil drill via +0/-7.87 mil

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