M12 Stackup

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top SilkScreen				
2	Top Solder Mask	Solder Resist	0.50mil	3.5	
3	Top Copper	Copper	1.40mil		
4	Dielectric 1	FR-4	7.00mil	4.2	
5	Copper Layer 2	Copper	1.40mil		
6	Dielectric 2	FR-4	14.00mil	4.2	
7	Copper Layer 3	Copper	1.40mil		
8	Dielectric 4	FR-4	11.00mil	4.2	
9	Copper Layer 4	Copper	1.40mil		
10	Dielectric 5	FR-4	14.00mil	4.2	
11	Copper Layer 5	Copper	1.40mil		
12	Dielectric 3	FR-4	7.00mil	4.2	
13	Bottom Copper	Copper	1.40mil		
14	Bottom Solder Mask	Solder Resist	0.50mil	3.5	
15	Bottom Silk				

Drill Guide

Symbol	Quantity	Finished Hole Size	Plated	Hole Type	Drill Layer Pair	Hole Tolerance
	98	0.254mm (10.00mil)	PTH	Round	Top Copper - Bottom Copper	
	1	0.380mm (14.96mil)	PTH	Round	Top Copper - Bottom Copper	
	7	0.381mm (15.00mil)	PTH	Round	Top Copper - Bottom Copper	
	2	0.508mm (20.00mil)	PTH	Round	Top Copper - Bottom Copper	
	52	0.762mm (30.00mil)	PTH	Round	Top Copper - Bottom Copper	
	2	0.850mm (33.46mil)	PTH	Round	Top Copper - Bottom Copper	
	52	1.016mm (40.00mil)	PTH	Round	Top Copper - Bottom Copper	
	4	1.200mm (47.24mil)	PTH	Round	Top Copper - Bottom Copper	
	4	3.250mm (127.95mil)	PTH	Round	Top Copper - Bottom Copper	
	222 Total					

M10 Fab Notes

SPECIAL NOTES

THE MICROPHONES USED IN THIS BOARD REQUIRE SPECIAL SOLDERING CONSIERATIONS:

- MSL (MOISTURE SENSITIVITY LEVEL) CLASS 1.
- MAXIMUM OF 3 REFLOW CYCLES IS RECOMMENDED.
- DO NOT EXPOSE THE MICROPHONES TO TEMP EXCEEDING 260°C
- DO NOT BOARD WASH OR CLEAN AFTER THE REFLOW PROCESS.
- DO NOT BRUSH BOARD WITH OR WITHOUT SOLVENTS AFTER THE REFLOW PROCESS.
- DO NOT DIRECTLY EXPOSE TO ULTRASONIC PROCESSING, WELDING, OR CLEANING.
- DO NOT APPLY OVER 30 PSI OF AIR PRESSURE INTO THE PORT HOLE.

DESIGN INFORMATION

MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 0.2 mm
MIN. VIA PAD SIZE: 24 MIL

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 [X] FR-4 High Tg [ ] OTHER _____

THICKNESS: [X] 62 MIL (1.6mm) +/-10% [ ] OTHER _____

TOLERANCE: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/- _____

BOW & TWIST: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/- _____

DRILLING:
REFERENCE: [X] AS SHOWN [X] NC_DRILL FILES
PTH COPPER THICKNESS: [X] 20-30 um [ ] OTHER _____

BOARD FINISH:
SILKSCREEN: [X] TOP [X] BOTTOM
SILKSCREEN COLOR: [X] WHITE [ ] OTHER _____
SOLDER RESIST COLOR: [X] GREEN [ ] OTHER _____
[X] MATTE [ ] SEMI-GLOSS

SURFACE FINISH: [X] IMMERSION GOLD (ENIG) [ ] ENEPIG
[ ] IMM. TIN/SILVER OR EQUIV [ ] OTHER _____

ARRAY/PANEL: [ ] CUT AND TRIM PER M1 BOARD OUTLINE
[ ] N.C. ROUTE [X] V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBS TO MEET OR EXCEED THE REQUIREMENTS OF:
[X] ANSI IPC-A-600F CLASS -> [ ] 1 [X] 2 [ ] 3
[X] 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 [X] REQUIRED [ ] PER ORDER

TEXAS INSTRUMENTS

PROJECT TITLE: PCM1864 Circular Microphone Board Reference Design
DESIGNED FOR: Public Release
FILE NAME: TIDA-01454B_PCB.PcbDoc

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-01454	REV: B	SVN REV: Not In VersionControl
LAYER NAME = Drill Drawing	M1 Board Outline M2 Board Dimensions		
PLOT NAME = Fabrication Drawing	GENERATED : 4/17/2017 5:16:28 PM		TEXAS INSTRUMENTS

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ENGINEER: Ravi Patil
LAYOUT BY: LDN
SCALE: 1.09
ALTIUM DESIGNER VERSION: 16.1.9.221