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

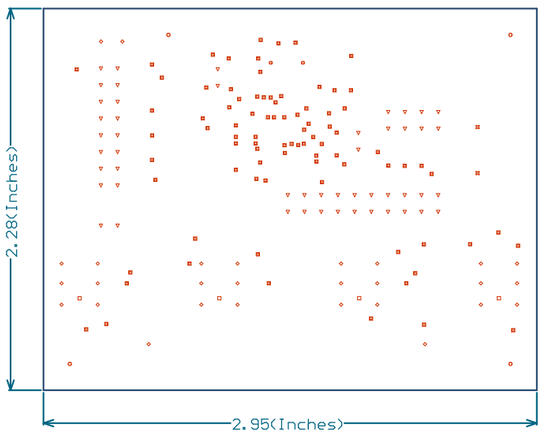
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBS TO MEET OR EXCEED THE REQUIREMENTS OF:
[X] ANSI IPC-A-600F CLASS -> [ ] 1 [X] 2 [ ] 3
[X] RoHS [ ] OTHER PER ORDER

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

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	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape	Template	Description	Hole Tolerance (+)	Hole Tolerance (-)
⊠	2	0.508mm (20.00mil)	PTH	Round	Top Copper - Bottom Copper	Pad	Rounded	c127h51			
✡	2	0.850mm (33.46mil)	PTH	Round	Top Copper - Bottom Copper	Pad	Rounded	c135h85			
□	4	0.381mm (15.00mil)	PTH	Round	Top Copper - Bottom Copper	Via	Rounded	v76h38m0mx0			
⌬	4	3.250mm (127.95mil)	PTH	Round	Top Copper - Bottom Copper	Via	Rounded	v600h325m0mx0			
◇	28	0.762mm (30.00mil)	PTH	Round	Top Copper - Bottom Copper	Pad	Rounded	c127h76			
▽	50	1.016mm (40.00mil)	PTH	Round	Top Copper - Bottom Copper	Pad	(Mixed)	(Mixed)			
◘	86	0.254mm (10.00mil)	PTH	Round	Top Copper - Bottom Copper	Via	Rounded	v64h25m0mx0			
	176 Total										

TEXAS INSTRUMENTS

PROJECT TITLE: PCM1864 Linear Microphone Board Reference Design
DESIGNED FOR: Public Release
FILE NAME: TIDA-01470A-PCB.PcbDoc

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: TIDA-01470	REV: A	SVN REV: Not In VersionControl
LAYER NAME = Drill Drawing	M1 Board Outline M2 Board Dimensions		
PLOT NAME = Fabrication Drawing	GENERATED : 5/12/2017 10:59:58 AM	TEXAS INSTRUMENTS	

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