


















Use Standard 4 Layer Stackup

Layer	Name	Material	Thickness	Constant	Board Layer Stack
	Top Overlay				
	Top Solder	Solder Resist	0.40mil	3.5	
1	Top Signal		1.40mil		
	Dielectric 1	FR-4	8.00mil	4.2	
2	GND		1.40mil		
	Dielectric 2	FR-4	40.00mil	4.2	
3	PWR		1.40mil		
	Dielectric 3	FR-4	8.00mil	4.2	
4	Bottom Signal		1.40mil		
	Bottom Solder	Solder Resist	0.40mil	3.5	
	Bottom Overlay				

Symbol	Quantity	Finished Hole Size	Plated	Hole Type	Drill Layer Pair	Hole Tolerance
	2	35.43mil (0,900mm)	NPTH	Round	Top Signal - Bottom Signal	
	4	125.00mil (3,175mm)	NPTH	Round	Top Signal - Bottom Signal	
	7	7.87mil (0,200mm)	PTH	Round	Top Signal - Bottom Signal	
	325	9.84mil (0,250mm)	PTH	Round	Top Signal - Bottom Signal	
	497	9.84mil (0,250mm)	PTH	Round	Top Signal - Bottom Signal	+0,00mil
	1	11.81mil (0,300mm)	PTH	Round	Top Signal - Bottom Signal	
	21	11.81mil (0,300mm)	PTH	Round	Top Signal - Bottom Signal	
	16	15.75mil (0,400mm)	PTH	Round	Top Signal - Bottom Signal	
	1	15.75mil (0,400mm)	PTH	Round	Top Signal - Bottom Signal	+0,00mil
	8	25.00mil (0,635mm)	PTH	Round	Top Signal - Bottom Signal	
	89	40,16mil (1,020mm)	PTH	Round	Top Signal - Bottom Signal	
	10	43.31mil (1,100mm)	PTH	Round	Top Signal - Bottom Signal	
	20	43.31mil (1,100mm)	PTH	Round	Top Signal - Bottom Signal	
	32	45.28mil (1,150mm)	PTH	Round	Top Signal - Bottom Signal	+/-1.97mil
	2	27.56mil (0,700mm)	PTH	Slot	Top Signal - Bottom Signal	
	2	59,06mil (1,500mm)	PTH	Slot	Top Signal - Bottom Signal	
	2	74,80mil (1,900mm)	PTH	Slot	Top Signal - Bottom Signal	
	1039 Total					

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

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>5</u> MIL
MIN. CLEARANCE:	<u>0.15</u> mm
MIN. VIA PAD SIZE:	<u>0.45</u> mm
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL	
PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
HOLE SIZE TOLERANCE (UNLESS OTHERWISE SPECIFIED): +/- <u>5</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408	<input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____
THICKNESS:	<input checked="" type="checkbox"/> 62 MIL (1.6mm) +/- 10% <input type="checkbox"/> OTHER _____
TOLERANCE:	<input type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2
	<input checked="" type="checkbox"/> OTHER +/- <u>IPC-A600</u>
BOW & TWIST:	<input type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2
	<input checked="" type="checkbox"/> OTHER +/- <u>IPC-A600</u>
DRILLING:	
REFERENCE:	<input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES
PTH COPPER THICKNESS:	<input checked="" type="checkbox"/> 20-30 um <input type="checkbox"/> OTHER _____
BOARD FINISH:	
SILKSCREEN:	<input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM
SILKSCREEN COLOR:	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____
SOLDER RESIST COLOR:	<input type="checkbox"/> GREEN <input checked="" type="checkbox"/> OTHER <u>RED</u>
	<input type="checkbox"/> MATTE <input type="checkbox"/> SEMI-GLOSS
SURFACE FINISH:	<input type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG
	<input checked="" type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____
ARRAY/PANEL:	<input checked="" type="checkbox"/> CUT AND TRIM PER M1 BOARD OUTLINE
	<input type="checkbox"/> N.C. ROUTE <input type="checkbox"/> V. SCORE
CERTIFICATION:	MATERIALS AND WORKSMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
	<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3
	<input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER <u>PER ORDER</u>
ALL BOARDS MUST MEET OR EXCEED UL94-V0 REQUIREMENTS.	
PCB MUST BEAR THE UL94V-0 UL REGISTERED MATERIAL ID NUMBER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
<input type="checkbox"/> XX MIL VIAS REQUIRE NON-CONDUCTIVE FILL AND PLANARIZE	
<input type="checkbox"/> XX MIL VIAS REQUIRE CONDUCTIVE FILL AND PLANARIZE	
<input type="checkbox"/> OUTER XX MIL VIAS REQUIRE 50 OHM SINGLE-ENDED IMPEDANCE	
<input type="checkbox"/> LAYER 2 & 3 (INNER LAYERS) XX MIL WIDE, XX MIL SPACE	
<input type="checkbox"/> TRACES REQUIRE 100 OHM DIFFERENTIAL IMPEDANCE	



PROJECT TITLE:
LAUNCHXL-F28P55X

DESIGNED FOR:
Public Release

FILE NAME:
MCU133C.PcbDoc

ENGINEER:
Stevan Duraskovic

LAYOUT BY:
a0507455

SCALE: 1.00	ALTUM DESIGNER VER 23.1.1.15
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