



Layer Order	Width/Space/Width	Zc/Zdiff
1.Signal_1	5.5/12/5.5	51/100
2.Power		
3.Signal_2	6/12/6	51/100
4.Power		
5.Signal_3	5/7/5	51/100
6.Power		
7.Signal_4	5/7/5	51/100
8.Power		
9.Power		
10.Signal_5	5/7/5	51/100
11.Power		
12.Signal_16	5/7/5	51/100
13.Power		
14.Signal_7	6/12/6	51/100
15.Power		
16.Signal_8	5.5/12/5.5	51/100

Board Characteristics - 16 LAYER BOARD, Size: 6.299" (+0.0/-0.012) by 9.187" (+0.0/-0.012)

- All dimensions are given in inches unless specified otherwise.
- Material Megtron-6
- Minimum trace width: 0.005" and clearance: 0.005".
- 1 oz copper for all power layers and for Top and Bottom  
1/2 oz copper for Stripline trace layers
- Zc=51 Ohm and Zdiff=100 Ohm for all traces.  
Perform TDR test for all signal layers.  
Present TDR test results for all signal layers.
- Immersion Gold with min. Ni: 2.5-5 um; Au: 0.05-0.2 um.  
Apply Solder Mask.
- Board Thickness: 0.093 +/- 0.008
- Mill the Top and Bottom of board on the solder side to a thickness of 0.063" +/- 0.008
- Silkscreen on Component and Solder Sides.
- 45 degree chamfer.
- FHS tolerances: +/- 0.002 unless specified otherwise.
- Press Fit Holes with Specifications as per TE Conn. Application Specification 114-13219:  
Drilled Hole Diameter: 0.54-0.58mm  
0.46mm Ref Finished Hole Diameter After Plating  
0.025-0.050 Copper Plating (Max Hardness 150 Knoop)  
0.0001-0.0005 Au, 0.004-0.0076 Ni Immersion Gold Over Nickel (ENIG)
- Press Fit Holes with Specifications as per TE Conn. Application Specification 114-13219:  
Drilled Hole Diameter: 1.13-1.17mm  
1.05mm Ref Finished Hole Diameter After Plating  
0.025-0.050 Copper Plating (Max Hardness 150 Knoop)  
0.0001-0.0005 Au, 0.004-0.0076 Ni Immersion Gold Over Nickel (ENIG)
- Via in Pad - Via Fill and Overplate:  
Vias of this diameter must be completely filled with Peters PP-2795 or equivalent,  
planarized and plated over with Copper and surface finish.  
The plated cap must adhere to fill material after 1 x 550F solder shock.
- Remove all non-functional inner layer pads for pins and vias.
- Do Not increase size of thermal pads and associated spoke connections in holes.
- Do Not Change Trace Widths.

BOARD'S DRILL SCHEDULE

DRILL SYMBOL	DRILL SIZE	COUNT	PLATED	Tolerance	COMMENT
○	.009	854	YES	---	
⊞	.0091	2185	YES	---	Note 13
⊕	.011811024	12	YES	---	
⊞	.0181	360	YES	---	Note 11
⊖	.02	1	YES	---	
⊞	.041	522	YES	---	
⊕	.0413	117	YES	---	Note 12
□	.042	20	YES	---	
	.057	4	YES	---	
	.062992126	6	YES	---	
	.073	18	YES	---	
	.086614173	2	NO	---	
	.106	6	NO	---	
	.12598425	2	NO	---	
	.12795	2	YES	---	
	.15	4	NO	---	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX .XXX DO NOT SCALE DRAWING	CONTRACT NO.		UNIVERSITY OF CHICAGO ELECTRONICS DEVELOPMENT GROUP		
	APPROVALS		DATE		TITLE
	DRAWN M. Bogdan		7/26/2017		KOTO - OFC Module Specification Drawing
	CHECKED M. Bogdan		7/26/2017		SIZE B FSCM NO. DWG. NO. 2902 REV. A
TREATMENT	ISSUED		SCALE 1/2 SHEET		
FINISH	SIMILAR TO	ACT. WT	CALC WT		