



PARAMETERS	STANDARD (VOLUME)		ADVANCED (ENGINEERING)		UNIT
	SPECIFICATION	TOLERANCE	SPECIFICATION	TOLERANCE	
Material					
Base Material	FR4 S1141, It-180A, S1000-2, Rogers				
Minimum Dielectric Prepreg Thickness	2	0,5	2	0,5	mil
Minimum Dielectric Core Thickness	2	0,5	2	0,5	mil
Minimum Copper Foil Weight	18	10	18	10	um
Maximum Copper Foil Weight	210	25	210	25	um
Minimum Inner Layer Copper Weight	18	10	18	10	um
Maximum Inner Layer Copper Weight	210	25	210	25	um
Minimum Outer Layer Copper Weight	35	10	35	10	um
Maximum Outer Layer Copper Weight	210	25	210	25	um
Board Size					
Minimum Board Dimension	10 x 10	0,1	10 x 10	0,1	mm
Maximum Board Dimension	508 x 610	0,15	610 x 610	610	mm
Maximum Board Dimension for Panelized	610 x 910	0,3	610 x 1066	0,3	mm
Board thickness & Layer Count					
Minimum Board Thickness	0,5	0,1	0,35	0,1	mm
Maximum Board Layers	4		2		layer
Maximum Board Thickness	6	0,6	7	0,6	mm
Maximum Board Layers	30		36		layer
for 62mils thick:	1,57	0,15	1,57	0,1	mm
Maximum Board Layers	10		12		layer
for 125mils thick:	3,175	0,3	3,175	0,2	mm
Maximum Board Layers	20		26		layer
for 187mils thick:	4,75	0,45	4,75	0,35	mm
Maximum Board Layers	36		36		layer
for 200mils thick:	5,08	0,5	5,08	0,4	mm
Maximum Board Layers	36		36		layer



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Aspect Ratio (Thickness to Drill Ratio)					
Through Hole (Max)	12:01				
Blind Via	1:01				
Drilling (Mechanical Drilling)					
Minimum Drilled (NPTH) Hole Size	0,3	0,05	0,2	0,05	mm
Maximum Drilled (NPTH) Hole Size	6,5	0,15	6,5	0,15	mm
Minimum Finished (PTH) Hole Size	0,2	0,05	0,15	0,05	mm
for 62mils thick:	1,57	0,15	1,57	0,15	mm
Minimum Finished (PTH) Hole Size	0,2	0,05	0,2	0,05	mm
for 125mils thick:	3,175	0,3	3,175	0,2	mm
Minimum Finished (PTH) Hole Size	0,3	0,05	0,25	0,05	mm
for 187mils thick:	4,75	0,47	4,75	0,35	mm
Minimum Finished (PTH) Hole Size	0,45	0,05	0,4	0,05	mm
for 200mils thick:	5,08	0,5	5,08	0,4	mm
Minimum Finished (PTH) Hole Size	0,5	0,05	0,45	0,05	mm
X-Y Drilling Machine Tolerance	3		3		mil
Hole to Hole Location Tolerance (NPTH)	3		3		mil
Drill Hole Edge to Trace/Pad	7	1	6	1	mil
Minimum Annular Ring	4	1	2,5	1	mil
Trace Width and Spacing					
Inner Layer Minimum Trace Width	3	1	3	0,5	mil
Minimum Trace Spacing	3	1	3	0,5	mil
Inner Layer Minimum Trace Width 0.5oz Cu	2,8	0,5	2,5	0,5	mil
Minimum Trace Spacing	2,8	0,5	2,5	0,5	mil
Inner Layer Minimum Trace Width 1oz Cu	3,5	0,5	3	0,5	mil
Minimum Trace Spacing	3,5	0,5	3	0,5	mil
External Layer Minimum Trace Width	3	0,5	2,8	0,5	mil



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Trace Width and Spacing					
Minimum Trace Spacing	2,8	0,5	2,5	0,5	mil
External Layer Minimum Trace Width 0.5oz Cu	3	0,5	2,8	0,5	mil
Minimum Trace Spacing	2,8	0,5	2,5	0,5	mil
External Layer Minimum Trace Width 1oz Cu	3,5	0,5	3	0,5	mil
Minimum Trace Spacing	3	0,5	3	0,5	mil
External Layer Minimum Trace Width 2oz Cu	3,5	0,5	3,5	0,5	mil
Minimum Trace Spacing	3	0,5	3	0,5	mil
Inner Layer Minimum Trace Spacing	2,8	0,5	2,8	0,5	mil
External Layer Minimum Trace Spacing	2,5	0,5	2,5	0,5	mil
Minimum Copper to Board Edge Clearance	8	1	6	1	mil
Soldermask & Legend/Silkscreen					
Minimum Soldermask Clearance Pad	2	0,5	1,5	0,5	mil
Minimum Soldermask Clearance Pad to Trace Edge	2,5	0,5	2	0,5	mil
Minimum Soldermask Dam	4	0,5	4	0,5	mil
Minimum Soldermask Thickness/Depth	10	2	8	2	um
Minimum Visible Silkscreen Legend Line Width	8	2	6	2	um
Minimum Visible Silkscreen Legend Thickness/Depth	8	2	6	2	um
Board Profiling					
Hole to Board Edge Tolerance (NPTH)	6		5		mil
Press Fit Hole Tolerance	0,05		0,05		mm
Pattern to Board Edge Tolerance	8		8		mil
Routing Tolerance	0,15		0,1		mm
V-Cut (End to End Only)	0,4	0,1	0,35	0,1	mm
Hole Wall Thickness					
Hole Wall Thickness (TH)	25	3	20	3	um
Minimum Hole Wall Thickness (B/Buried)	18	3	15	3	um



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Hole Wall Thickness					
Minimum Hole Wall Thickness (Micro Via)	18	3	15	3	
Types of Finishing (Indicate min/max value)					
OSP (Entek)	0,3	0,1	0,6	0,1	um
ENIG (Electroless Immersion Gold)	0,05	0,005	0,1	0,005	um
Immersion Silver	0,1	0,05	0,3	0,05	um
HASL Leadfree / Leaded	0,5	0,1	0,8	0,1	um
Impedance (Impedance Measurement)					
Impedance Measurement	yes				
Impedance Tolerance for > 50 ohms	10%		5		ohm
Impedance Tolerance for < 50 ohms	5		5		ohm
Warpage					
Maximum Warp & Twist	0,75		0,5		
Impedance Tolerance for > 100 ohms	10%		10		ohm
Impedance Tolerance for < 100 ohms	10		10%		ohm
Other Capabilities					
Laser Drilled Micro Via	yes				
Minimum Laser Drilled Hole Size	0,1	0,05	0,13	0,05	mm
Conductive Filled Vias	yes				
Minimum Hole Size for Filling Vias	0,2	0,05	0,4	0,05	mm
Non-Conductive Filled Vias	yes				
Minimum Hole Size for Filling Vias	0,2	0,05	0,4	0,05	mm
Sunken holes	yes				
Valor ODB++ data format	yes				
Edge Plating	yes				
BareBoard / Electrical Test	yes				
Counter Bores / Slot Mining	yes				