

Summarised Flex Process Capability

For full capability information please consult Merlin Flex Process Capability document (Latest Edition)

Parameter						
	IMPERIAL		METRIC			
Panel Sizes	24 " x 18 "		610mm x 457mm (preferred)			
	18 " x 12 "		457mm x 305mm (preferred)			
Active Board Area	22 " x 16 "		558mm x 406mm (preferred)			
	16 " x 10 "		406mm x 250mm (preferred)			
Number of Layers	24 Layers maximum					
Parameter	Standard		Advanced		Development	
Parameter	Imperial	Metric	Imperial	Metric	Imperial	Metric
General						
Minimum Board Thickness	0.002 "	0.05mm	0.001 "	0.025mm	0.001 "	0.025mm
Maximum Board Thickness	0.061 "	2.40mm	0.127 "	5.00mm	0.127 "	5.00mm
Material Tolerance +/-	10%	10%	10%	10%	n/a	n/a
Minimum Core Thickness	0.001 "	0.025mm	0.0005 "	0.012mm	n/a	n/a
Inner Layers						
Min Line (0.5oz start Copper)	0.003 "	0.080mm	0.0025 "	0.065mm	0.002 "	0.050mm
Min Space (0.5oz start Copper)	0.0031 "	0.080mm	0.0025 "	0.065mm	0.0023 "	0.060mm
Outer Layers						
Min Line (12µm start Copper)	0.004 "	0.100mm	0.003 "	0.075mm	0.003 "	0.075mm
Min Space (12µm start Cu)	0.004 "	0.100mm	0.003 "	0.075mm	0.003 "	0.075mm
Holes						
Minimum Hole Size (drilled)	0.008 "	0.200mm	0.006 "	0.150mm	0.005 "	0.120mm
Min Annular Ring Radial Inner*	0.005 "	0.125mm	0.004 "	0.100mm	0.003 "	0.075mm
Min Annular Ring Radial Outer*	0.004 "	0.100mm	0.003 "	0.075mm	0.003 "	0.075mm
NPTH Hole Size Tolerance +/-	0.002 "	0.050mm	0.001 "	0.025mm	0.001 "	0.025mm
Positional Tolerance	0.003 "	0.075mm	0.002 "	0.050mm	0.002 "	0.050mm
Maximum Aspect Ratio	6.1:1		8:1		8:1	
Polyimide Coverlay						
Minimum Clearance from Copper	0.004 "	0.100mm	0.003 "	0.075mm	0.003 "	0.075mm
Minimum Encapsulation	0.005 "	0.150mm	0.004 "	0.100mm	0.004 "	0.100mm
Minimum Web between Apertures	0.006 "	0.150mm	0.004 "	0.100mm	0.004 "	0.100mm
Liquid Photoimageable Solder Mask						
Minimum Clearance from Copper	0.004 "	0.100mm	0.003 "	0.075mm	0.003 "	0.075mm
Minimum Encapsulation	0.004 "	0.100mm	0.003 "	0.075mm	0.003 "	0.075mm
Minimum Web between Apertures	0.006 "	0.150mm	0.003 "	0.075mm	0.003 "	0.075mm
Notation Inkjet (White only)						
Minimum Gap to features	0.004 "	0.100mm	0.004 "	0.100mm	0.004 "	0.100mm
Minimum Line Width	0.005 "	0.125mm	0.005 "	0.125mm	0.005 "	0.125mm
Silver Ink						
Minimum Clearance from Board Edge	0.004 "	0.100mm	0.003 "	0.075mm	0.004 "	0.100mm
Surface Finish						
Hot Air Solder Level Thickness Range	1 to 35 microns		5 to 20 microns		5 to 20 microns	
ENIG (Nickel Plating Range)	3 to 5 microns					
ENIG (Gold Plating Range)	0.05 to 1.2microns					
Profile						
SRD - Positional Accuracy	0.005 "	0.125mm	0.004 "	0.100mm	0.004 "	0.100mm
Hard Tool - Positional Accuracy	0.003 "	0.075mm	0.002 "	0.050mm	0.002 "	0.050mm
Rout – Minimum Router Diameter	0.040 "	1.00mm	0.023 "	0.6mm	0.023 "	0.6mm
Rout – Maximum Router Diameter	0.094 "	2.4mm	0.125 "	3.175mm	0.125 "	3.175mm
Rout – Positional Accuracy	0.003 "	0.075mm	0.002 "	0.050mm	0.002 "	0.050mm
Laser – Positional Accuracy	0.002 "	0.050mm	0.002 "	0.050mm	0.002 "	0.050mm
Impedance						
Tolerance	10%		5%		2%	

Any boards using development tolerances must have prior agreement of the Technical department.

*Depends on IPC Class requirement Class 3 may require more land – See technical or QA.