

UK Manufacturing Capability

Feature	FR4		MPCB
	Standard	Advanced	
Acceptance Standard	IPC-A-600 Class 2	IPC-A-600 Class 3	As per FR4
Base Material	Standard Tg	High Tg, High CTI, Halogen Free	Aluminium, Copper 0.4 to 8 W/mK
Layer Count	1 - 12	13 - 24	1 – 8* <i>*post bonded</i>
Finished Board Thickness (mm)	0.5 – 2.4	> 2.4	0.5 – 3.2
Minimum Inner Layer Core Thickness	0.15	0.10	-
Maximum Board Size (mm)	1 to 2 layer = 381x 419 (15"x16.5") Multilayer = 362 x 417 (14.25" x 16.43")	-	Single layer = 590 x 437 Post Bonded = 265 x 420
Finished Copper Thickness (surface)	35um to 105um	<35um > 105um	35um to 175um
Copper Thickness (Hole)	20um	25um	20um* <i>*post bonded PTH</i>
Min Track & Gap	18um = 0.15mm	18um = 0.10mm	As per FR4
	35um = 0.20mm	35um = 0.15mm	As per FR4
	70um = 0.25mm	70um = 0.20mm	As per FR4
	105um = 0.30mm	105um = 0.25mm	As per FR4
Min drilled hole size (mm)	0.25 (upto1.6 thk mtl) 0.40 (1.6 – 2.4 thk mtl) 0.50 (2.4 – 3.2 thk mtl)	0.20 (upto1.6 thk mtl) 0.30 (1.6 – 2.4 thk mtl) 0.40 (2.4 – 3.2 thk mtl)	As per FR4 for <i>post bonded PTH</i>
Aspect Ratio	6:1	8:1	As per FR4 for <i>post bonded PTH</i>
General Tolerances (mm)	Plated Thru Hole = +/- 0.10 Unplated Hole = +/- 0.05 Routed Features = +/- 0.15	Plated Thru Hole = +/- 0.05 - Routed Features = +/- 0.10	As per FR4
V-Score Tolerances (mm)	Score line to circuit pattern = +/- 0.25 Score line to score line = +/- 0.15 Min gap from copper edge to centre of score line = 0.50 Remaining web thickness = 0.4 +/- 0.1		As per FR4
	Remaining web thickness = 0.4 +/- 0.1		0.3 +/- 0.1
Soldermask	Dam/web width = 0.10mm	Dam/web width = 0.075mm	As per FR4
	Clearance to copper =	Clearance to copper =	As per FR4

	0.075 mm	0.05mm	
Peelable Mask	Minimum Feature = 0.50mm		As per FR4
	Maximum tented hole size = 3.0mm		As per FR4
Ident	Min Feature = 0.20mm	As per FR4	
	Min clearance = 0.20mm	As per FR4	
Edge of hole to Copper	Min clearance = 0.20mm		As per FR4
Surface Finish (standard)	Electroless Nickel/gold, Immersion Silver, Lead & Lead Free HASL, Hard Gold.		As per FR4
Surface Finish (non-standard)	Non Standard = OSP, Immersion Tin, Carbon Ink		As per FR4
Non Standard Operations	Plugged Vias, half hole plating, blind/buried vias, Skip scoring, milling, bar coding		Skip scoring, milling, bar coding