

### HDI PCB Manufacture Capabilities

No.	Item	Standard	Advanced	
1	<b>Materials</b>	Materials	FR-4 Middle, High Tg, Halogen Free, High CTI, High Speed, High frequency	
2	<b>Basic parameters</b>	Layers	4-32L	
3		HDI builds	6+N+6	
4		Max.Board size	610*450mm	
5		Min.Board size	10*10mm	
6		Max.Board thickness	6.5mm	
7		Min.Board thickness	0.3mm	
8		Tolerance of board thickness(>1.0mm)	±10%	
9		Tolerance of board thickness(≤1.0mm)	±0.1mm	
10		<b>Drilling</b>	Min.Drilling hole(mech)	0.2mm
11	Min.Drilling hole(laser)		0.1mm	
12	Min.Buried hole(mech)		0.3mm	
13	Finish hole tolerance(PTH)		±0.075mm	
14	Finish hole tolerance(NPTH)		±0.05mm	
15	Hole position deviation		±0.075mm	
16	Min.Distance between via and conductors		0.2mm	
17	Min.Drilling spacing between holes(the same network)		0.2mm	
18	Min.Drilling spacing between holes(for different networks)		0.3mm	
19	Max.Micro-via/ Land PAD design		0.4/0.6mm	
20	Min.Micro-via/ Land PAD design		0.075/0.225mm	
21	Aspect ratio(mech drill)		10:1	
22	Aspect ratio(laser drill)		0.8:1	
23	<b>Inner layer</b>		Min.Line width/space	2/2mil
24			Max.Copper thickness	2oz
25		Min.Copper thickness	1/2oz	
26	<b>Outer layer</b>	Min.Line width/space	2/2mil	
27		Max.Copper thickness	2oz	
28		Min.Copper thickness	1/2oz	
29		Min.BGA pad size	12mil(8mil for electrical soft gold board)	
30		Finish Line tolerance	±1mil	
31	<b>Testing method</b>	Electrical testing	Flying needle test, needle bed test	

32	<b>Surface treatment</b>	Surface treatment	HASL/LF HASL, ENIG, ENEPIG, Immersion Silver, Immersion Tin, Plating Tin, Plating Silver, Electrolytic Nickel Gold, Soft Gold, Hard Gold, Gold Finger, OSP, Carbon Ink.	HASL/LF HASL, ENIG, ENEPIG, Immersion Silver, Immersion Tin, Plating Tin, Plating Silver, Electrolytic Nickel Gold, Soft Gold, Hard Gold, Gold Finger, OSP, Carbon Ink.
33		Mixed surface treatment	GF+OSP, GF+HASL, OSP+ENIG, IAG+GF, Isn+GF	GF+OSP, GF+HASL, OSP+ENIG, IAG+GF, Isn+GF
34	<b>Routing</b>	Routing Tolerance(Laser)	±0.05mm	±0.05mm
35		Routing Tolerance(CNC)	±0.15mm	±0.1mm
36	<b>Others</b>	Via treatment method	Through hole window opening, through hole cover oil, through hole plug oil, through hole plug resin/copper paste	Through hole window opening, through hole cover oil, through hole plug oil, through hole plug resin/copper paste
37		Warp and Twist	≤0.7%	≤0.5%
38		Controlled Impedance	±10%	±5%
39		Special process	Gold fingers, half-holes, metal edging, stepped grooves, etc.	Gold fingers, half-holes, metal edging, stepped grooves, etc.