

## Rigid-Flex PCB Manufacture Capabilities

No.	Item	Standard	Advanced	
1	Materials	Flex	Adhesiveless FCCL	
2		Rigid	Middle, High Tg, LF, HFPI, High Frequency	
3		Low Flow	Epoxy adhesive series, Acrylic adhesive series	
4		Coverlayer	Epoxy adhesive series, Acrylic adhesive series	
5	Basic parameters	Layers	2-12(10 flex layers)	
6		Max. board size	400mm*550mm	
7		Min. board size	10mm*15mm	
8		Board thickness	0.3mm-3.0mm	
9		Tolerance of board thickness(thickness>1.0mm)	±10%	
10		Tolerance of board thickness(thickness≤1.0mm)	±0.1mm	
11	Drilling	Min.Drilling hole(mech)	0.15mm	
12		Min.Drilling hole(laser)	0.075mm	
13		Min.Blind hole	0.15mm	
14		Finish hole tolerance(PTH)	±0.075mm	
15		Finish hole tolerance(NPTH)	±0.05mm	
16		Hole position deviation	±0.075mm	
17		Min.Distance between via and conductors	6mil (≤6layer)	5mil (≤6layer)
18			9mil (7~11layer)	7mil (7~11layer)
19			12mil (≥12layer)	9mil (≥12layer)
20		Min.Drilling spacing between holes(the same network)	0.2mm	0.15mm
21		Min.Drilling spacing between holes(for different networks)	0.3mm	0.2mm
22		Aspect ratio(mech drill)	10:1	20:1
23	Inner layer	Min. line width/spacing (12/18um copper)	3.5/3.5mil (3.2/3.2mil)	
24		Min. line width/spacing (35um copper)	4.0/4.0mil (3.6/3.7mil)	
25		Min. line width/spacing (70um copper)	6/6.5mil (5.5/6mil)	
26		Max.Copper thickness	2oz	
27		Min.Copper thickness	1/2oz	

28	<b>Outer layer</b>	Min. line width/spacing (18um copper)	3.5/3.8mil (3.2/3.5mil)	3.2/3.6mil (3.0/3.3mil)
29		Min. line width/spacing (35um copper)	4.0/4.3mil (3.5/3.8mil)	3.5/3.8mil (3.3/3.6mil)
30		Min. line width/spacing (70um copper)	6.5/6mil (6/5.5mil)	6.0/5.5mil (5.5/5mil)
31		Min. line width/spacing (105um copper)	10/13mil (9.5/12.5mil)	9.5/12.5mil (9/12mil)
32		Min.line width/spacing(18um copper, flex on the surface of board)	5/5mil (4.5/4.5mil)	4.5/4.5mil (4/4mil)
33		Min.line width/spacing(35um copper, flex on the surface of board)	5.5/6mil (5/5.5mil)	5/5.5mil (4.5/5mil)
34		Min.line width/spacing(70um copper, flex on the surface of board)	7.0/8.0mil (6.5/7.5mil)	6.5/7.5mil (6/7.0mil)
35		Min.BGA pad size	12mil(8mil for electrical soft gold board)	10mil(7mil for electrical soft gold board)
36		Max.Copper thickness	3oz	5oz
37		Min.Copper thickness	1/2oz	1/2oz
38	Finish Line tolerance	±1.5mil	±1mil	
39	<b>Testing method</b>	Electrical testing	Flying needle test, needle bed test	Flying needle test, needle bed test
40	<b>Surface treatment</b>	Surface treatment	HASL/LF HASL, ENIG, ENEPIG, Electrolytic Nickel Gold, Soft Gold, Hard Gold, Immersion silver, Immersion tin and OSP	HASL/LF HASL, ENIG, ENEPIG, Electrolytic Nickel Gold, Soft Gold, Hard Gold, Immersion silver, Immersion tin and OSP
41		Mixed surface treatment	ENIG+OSP,ENIG+Gold finger,Electrical gold+ Gold fingers	ENIG+OSP,ENIG+Gold finger,Electrical gold+ Gold fingers
42	<b>Routing</b>	Routing Tolerance(Laser)	±0.05mm	±0.05mm
43		Routing Tolerance(CNC)	±0.15mm	±0.1mm
44	<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
45		Warp and Twist	≤0.7%	≤0.5%
46		Controlled Impedance	±10%	±5%
47		Special process	Gold fingers, half-holes, metal edging, stepped grooves, etc.	Gold fingers, half-holes, metal edging, stepped grooves, etc.