Flex PCB Fabrication Capability

No.	Item		Standard	Advanced	Comment
1	Material	FCCL (adhesive)	Shengyi SF305:PI=0.5mil&1mil&2mil; Cu=0.33oz&0.5oz & 1oz	/	
2		FCCL (adhesiveless)	Panasonic R-F775:PI=1mil&2mil&3mil; Cu= 0.5oz&1oz	PI=3mil; Cu=2oz	
			Taiflex MHK: PI=1mil&2mil,Cu=0.33oz&0.5oz&1oz		
			DuPont Pyralux AP:PI=1mil,&2mil&3mil; Cu= 0.5oz &1oz	PI= 4mil; Cu=2oz	
3		Coverlay	Shengyi SF305C: 0515&0525&1025&2030	/	
			Taiflex FHK: 1025&2035	/	
4		Adhesive	Taiflex BT: AD=10um, 25um and 40um	/	
5		PI stiffener	Taiflex MHK: PI=3mil&5mil&7mil&9mil	/	
6		3M	9077&6677&9058	/	
7	Others	Design software	CAM350&PROTEL&PADS&POWERPCB&AUTOCAD&GENESIS&ORCAD	/	
8		Gerber format	RS-274-D、RS-274-X	/	
9		Drill format	EXCELLON format	/	
10		Layer	1-4	5-8	
11		Board thickness (without stiffener)	0.05-0.5mm	0.5-0.8mm	
12		Tolerance of single layer	±0.05mm	±0.03mm	without stiffener
13		Tolerance of double-layer(≤0.3mm)	±0.05mm	±0.03mm	without stiffener
14		Tolerance of multi-layer(＜0.3mm)	±0.05mm	±0.03mm	without stiffener
15		Tolerance of multi-layer(0.3mm-0.8mm)	±0.1mm	±10%	without stiffener
16		Tolerance of board thickness(including PI stiffener)	±0.05mm	±10%	
17		Tolerance of board thickness(including FR4 stiffener)	±0.1mm	±10%	
18		Min. board size	5*10mm(without birdge);10mm*10mm(with bridge)	4*8mm(withoutbirdge);8mm*8mm(with bridge)	
19		Max. board size	9*14inch	9*23inch(PI≥1mil)	
20		Impedance control tolerance	Single-ended: ±5Ω(≤50Ω),±10%(>50Ω)	Single-ended: ±3Ω(≤50Ω),±8%(>50Ω)	
			Differential: ±5Ω(≤50Ω),±10%(>50Ω)	Differential: ±4Ω(≤50Ω),±8%(>50Ω)	
21		Min. coverlay bridge	8mil	/	
22		Min. bend radius of single layer	3-6 times of board thickness	/	
23		Min. bend radius of double-layer	6-10 times of board thickness	/	
24		Min. bend radius of multi-layer	10-15times of board thickness	/	
25		Min. dynamic bend radius	20-40 times of board thickness	/	single layer
26	Inner layer	Min. line width/spacing (12/18um copper)	3.0/3.2mil(loop lines 6.0/6.2mil)	2.8/2.7mil(loop lines 5/5.2mil)	
27		Min. line width/spacing (35um copper)	4.0/4.0mil(loop lines 8.0/8.0mil)	3.5/3.5mil(loop lines 7/7mil)	
28		Min. line width/spacing (70um copper)	6/6.5mil(loop lines 10/10.5mil)	5/6mil(loop lines 9/9.5mil)	

29		Max. copper thickness	2oz	3oz	
30	**Outer layer**	Min. line width/spacing (18um copper)	3/3.2mil(loop lines 6/6mil)	2.8/2.7mil(loop lines 5.5/5.5mil)	
31		Min. line width/spacing (35um copper)	4/4.5mil(loop lines 8/8.5mil)	3.5/3.5mil(loop lines 7.5/7.5mil)	
32		Min. line width/spacing (70um copper)	6/7mil(loop lines 10/11mil)	5.5/8.5mil(loop lines 9.5/10.0mil)	
33		Min. line width/spacing (105um copper)	10/13mil(loop lines 12/15mil)	9.5/12.5mil(loop lines 11.5/14.5mil)	
34		Max. finished copper thickness	3oz	5oz	
35	**Drilling**	Min. distance between via and conductors	6mil (<4 layer)	5mil (<4 layer)	
			8mil (4~6 layer)	7mil (4~6 layer)	
			12mil (7-8 layer)	10mil (7-8 layer)	
36		Min. mechanical drill hole	6mil	4mil	
37	**Solder mask and silk screen**	Solder mask color	green	/	
38		Min. solder dam (base copper ≤1oz)	4mil(green), 8.0mil(solder dam on the large copper)	/	
39		Min. clearance	3mil(part for 2.5mil)	/	
40		Silk color	white, yellow	/	
41	**Surface treatment**	Surface treatment	HASL ,ENIG, ENEPIG, Electrolytic Nickel Gold, Soft gold, Hard gold, Immersion silver and OSP	Immersion tin	
42		Mixed surface treatment	ENIG+OSP,ENIG+G/F	/	
43		Gold thickness (ENIG)	0.05-0.10um	/	
44		Nickel thickness (ENIG)	3-6um	/	
45		Gold thickness (ENEPIG)	0.05-0.10um	/	
46		Palladium thickness (ENEPIG)	0.05-0.15um	/	
47		Nickel thickness (ENEPIG)	3-6um	/	
48		Electrolytic Nickel thickness	3-6um	/	
49		Electrolytic Gold thickness	0.05-0.10um	/	
50		Hard gold thickness(including lead)	0.1-1.5um	/	
51		OSP thickness	0.1-0.3um	/	
52		Immersion silver thickness	0.2-0.4um	/	
53	**Routing**	Laser accuracy	±0.05mm	/	
54		Punch accuracy	±0.05mm - ±0.15mm	/	