

PCB Technical Capacity of SUCCESS CIRCUITS (2025.04 Updated)

No.	Item		Capacity for sample	Capacity for small & medium production
1	Material type	FR4(General)	Brand: Shengyi, Guoji, KB, ITEQ GDM	Brand: Shengyi, Guoji, KB, ITEQ GDM
2		Halogen Free	S1155, PP S0155(General TG); S1165, PP S0165(High TG)	S1155, PP S0155(General TG); S1165, PP S0165(High TG)
3		FR4(High TG)	S1171, S1000-2, FR408, FR408HR, IT180A, N4000-13, PCL-370HR	S1171, S1000-2, IT180A, N4000-13, PCL-370HR
4		Ceramic substrate	Rogers4350, Rogers4450, Rogers4003, 25FN, 25N	Rogers4350, Rogers4450, Rogers4003, 25FN, 25N
5		PTFE	Rogers series, Taconic series, Arlon series, Nelco series, F4B series	T TLX, TLY Series of Taconic , Diclad, AD Series of Arlon
6		Metal base	Aluminum base, Copper base, Iron base(1-4L)	Aluminum base(1-4L)
7		Mixed Material Lamination	FR4 and Aluminum base mixed lamination, FR4 and Rogers mixed lamination, Aluminum base and Rogers mixed lamination	FR4 and Aluminum base mixed lamination, FR4 and Rogers mixed lamination,
8	Parameter	Number of Layers	1-30 Layers	1-20 Layers
9		Finished board thickness	Board with HASL:0.4—3.2 MM, Others:0.13—7.0 MM Min. thickness for 4L: 0.6mm(0.4MM), for 6L: 0.7mm,for 8L: 1.0mm, for 10L: 1.6mm	Board with HASL :0.4—3.2 MM, Others:0.2—6.0 MM Min. thickness for 4L: 0.6mm (0.4MM), for 6L: 0.7mm,for 8L: 1.0mm, for 10L: 1.6mm
10		Max. production sizes	Board with HASL:350mm*300mm(0.4mm≤Thickness≤0.8mm) 420mm*350mm(0.8mm≤Thickness≤1.2mm)	Board with HASL:350mm*300mm(0.4mm≤Thickness≤0.8mm) 420mm*350mm(0.8mm≤Thickness≤1.2mm)
11			RoHS compliant board and HASL board thickness > 1.2mm: 1L-2L:570mm*850mm, 4L:508mm*609mm, 6L and above:	RoHS compliant board and HASL board thickness > 1.2mm: 1L-2L:450mm*610mm, 4L:450mm*600mm, 6L and above: 450mm*530mm
12		Profile	CNC milling ,V-CUT, Break tab, Stamp holes, Punching	CNC milling ,V-CUT, Break tab, Stamp holes, Punching
13		Distance from V-cut center line to	T≤1.0mm: 0.3mm (20°) , 0.33mm(30°), 0.37mm(45°), 0.42mm(60°)	T≤1.0mm: 0.3mm (20°) , 0.33mm(30°) , 0.37mm(45°) , 0.42mm(60°)

14			1.0mm < T≤1.6mm: 0.36mm (20°), 0.4mm(30°), 0.5mm(45°), 0.6mm(60°)	1.0mm < T≤1.6mm: 0.36mm (20°), 0.4mm(30°), 0.5mm(45°), 0.6mm(60°)
15		circuits of Inner & outer layer	1.6mm < T≤2.4mm: 0.42mm (20°), 0.5mm(30°), 0.6mm(45°), 0.8mm(60°)	1.6mm < T≤2.4mm: 0.42mm (20°), 0.5mm(30°), 0.6mm(45°), 0.8mm(60°)
16			2.4mm < T≤3.0mm: 0.47mm (20°), 0.6mm(30°), 0.8mm(45°), 1.0mm(60°)	2.4mm < T≤3.0mm: 0.47mm (20°), 0.6mm(30°), 0.8mm(45°), 1.0mm(60°)
17			0.1mm≤Hole Dia. ≤6.2mm (Drill bit size: 0.15mm—6.3mm)	0.15mm≤Hole Dia. ≤6.2mm (Drilling size: 0.2mm—6.3mm)
18	Drilling Hole	Mechanical hole(Finished)	Min. finished hole for PTFE and Mixed Material Lamination: 0.35MM	Min. finished hole for PTFE and Mixed Material Lamination: 0.35MM (Drill bit)
19			Mechanical blind/buried hole Dia. ≤0.3mm (Drill bit size≤0.4mm)	Mechanical blind/buried hole Dia. ≤0.3mm (Drill bit size≤0.4mm)
20			Min. Width for Slot: 0.5mm (Min. Milling bits size :0.6mm)	Min. Width for Slot: 0.5mm (Min. Milling bits size :0.6mm)
21			Min. Crossed hole Dia.: 0.35mm (Drill bit size: 0.45mm)	Min. Crossed hole Dia.: 0.35mm (Drill bit size: 0.45mm)
22			Dia. For Hole plugged with solder mask≤0.3mm (Drill bit size≤0.4mm)	Dia. For Hole plugged with solder mask≤0.3mm (Drill bit size≤0.4mm)
23			0.1mm≤Finished Dia. for hole plugged with resin≤0.4mm	0.1mm≤Finished Dia. for hole plugged with resin≤0.4mm
24			Min. Finished laser drilling hole Dia. 0.1mm (Depth ≤ 65um) ; 0.13mm (Depth ≤ 100um)	/
25	Drilling Hole	Laser drilling hole(Finished)	0.075mm≤Finished Dia. For blind hole plugged with resin≤0.20mm	/
26			0.075mm≤Finished Dia. For blind hole plugged with plated copper≤0.15mm	/
27		Back drilling hole	0.5mm≤Back drilling hole Dia. ≤6.5mm	0.5mm≤Back drilling hole Dia. ≤6.5mm
28			bit	Standard drilling: 130° (Driller Dia. ≤3.175mm), 165° (3.175mm≤Driller Dia. ≤6.3mm)
29		Countersink hole, Step hole		Special drilling: 82° 90° 120° (0.3mm≤Countersink hole drilling Dia. ≤
30			0.1mm (T≤0.6mm) 0.15mm (T≤1.2mm)	0.1mm (T≤0.6mm) 0.15mm (T≤1.2mm)
31		Min hole & Aspect Ratio	Max. Aspect Ratio: 12:1 (Min. drilling > 0.2mm)	Max. Aspect Ratio: 10:1 (Min. drilling > 0.2mm)
32	Circuit	Copper weight	Inner layer: 1/3 OZ – 6 OZ, Out layer: 1/2 OZ – 6 OZ 2L: Max. 6oz	Inner lay: 1/3 OZ – 6 OZ, Outer layer: 1/2 OZ – 6 OZ 2L: Max. 6oz

33	graphic	Capacity for Inner layer Etching	1/3 OZ , 1/2 OZ	3 / 2.5 mil	1/3 OZ , 1/2 OZ	4 / 3 mil
34			1 OZ	4 / 3 mil	1 OZ	4.5 / 3.5 mil
35			2 OZ	6 / 3.5 mil	2 OZ	7 / 5 mil
36			3 OZ	8 / 4 mil	3 OZ	9 / 6 mil
37			4 OZ	10 / 6 mil	4 OZ	Need to be evaluated
38		Capacity for Outer layer Etching	1/3 OZ	4.5 / 3 mil	1/3 OZ	5 / 4 mil
39			1/2 OZ	4.5 / 4 mil	1/2 OZ	5 / 4 mil
40			1 OZ	5.5 / 4 mil	1 OZ	6 / 4 mil
41			2 OZ	7 / 5 mil	2 OZ	8 / 5 mil
42			3 OZ	9 / 5 mil	3 OZ	10 / 5 mil
43			4 OZ	11 / 5.5 mil	4 OZ	13 / 8 mil
44			5 OZ	13 / 8 mil	5 OZ	Need to be evaluated
45	Circuit graphic	Capacity for Outer layer Etching	6 OZ	Need to be evaluated	6 OZ	Need to be evaluated
46		Min. Distance from drilling hole to	5.5 mil (First stack up), 9 mil (Second stack up), 10 mil (Third Stack up)		7 mil (First Stack up), 10 mil (Second stack up)	
47		Min. Distance from drilling hole to	5.5 mil (< 8L), 7 mil (8L≤Layers≤12L), 8 mil (L > 12L)		6 mil (< 8L), 8 mil (8L≤L≤12L)	
48		Min. Distance from laser drilling	6 mil		7 mil	
49		Min. distance from Outline to	8 mil		8 mil	
50		Min. space for inner layer isolated	8 mil		10 mil	
51		Min. space for inner layer copper	8 mil		10 mil	

52		Min. Distance from goldfinger	8 mil	10 mil
53		Min. space between wall of hole on	8 mil	10 mil
54		Min. Distance between pads with	4 mil (Without solder mask bridge)	5 mil (Without solder mask bridge)
55		Min. Distance between pads with	6 mil (Isolation 10mil for pads on copper)	7 mil (Isolation 10mil for pads on copper)
56		Min. Annular ring for Vias	14 mil (8 mil Hole Dia. , H/1 OZ base copper), 20 mil (8 mil Hole Dia. , 2 OZ base copper)	18 mil (8 mil Hole Dia., H/1 OZ base copper), 24 mil (8 mil Hole Dia., 2 OZ base copper)
57		Min. Annular ring for DIP holes	20 mil (8 mil Hole Dia., H/1 OZ base copper), 24 mil (8 mil Hole Dia., 2 OZ base copper)	22 mil (8 mil Hole Dia., H/1 OZ base copper), 26 mil (8 mil Hole Dia., 2 OZ base copper)
58		Min. pads for BGA(Finished)	Immersion gold, Immersion silver, Immersion Tin, OSP≥8 mil	Immersion gold, Immersion silver, Immersion Tin, OSP:≥10 mil
59			HASL: Isolated circuit ≥8 mil, Solder mask opening on copper≥14 mil	HAL: Isolated circuit≥10 mil, Solder mask opening on copper≥16 mil
60		Min. width/ space for grid	8/8 mil	10/10 mil
61		Min. space between goldfingers	6 mil	7 mil
62		Colors for solder mask inks	Green, Yellow, Red, White, Blue, Black, Matt Black, Matt Green	Green, Yellow, Red, White, Blue, Black, Matt Black, Matt Green
63		Colors for Silkscreen	White, Yellow, Black, Grey, Orange, Green	White, Yellow, Black, Grey, Orange, Green
64		Min. Width for solder mask bridge	Base coppers≤1 OZ, 4 mil (Green) , 5mil (Other colors)	Base coppers≤1 OZ, 4 mil (Green) , 5mil (Other colors)
65			Base copper: 2-4 OZ, 6mil.	Base copper: 2-4 OZ, 6mil.
66	Silkscreen	Min. single-sided width for solder	2 mil (Partial 1.5 mil)	2.5 mil (Partial 2 mil)
67		Min. Width & Height for silkscreen	Min. Width: 5 mil, Min. height: 28 mil	Min. Width: 5 mil, Min. height: 32 mil
68		Type for silkscreen(only for white)	Serial number, Bar code, Two-dimension code	Serial number, Bar code, Two-dimension code
69		Min. space from peel able solder	8 mil	12 mil

		mask to pad		
70		Min. space from silkscreen to pad	4 mil	6 mil
71		Min. space from Carbon to pad	8 mil	12 mil
72		Min. space from carbon to carbon	13 mil	16 mil
73	Surface finishing	RoHs compliant	HASL(Lead free), Immersion gold, Immersion Tin, Immersion Silver, OSP, Hard Gold, Immersion gold + OSP, Immersion gold + Plated gold fingers, Gold plated + Plated gold fingers, Immersion Silver + Plated gold fingers, Immersion Tin + Plated goldfingers, ENEPIG, Pattern plated (Base copper ≤2 OZ)	HASL(Lead free), Immersion gold, Immersion Tin, Immersion Silver, OSP, Immersion gold + Plated gold fingers, Gold plated + Plated gold fingers, Immersion Silver + Plated goldfingers, Immersion Tin + Plated goldfingers, ENEPIG , Pattern plated (Base copper
74				
75				
76		No RoHs compliant	HASL	HASL
77	Surface plating and Coating thickness	HASL	2-40 um (0.4um Large Tin area)	2-40 um (0.4um Large Tin area)
78		Pattern plated	Nickel:3um-5um, Gold :0.025um-0.1 um	Nickel:3um-5um, Gold :0.025um-0.1 um
79		Immersion gold	Nickel:3um-5um, Gold :0.05um-0.1 um	Nickel:3um-5um, Gold :0.05um-0.1 um
80		Immersion Tin	≥1.0 um	≥1.0 um
81		Immersion silver	0.1 um-0.3 um	0.1 um-0.3 um
82		OSP	0.2 um-0.3 um	0.2 um-0.3 um
83		Plated hard gold	≤3 um (2.0 um or more need to review)	≤3 um (0.8 um or more need to review)
84		Chemical Nickel& Pd Gold	Soldering: Nickel/3 um-5 um, Pd/05 um-0.1 um, Gold/ 0.03 um-0.05 um Bonding: Nickel/3 um-5 um, Pd/ 0.1 um-0.15 um, Gold/0.07 um-0.15 um	Soldering: Nickel/3 um-5 um, Pd/ 0.05 um-0.1 um, Gold/0.03 um-0.05 um Bonding: Nickel/3 um-5 um, Pd/0.1 um-0.15 um, Gold/ 0.07 um-0.15 um
85				
86				
87		Solder mask	15 um-25 um(solder mask on copper), 8 um-12 um(solder mask on via and the edge of circuit) (Once)	15 um-25 um(solder mask on copper),8 um-12 um(solder mask on via and the edge of
88		KEY CARBONIZED	0.1 um-0.35 um	0.1 um-0.35 um
89		Peelable mask	0.2 um-0.5 um	0.2 um-0.5 um
89	Tolerance	PTH	+ / - 0.076 um	+ / - 0.076 um
90		NPTH	+ / - 0.05 um	+ / - 0.05 um

91		Press-fit	+ / - 0.05 um	+ / - 0.05 um
92		Precision of hole location	+ / - 0.076 um	+ / - 0.076 um
93		Angle of counter-boring	+ / - 10°	+ / - 10°
94		Orifice of counter-boring	+ / - 0.2 mm	+ / - 0.2 mm
95		Depth of counter-boring	+ / - 0.2 mm	+ / - 0.2 mm
96		Precision of rear drill depth	+ / - 0.15mm	+ / - 0.2mm
97		Irregular hole(Milling)	+ / - 0.13 mm	+ / - 0.15 mm
98		Blind slot precision (NPTH)	+ / - 0.1 mm	/
99		Trace width	Trace width≤10 mil:+ / - 1 mil, Trace width > 10 mil:+ / - 1.5 mil	Trace width≤10 mil:+ / - 1.5 mil, Trace width > 10 mil:+ / - 2 mil
100		Pad	+ / - 1.5 mil (Pad≤10 mil),+ / - 10% (Pad > 10 mil)	+ / - 1.5 mil (Pad≤10 mil),+ / - 10% (Pad > 10 mil)
101		Alignment accuracy between inner	≤ 5 mil	≤ 5 mil
102		Board thickness tolerance	Thickness≤1.0 mm: + / -1.0mm, 1.0mm < Thickness≤1.6mm: + / - 8%, Thickness > 1.6mm: + / - 10%	Thickness≤1.0 mm: + / -1.0mm, 1.0mm < Thickness≤1.6mm: + / - 8%, Thickness > 1.6mm: + / - 10%
103				
104		Outline tolerance	+ / - 0.1mm	+ / - 0.13mm
105		Outline location tolerance	+ / - 0.1mm	+ / - 0.1mm
106		V-CUT angle tolerance	+ / - 5°	+ / - 5°
107		V-CUT symmetry tolerance	+ / - 0.1mm	+ / - 0.1mm
108		V-CUT balance tolerance	+ / - 0.1mm	+ / - 0.1mm
109		Chamfer angle tolerance for gold	+ / - 5°	+ / - 5°
110		Chamfer angle balance tolerance for	+ / - 0.13mm	+ / - 0.13mm
111		Impedance tolerance	+ / - 5 Ohm (< 50 Ohm) , + / - 10% (≥50 Ohm)	+ / - 5 Ohm (< 50 Ohm) , + / - 10% (≥50 Ohm)
112	Others	Special technic	Via on pad, Plug with resin, Gold finger without leading wire, Plated hard	Via on pad, Plug with resin, Gold finger without leading wire, Plated hard gold without

		gold without leading wire partial, Metallized edge, Impedance, Half hole, Back board, HDI, Multilayer blind& buried via, Buried resistance	leading wire partial, Metallized edge, Impedance, Half hole, Back board, HDI,
113	Mechanical blind& buried via	Pressing on same sides≤3 times	Pressing on same sides≤3 times
114	HDI board (LDPP)	1+n+1, 1+1+n+1+1, 2+n+2(n for buried via≤0.3mm). Laser buried via can be plugged by resin and copper.	/
115	Coefficient of Thermal	1-4 W/mK	1-4 W/mK
116	Metal substrate process type	Prebonding, Postbonding, Sintering, Metal cored, Burying metal blocks	Prebonding, Postbonding, Sintering
117	Minimum thickness for inner layer	0.05mm(Non blind& buried via) ,0.13mm(blind& buried via)	0.075mm(Non blind& buried via), 0.13mm(blind& buried via)
118	Minimum thickness for insulating	3 mil (H OZ Only), the other 4mil	4 mil (H OZ Only), the other 6mil
119	Warp	Standard: + / - 0.5%, blind& buried via or asymmetric pressing:: + / -1.0%	Standard: + / - 0.75%, blind& buried via or asymmetric pressing:: + / -1.0%
120	Minimum Radius for inner angle	0.3 mm	0.3 mm
121	Maximum voltage	500 V	500 V
122	Maximum current	200 mA	200 mA
123	Solder mask hardness	>6 H	>6 H
124	Thermal Stress	260 °C,20 s	260 °C,20 s
125	Peelable strength	1.4 N/mm	1.4 N/mm

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