

# **IPCB**

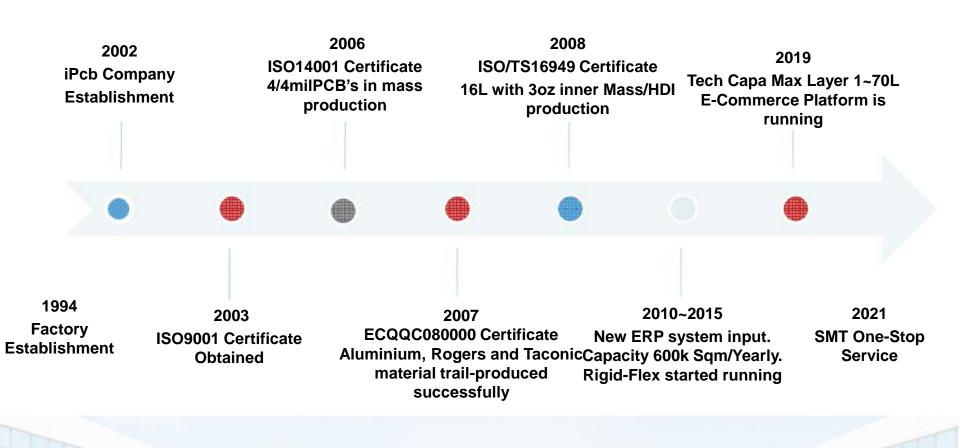
# **IPCB Circuits Limited**



The most reliable PCB custom service factory

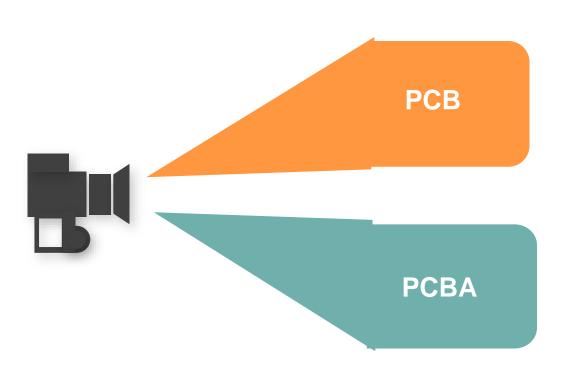


#### Milestone





#### **Business Lines**



**HIGH FREQUENCY PCB** 

**IC SUBSTRATE** 

IC TEST BOARD

**HIGH SPEED PCB** 

RIGID-FLEX(R-F) PCB

**HDI PCB BOARD** 

**MULTILAYER PCB** 

**SPECIAL PCB** 

**PCB ASSEMBLY** 



### **Products Segment**

■ High frequency ■ IC Substrate

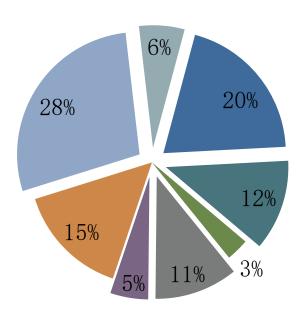
■IC Test Board ■High Speed

■ Rigid-Flex

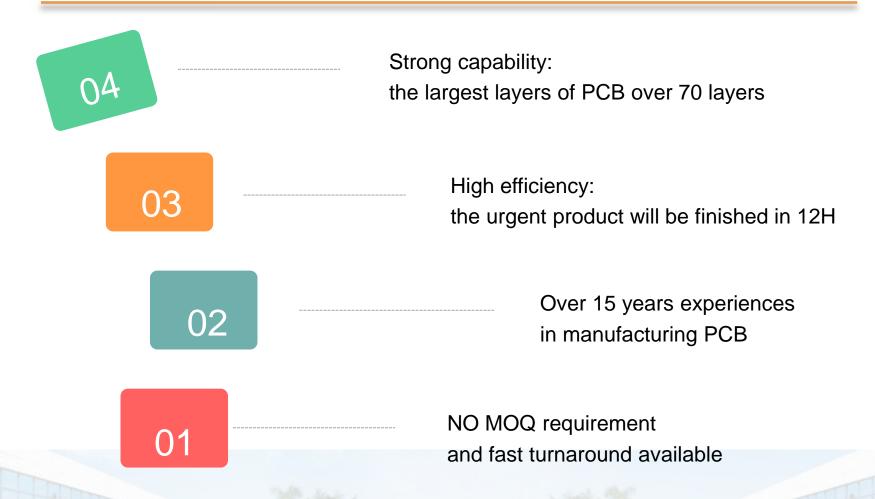
■HDI PCB

■Multilayer

■ Other



#### **Advantages**



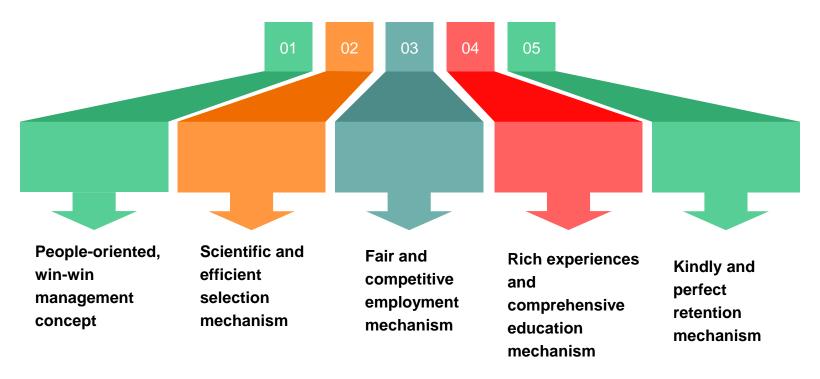


### **Cultural philosophy**





#### Management philosophy



**Cooperation** --- is the key point, Team work to ensuring the quality and service of iPcb.

**Pragmatic** --- is the premise "perseverance" and "determination" can overcome all difficulties.

**Innovative** --- is the soul, the life force and source of iPcb.

**Gratitude** -- with our actions to repay customers& society.

**Integrity** --- is the basic, to treat people sincerely.

#### Value & Mission & Goal

#### Responsibility

Adheres to the environmental philosophy of reducing pollution

Making good use of resources and sustainable development.

Improve the production process of PCB Solve technical problems for customers Help customers win the market.

Provide customers with more stable quality Higher performance products and more satisfactory service.

#### **Quality concept**

Do well the first time, take precautions first.

#### Goal

Pioneer of online ordering, To be the easiest printed circuit board manufacturer to do business with.

**Guaranteed quality from quote to delivery** 





#### **IPCB** Position



**iPcb Hongkong Office** 

iPcb Shenzhen R&D / Marketing Office

iPcb Shenzhen Factory

Capa:15k Sqm/M

For Sample & small-batch product

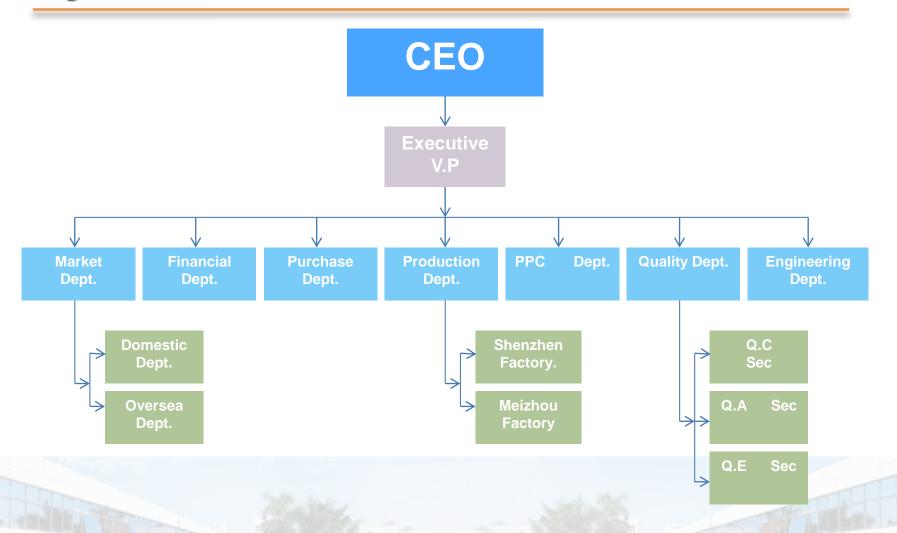
iPcb Meizhou Manufacturing Factory

Capa:50k Sqm/M

iPcb TaiWan Office



### Organization





### **Products Application Fields**

- -Automotive Field
- -Aerospace
- -Domestic Appliance
- -Communication

















# Technical Capability - High Frequency & Mixed Board

No.	High Frequency and Mixed Board	Description	Data and Model
1	Rogers Material	RO3000 Series	Ro3003, Ro3006, Ro3010, Ro3035, Ro3203, Ro3206, Ro3210
2	Rogers Material	RO4000 Series	Ro4003C, Ro4350B, Ro4360, Ro4533, Ro4700, Ro4835
3	Rogers Material	RT5000 Series	RT5870, RT5880
4	Rogers Material	RT6000 Series	RT6002, RT6035, RT6006
5	Rogers PP	Semi-cured adhesive	Ro4403(4mil), Ro4450B(4mil), Ro4450F(4mil), RO3001(1,5mil)
6	Arlon Material	Arlon Series	Diclad, Cuclad, Isoclad, AD Series, CLTE eles
7	Arlon PP	Semi-cured adhesive	25FR 1080 (4mil) , 25FR 2112 (6mil) , Cuclad6700 (1,5mil)
8	Taconic Material	Taconic Series	TLX, TLY, RF, TLC, TLG Series, CER10 eles
9	Taconic PP	Semi-cured adhesive	TP-32 (4mil) 、TPG系列 (4mil) 、HT1,5 (1,5mil)
10	Wanglin Material	wangling	F4BK, F4BM, F4B, TP-1/2, TF-1/2, CT330, CT350, CT440, CT615
11	Finish copper thickness	oz	0,5oZ - 2oZ
12	Material copper thickness	oz	0,5oz - 1oZ
		RO3000 Series	590+440mm (Single/Double Side) 、580+420mm (Multi-layers)
		RO4000 Series	1200+430mm (Single/Double Side) 、880+600mm (Multi-layers)
		RT5000 Series	590+440mm (Single/Double Side) 、580+420mm (Multi-layers)
13	Max finish board size	RT6000 Series	590*440mm (Single/Double Side) 、580*420mm (Multi-layers)
		F4BM Series	1480+430mm (Single/Double Side)
		TP/TF Series	180mm+180mm (Single/Double Side)
		CT Series	1200*430mm (Single/Double Side) 、880*600mm (Multi-layers)
	Min finish board size	All Material	0.5*1.0mm
	The number of layers		1-321ayers
16	High Frequemcy mixed pressure layers		4-32layers
17	Material mixed pressure	Variety	Rogers/Taconic/Arlon/Wanglin and FR-4
18	Min core thickness	mil	4mil
19	Max PTFE array size (thickness≤0,50mm)	mm	16+18
20	Finish board thickness	mm	0.13-8.0mm(Double Side) 0.4 -8.0mm(Multi-Layers)
	Min PTFE material hole size	mm	0,38
21	Dielectric constant	Range	1-25
22	Material thickness tolerance	mm	±0,05mm
23	Finish board thickness tolerance	mm	Board thickness≤1,0mm: ±0,1 、 Board thickness≤1,0mm: ±10%
24	Min Pattern Width tolerance	mm	±20um
25	Min Pattern Width / Spacing	mm	0,076mm



# Technical Capability - Rigid & Flex PCB

No.	Rigid & Flex PCB	Description	Data and Model
1	FPC Main material	Brand	taiflex、graceth)、SY、松润
2	PCB Material	Brand	SY, ITEQ, KB
3	Texture	Texture Brand	PI、 PET
4	Cover Film	Brand	taiflex, graceth, SY
5	Max Layers	LAYER	1-14layers (sample) 、1-12layers(manufacture)
6	Finish Board thickness	mm	0,25-6,0mm(samplel) Rigid - Flex PCB 0,25-6,0mm
7	Min Pattern Width / Spacing	mm	0,05mm/0,05mm
8	Max finish board size	mm	230+450mm
9	Finish Board thickness tolerance	mm	±50,05mm
10	PP Thickness	um	12,5um 、 25um 、 50um
11	Copper thickness	um	12um 、 18um 、 36um 、 70um
12	Stiffener materail	Variety	FR4/PI/PET/SUS/PSA
13	Surface treatment	Variety	ENIG, Immersion tin, OSP, immersion silver, plating gold
14	Min hole size	mm	Mechanical Hole : 0,15mm , Laser HoleO,1mm
15	Hole tolerance	mm	NPTH:±0,05mm 、PTH:±0,075mm
16	Cover film color	Variety	Yellow , Black
17	PI thickness	mil	0,5mil, 0,7mil, 0,8mil, 1mil, 2mil
18	Max number of layers of FPCB		1-8layers
19	Min finished size	mm	5mm+8mm
20	Min pad	mm	inner layer (5mil) , outer layer (4mil)
21	Stiffener min size	mm	4mm×5mm
22	Stiffener max size	mm	32mm×32mm
23	Stifferner alignment accuracy	mm	±0,075mm
24	Cover minimum openning size	mm	0.6×0.6mm(steeling tooling)、0.5×0.5mm(Precision tooling)
		mm	0,5mm(Precision tooling)、0,2mm (Laser Routing) 、
25	Minimum openning spacing for covering film	11011	drilling)
26	Coating film overflow amount (unilateral)	mm	Normal0,08-0,12mm 、 Limitation0,03mm (TPX压制)
27	Min diameter of gold finger semicircle hole	mm	0,25mm, Normal value0,3mm
28	Rigid-Flex PCB: Peel-off strength	И	1,4N
29	Rigid-Flex PCB: Planeness	um	Less than 15um before baking; less than 30um after baking
30	Rigid-Flex PCB: thermal shock	°C	288°C (3 times within 10 seconds)
31	Rigid-Flex PCB: W/B gold wire pull strength	g	> 6g
32	Rigid-Flex PCB: min,board thickness	mm	FPCB 0,1mm、4Layers 0,3mm、6Layers 0,5mm、8Layers 0,6mm、10Layers0,8mm



# **Technical Capability - HDI Board**

No.	HDI Board	Description	Data and Model
1	Material	Brand	SY, ITEQ, KB, NOUYA
2	HDI Construction		1+N+1、2+N+2、3+N+3、4+N+4、5+N+5、6+N+6、anylayer
3	Construction order		N+N、N+X+N、1+(N+X+N)+1
4	Layer		1-40Layers
5	Min Pattern Width / Spacing	mil	2/2
6	Min Mechanical Hole	mm	0,15mm
7	Min Thickness of Core Board	mil	2mil
8	Laser Hole	mm	0,075mm-0,1mm
9	Min thickness of PP	mil	2mil
10	Max diameter of resin plug hole	mm	0,4mm
11	Electroplating to fill holes		Can do it,
12	Electroplating to fill holes size	mil	3-5mil
13	hole pile pad/hole pile hole/pad hole(VOP)	mil	Can do it,
14	The distance from the wall of via hole to the pattern	mil	mil
15	Laser drilling hole accuracy	mil	0,025mm
	Min BGA pad center distance	mil	0,3mm
17	Min SMT	mil	0,25nm
18	Plating hole-filling sag	mil	≤10um
19	Back drilled/countersink hole tolerance	mil	±0,05mm
20	Through-hole plating penetration capacity	Rate	16:1
21	Blind hole plating penetration capacity	Rate	1,2:1
22	BGA min PAD	mil	0,2
23	Min Buried Hole(Mechanical Hole)	mil	0,2
	Min Buried Hole(Laser Hole)	mil	0,1
25	Min Blind Hole(Laser Hole)	mil	0,1
26	Min Blind Hole(Mechanical Hole)	mil	0,2
27	Min spacing between laser blind hole and mechanical buried hole	mil	0,2
28	Min Laser Hole	mil	0,10(depth≤55um), 0,13(depth≤100um)
29	MinBGA pad center distance	mil	0,3
	Interlaminar alignment	mm	±0,05mm(±0,002")



# **Technical Capability - D/S, Multi-Layers**

No.	Item-Double/Multi Layers	Description	Data and Model
1	Layer	Layer	1-70
2	Material	Brand	SY, ITEQ, KB, NOUYA
3	Surface treatment		HASL lead-free,Immersion Gold、OSP、Immersion Tin、Immersion Silver、 Plating Gold、Plating Tin、ENEPIG
4	Selectivity surface treatment		ENIG+OSP、ENIG+G/F、Flash Gold+G/F、Immersion Silver+G/F、Immersion Tin+G/F
5	Solder mask color		green.yellow.black.matte black.blue.red.white.matte green
6	Silkscreen color		White, yellow, black
7	Max board size with 2L	mm	2000+500
8	Max board size with 4L,6L	mm	570*850 or 1150*430(Exceeding 570MM shall be reviewed)
9	Max board size with more than 8L	mm	570+670 or 980+430(Exceeding 570MM shall be reviewed)
10	MiN board size	mm	0,5*1,0mm(thickness≤0,5mm)、1,0*2,0mm(thickness≥0,5mm)
11	Min outline tolerance	mm	±0.05mm(Laser Routing), ±0.1mm(Mechanical Routing)
12	Board Thickness	mm	0,13-8mm
13	Double side board thickness	mm	0,13-3,6mm
14	4Layers board thickness	mm	0,30-7mm
15	6Layers board thickness	mm	0,6-8mm(6L), 0,8-8mm(8L), 1,0-8mm(1OL), 1,0-8mm(1ZL)
16	The tolerance of board thickness	mm	±0,1mm(thickness≤1,0mm), ±10%mm(thickness>1,0mm)
17	Min Drilling hole size	mm	0,075-0,1mm(Laser)、0,15mm(Mechanical)
18	Single Max Drilling	mm	6,5mm(Drill Bit)
19	Max Drilling	mm	50mm
20	Min PTH tolerance	mm	±0,05mm、 ±0,075mm
21	Min NPTH tolerance	mm	±0,05mm(Limitation+0, -0,05mm or +0,05, -0mm)
22	Min hole tolerance	mm	±0,075mm
23	Max Drilling tolerance	mm	±0,1mm
24	Slot hole	mm	0,5-6mm
25	Min slot hole length	mm	1,0mm
26	Slot hole aspect ratio	mm	1:2
27	Min slot hole tolerance	mm	Slot width, ±0,15mm
28	Min slot hole tolerance	mm	Slot width direction±0,10, slot length direction±0,15
29	Countersink hole angle & size		Big hole82, 90, 120degree, dia≤10mm



#### **Main Material**



























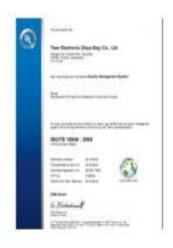




### **Quality Assurance**









ISO9001 Certificate

ISO14001 Certificate

TS16949 Certificate

UL Yellow card



### **Main Equipment**



**CNC** Drilling



**Laser Drilling** 



**Dry Film** 



**Chemical PTH** 



**Pattern/Panel Plating** 



Wet Film/ Exposure



# **Main Equipment**



Oven



**Auto Test** 



Legend



E - Test



**Flying Test** 



2D X-Y Machine

# **Main Equipment**



Outline



**OSP** 



**Physics Lab** 



**Cu Tester** 



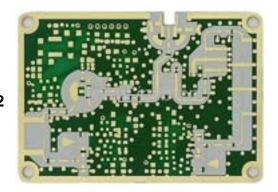
**Ionic Contamination Machine** 

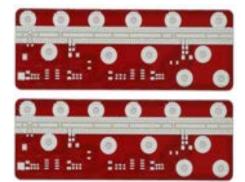


**Impedance Control Machine** 

#### **Products**

8L 2.0T RO3010 + FR4 Dk:10.2 ENIG

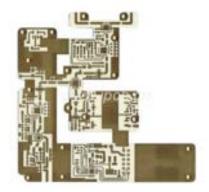




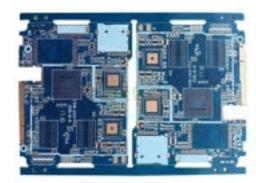
2L 1.0T RO4350B 4mil/4mil DK:3.48 Immersion silver



2L 1.6T PTFE F4BM DK2.55



4L 1.2T RO4003C+FR4 Dk:3.55

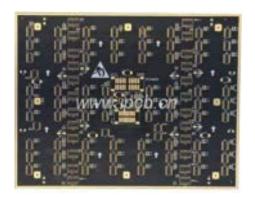


12L 1.6T HDI FR4 (ITEQ)
3mil/3mil Laser Drilling
0.1mm



#### **Products**

6L 1.2T FR4(ITEQ180) 3mil/3mil ENIG P2.5 LED Board

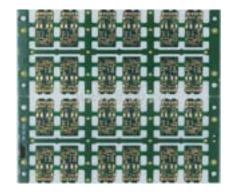




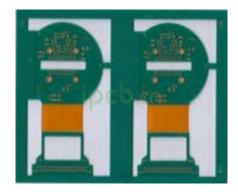
8L 1.0T HDI 1-2L,1-3L,6-8L,7-8L FR4 (ITEQ) 3mil/3mil Laser Drill 0.1mm ENIG+OSP



4L 0.6T FR4 3mil/3mil ENIG+OSP WIFI Module



4L 0.8T FR4 3mil/3mil ENIG +OSP Type-c Charge



8L FR4 1.2mm+PI 0.15mm Rigid4L +,Flex 4L



#### **Customers**

























# **SMT Dep**





SMT-3 Line





### SMT Dep -AOI & X-Ray Process



AOI – CTQ Process







X- Ray Process



# **Smt Dep –Inspection**

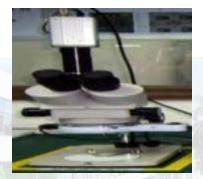
















iPCB Circuits Limited



# **SMT Dep –Assembly & Warehouse**



Assembly

#### Warehouse





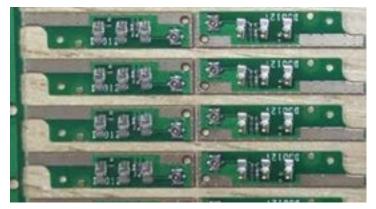
# **Smt Dep –Reflow Process**

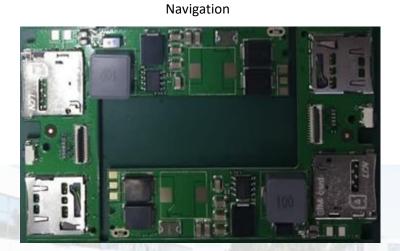




### **Smt Dep -Products**

**Leaf Spring** 

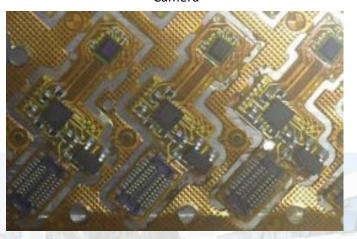




Mobile Phone



Camera





#### **Contact Us**



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#### IPCB CIRCUITS LIMITED

Committed to continuous research and development of excellent suppliers and efforts

# Thank You!

**WWW.IPCB.COM** 

