

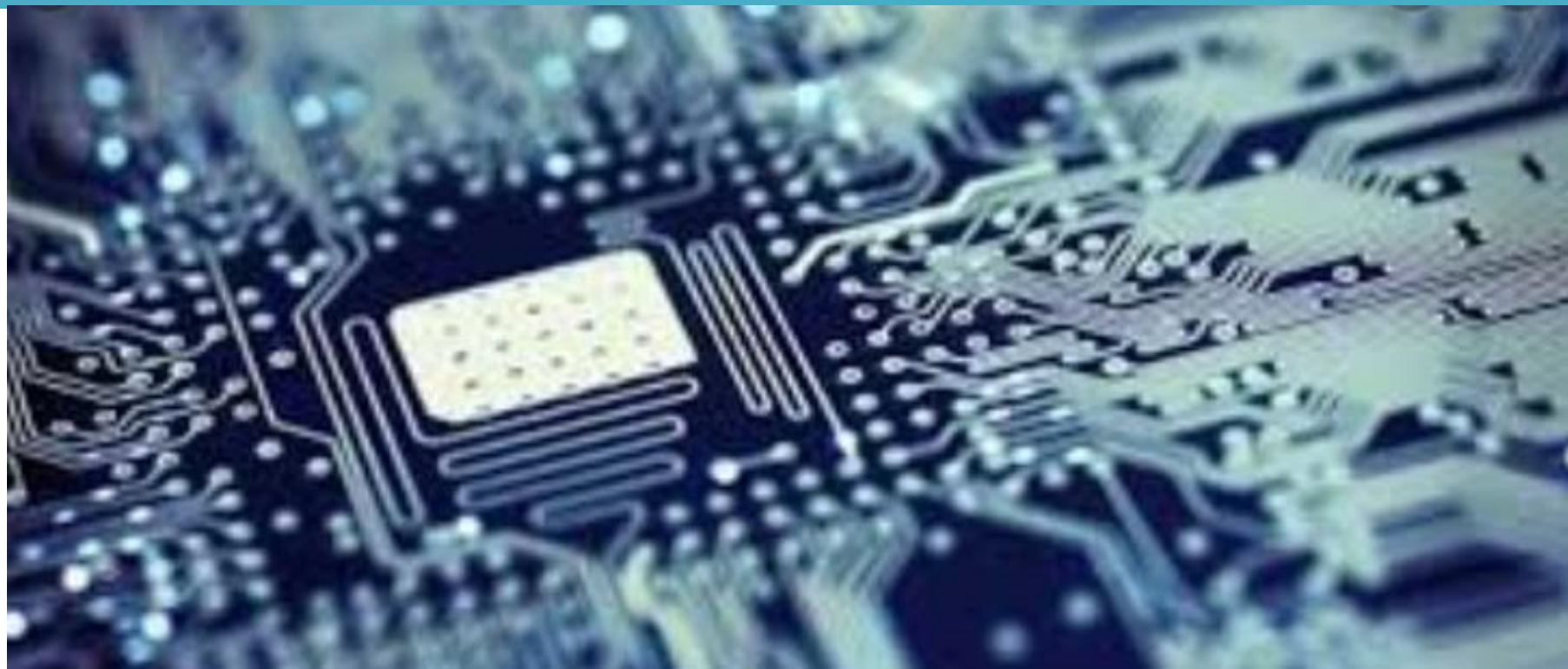


<http://www.gia-tzoong.com.tw/>

佳總興業股份有限公司

GIA TZOONG ENTERPRISE CO., LTD (Taiwan Factory)

GIA TZOONG (shenzhen) LTD.



公司基本資訊

Company Introduction

Company Overview 公司簡介

Established	19 September, 1988
Employees	Taiwan 385 people, China 300 people
Capital Investment	Taiwan: US \$ 58 million , China: US\$ 1 million
Total Plant Area	Taiwan: 26,400 m²
	China: 120,000 m²
Current Capacity	Taiwan PCB 40,000 m²/month
	China PCB 35,000 m²/month
QA System	UL, ISO9001, IATF-16949, ISO14001

Key Milestone 公司里程碑

1995-1999

- ★ Thin Foil PCB development and qualification
- ★ Increasing capacity to 350,000 sq.ft/month from 15,000 m²/month
- ★ Passed OTC audit (stock exchange)
- ★ ISO 9001:2000 certified

2010-2015

- ★ Established Punch factory
- ★ Aluminum Flex board
- ★ MCPCB Coreboard (Copper)
- ★ Increased production capacity to 40,000 m²/month

1988 – 1989

- ★ Establishment with capital investment of US\$50M.
- ★ Started PCB production.
- ★ Multi-layer PCB production

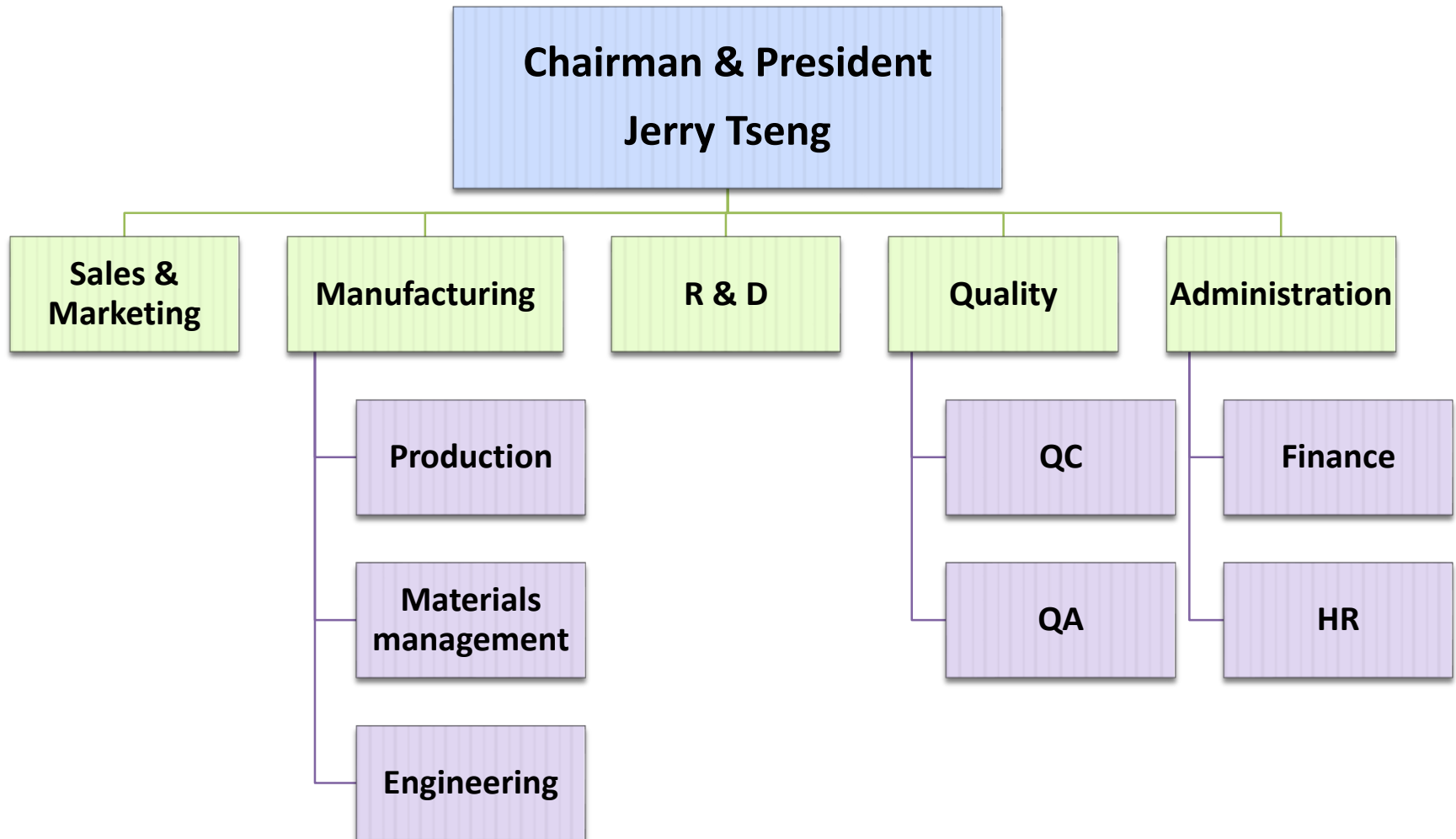
2001 - 2009

- ★ ISO 14001 EMS and TS 16949 QMS for automotive certified
- ★ FPC & Rigid-Flex board
- ★ Metal Core PCB (Aluminum)

2019

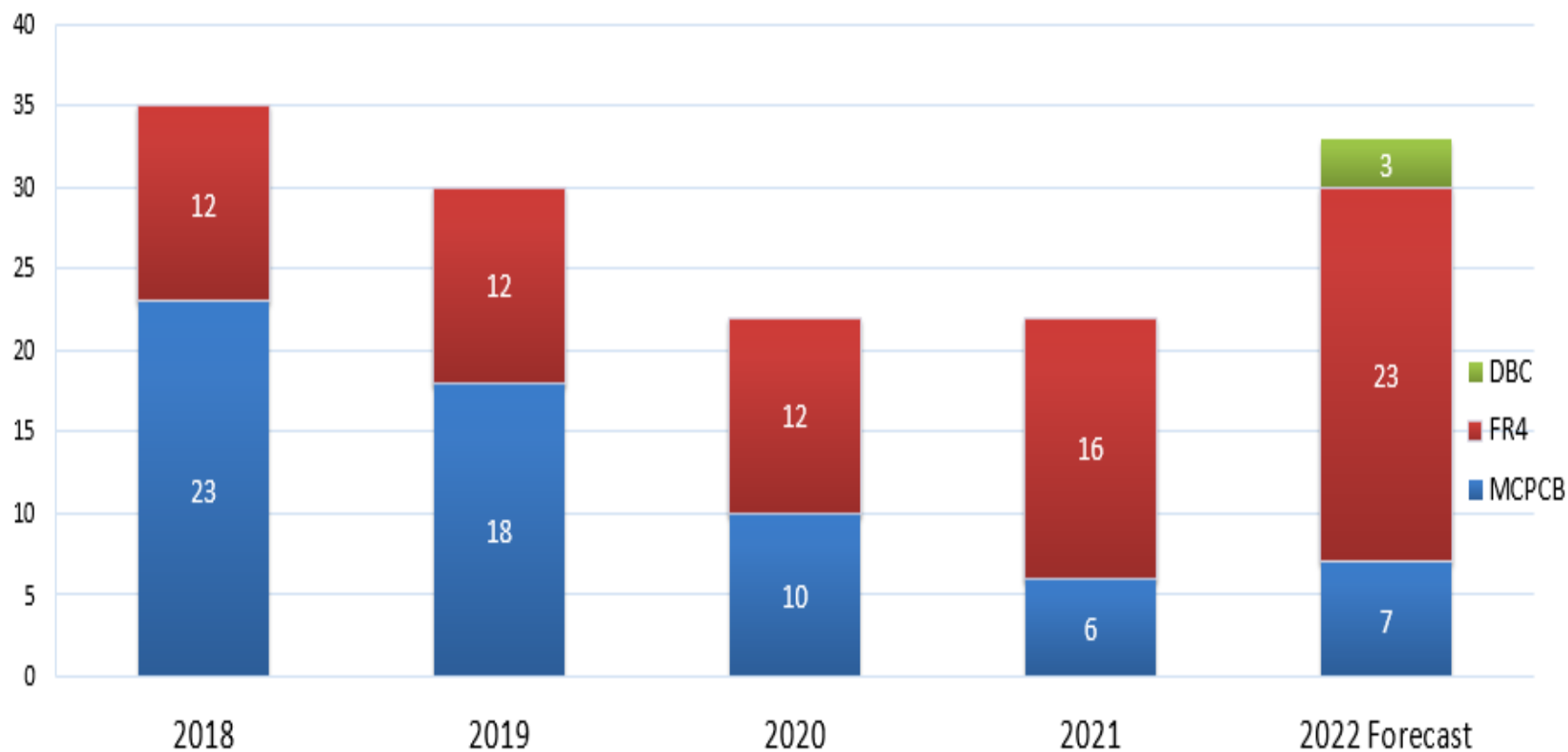
- ★ IATF 16949 certified
- ★ Established Gia- Tzoong (ShenZhen) LTD.
- ★ DBC (Direct Bond Copper)

Organization Structure 組織圖

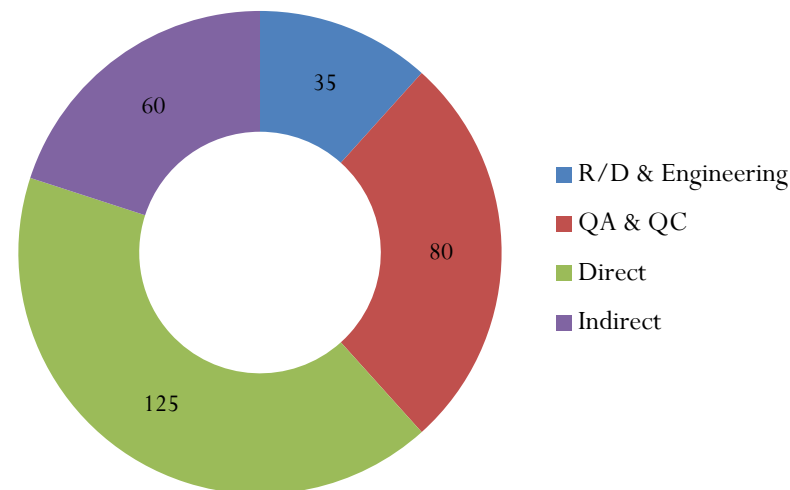
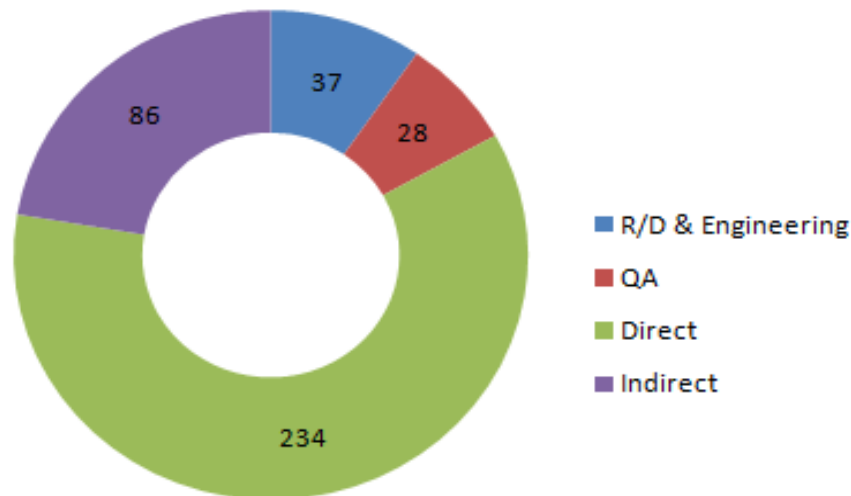


Revenue 營收

Unit million : USD



Employees Distribution 員工分配



Employee	Taiwan
R/D & Engineering	37 (10%)
QA	28 (7%)
Direct	234 (61%)
Indirect	86 (22%)
Total	385

Employee	China
R/D & Engineering	35 (11%)
QA & QC	80 (26%)
Direct	125(42%)
Indirect	60 (21%)
Total	300

產品介紹

Products information

Main Products Line 核心產品線

1.	Rigid PCB (2 to 24 Layers)
2.	High Frequency (Rogers/Teflon)
3.	Heavy Copper (3 to 14oz)
4.	Metal Core PCB (Copper/Aluminum)
5.	Rigid-Flex (FR4+FPC/Aluminum+FPC)
6.	DBC (Copper thickness 0.127 – 0.5 mm)

Rigid PCB (2 to 24 Layers)

Application:

3C accessories

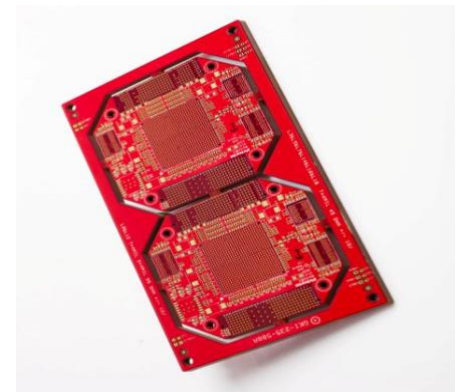
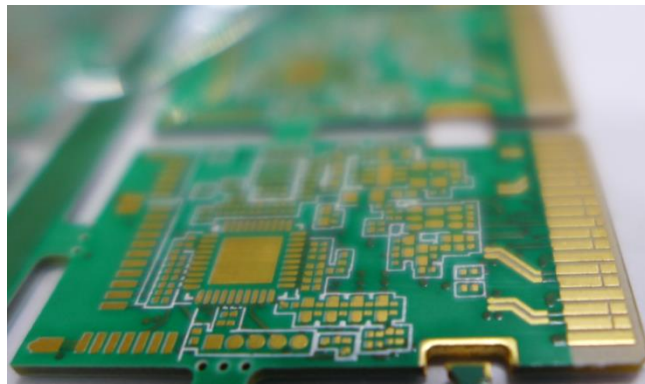
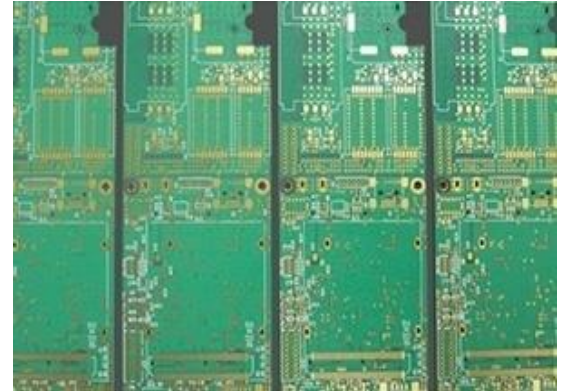
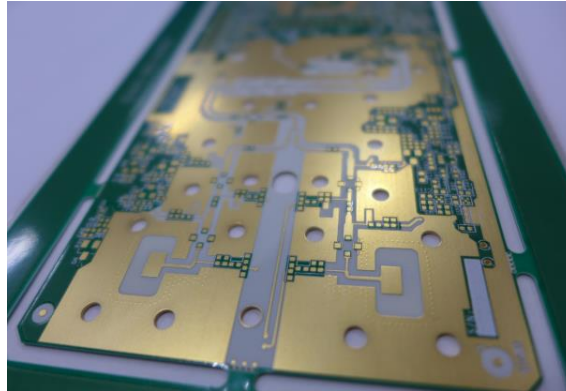
Automotive

IPC (Industrial)

Medical

Security

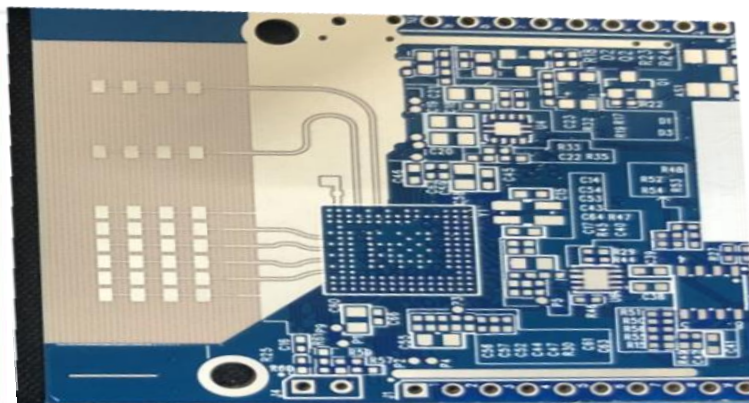
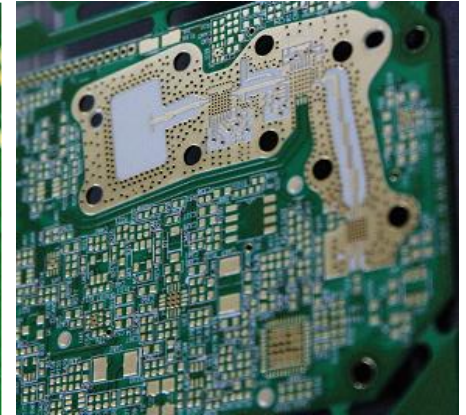
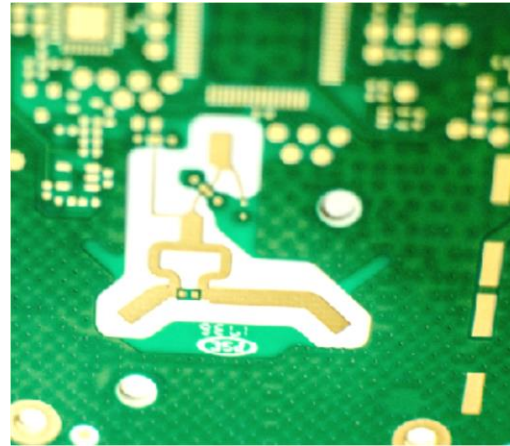
Telecommunication



High Frequency (Rogers / Teflon)

Application:

5G-mmWave
Antenna
Automotive Radar
Radio Frequency devices
Medical
Network



Heavy Copper (3 to 14oz)

Application:

High Power Application
Transformer



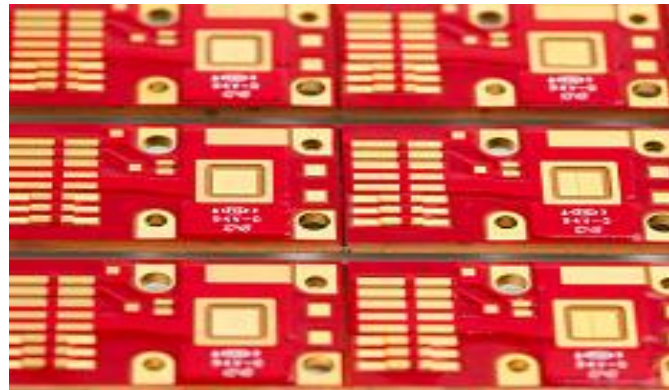
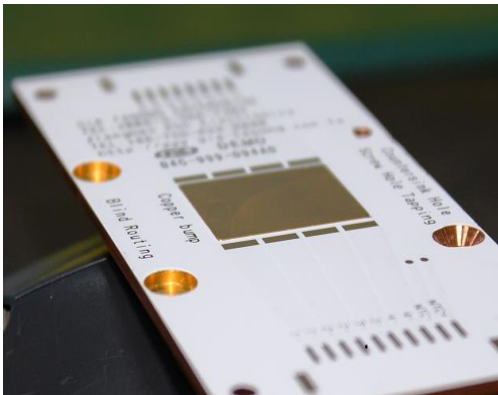
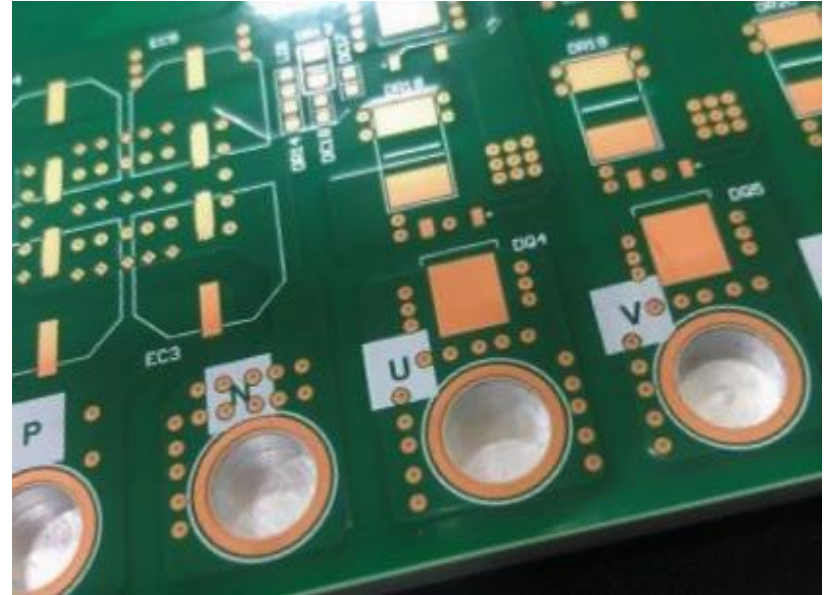
Metal Core PCB (Copper/Aluminum)

Application:

Automotive MCU

High Thermal application

LED related application



Rigi-Flex Board (FR4+FPC/Aluminum+FPC)

Application:

AR/VR

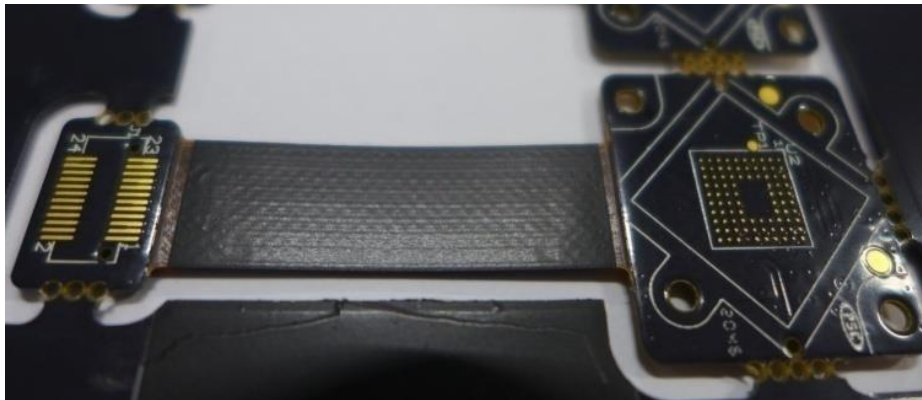
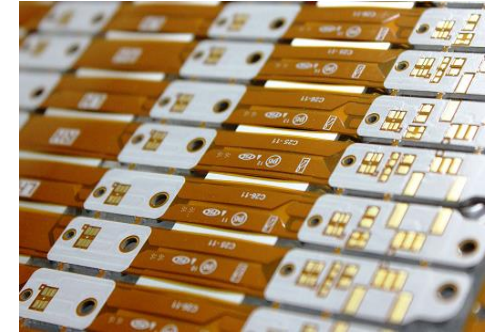
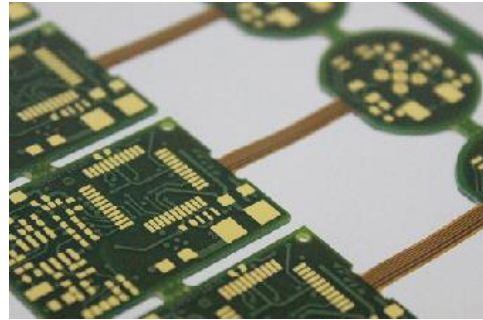
Automotive Lighting

Cellular Phone Camera Module

Drone

Medical

Portable Measuring Device



DBC (Copper thickness 0.127–0.5 mm)

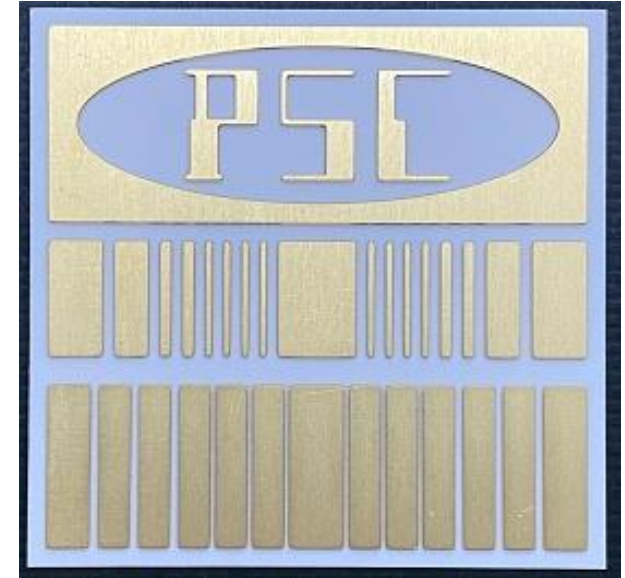
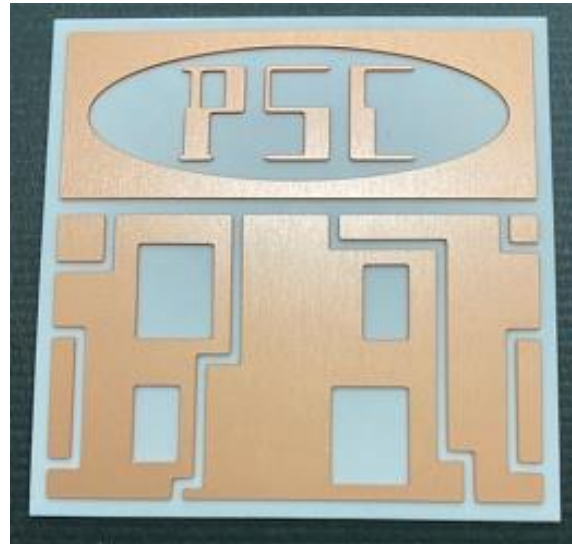
Application

IGBT Module

MOSFET Power IC Module

Solar Cell Component

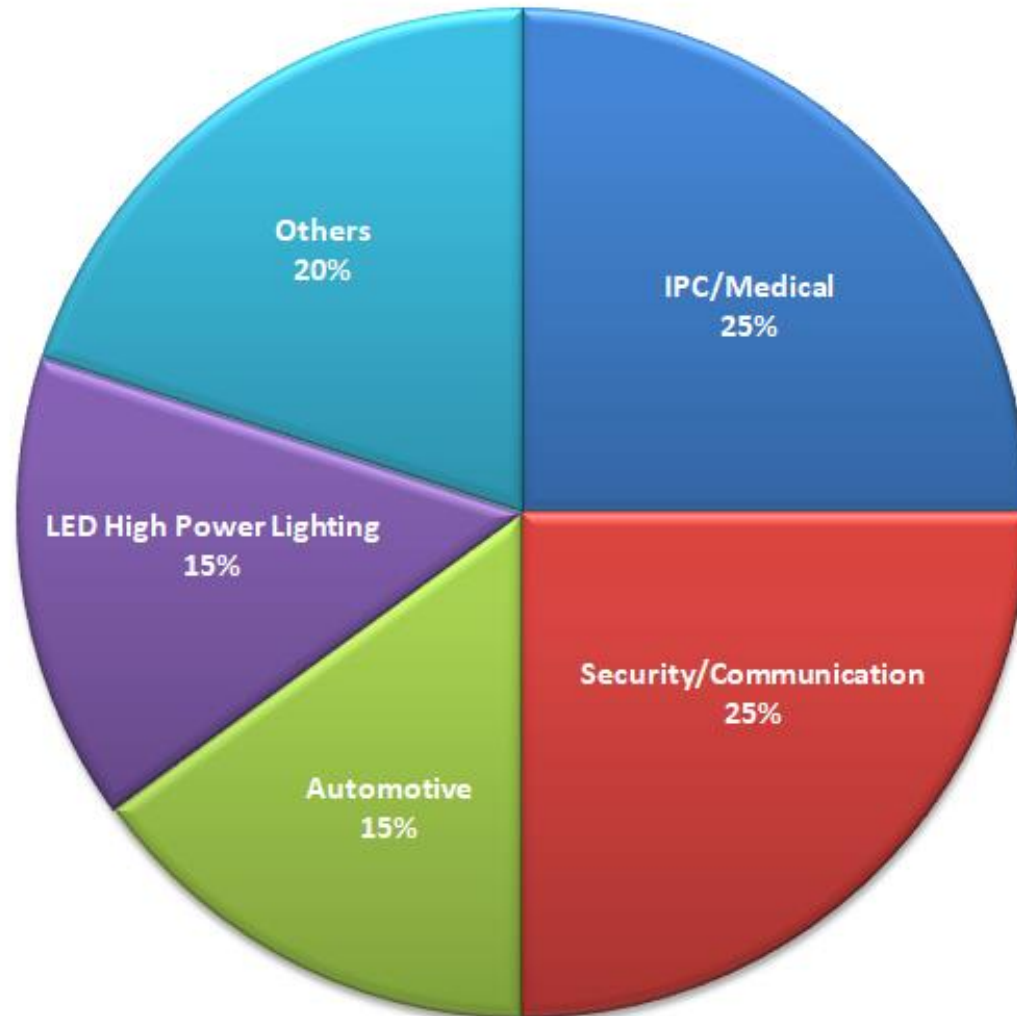
Power Drive Component



Rigid PCB Key Capability 硬板製程能力

Items	Technology & Capability
Max. Layer Count	24 Layer (Blind and Buried Via)
Max Panel Size	21"x24"(Regular)
Min Board Thickness	2L:12mils/0.2mm ; 4L:16mils/0.4mm ; 6L:18mils/0.6mm
Max Board Thickness	128 mil/3.2 mm
Pattern Density – Outer & Inner Layer	2.5/2.5 mils
Min Via Size (finish)	8 mils/0.2mm
Micro Via	4 mils/0.1mm
Hole Aspect Ratio	10 : 1
Surface Finishes	HASL, OSP, Electrolytic Gold, Immersion Silver/Gold/Tin ENEPIG, Carbon ink (Peters), Peelable Mask(Peters)
Controlled Impedance	+/-10% Ohms for Regular
Contouring	Routing, V-Groove, Beveling
Material of CCL	FR-4 Tg150 to Tg190 degree C , Heavy Copper series (2 to 14 oz) ; High Frequency, Low DK/Low DF Material

Revenue By Product Application



主要設備 **Major equipments**

Major Equipments



CNC Drilling



Copper Plating



Etching



Direct Imaging

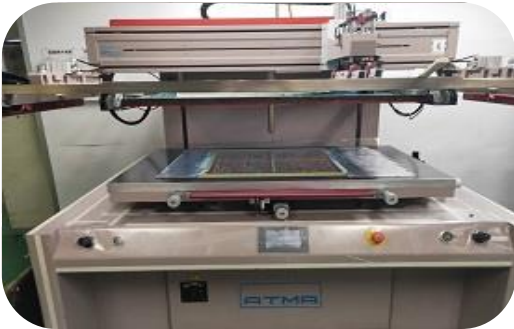


Multi-Layer Lamination



Laser Ablation Machine

Major Equipments (cont'd)



**Solder Mask
Semi-Auto Printing**



**Solder Mask
4CCD Image**



Legend Inkjet Printer



Punching



CNC Routing



O/S Testing

品質系統

QUALITY SYSTEM

Quality Certificate

- ISO 9001
- IATF-16949
- ISO 14001
- UL
- IPC-600 Class 2/3
- Quality conformance and test
- RoHS (3.0) & REACH (211) & CA65 in compliance
- 5S
- Continuous improvement



7PMV2.E117098
Wiring, Printed - Component

For enhanced search functionality, please visit [UL's eQD Search of Database](#)
Click on a product designation for complete information.

Data Tables

Wiring, Printed - Component

See General Information for Wiring, Printed - Component

GIA TZOONG ENTERPRISE CO. LTD
38-4 HSIUNG PONG RD
TAOYUAN, TAIWAN

E117098

Type	Cord Width		Cord	S/S	Hole		Hole		Hole	C
	Min	Max			Area	Area	Temp	Flame		
Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
mm(in)	mm(in)	mm(in)	mm(in)	mm(in)	mm(in)	mm(in)	mm(in)	mm(in)	mm(in)	mm(in)
74	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)	0.20 (0.008)
76	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)
77	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
78	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
79	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)	0.17 (0.007)
81	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
88	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
MultiLayer metal base printed wiring board, Reliability only Recognition.										
75	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
MultiLayer printed wiring board.										
80	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
21	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
22	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
31	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
51	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
52	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
61	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)
MultiLayer Printed Wiring Board.										
81	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)	0.10 (0.004)

E117098

No IATF : 0347473

QA Laboratory

Item	Equipment	Type	Set
1	金相顯微鏡 / Gold Measuring	OLYMPUS BX-51	1
2	X-RAY 螢光膜厚儀 / Measurement	OXFORD X-Strata960	1
3	阻抗測試儀 / Impedance Inspector	POLAR CITS 880	1
4	V-CUT殘厚儀 / Residual Thickness Inspector	Mitsutoyo VT-210	1
5	微Ω計/OHM Meter	GWINSTEK GOM-801H	1
6	拉力機 / Pull Stretch	SHIMPO FGP-10	1
7	電子天平 / Electronic Balancer	HINKO PENSHI PF-600	1
8	二次元測試儀 / 2D Coordinate Measuring Machine	EZ 3D	1
9	離子污染機 / Ionic contamination Inspector	Omega Meter 600	1
10	孔, 面銅測量儀 / Copper Thickness Inspector	OXFORD CMI-700	2
11	粗糙度測量儀 / Roughness examine instrument	Mitsutoyo - SJ.201	1
12	張力測試儀 / Tension Inspector	Tetko Mat	1
13	錫爐 / Solderability Test pot	PSC	1
14	標準棒 / Pin Gauge	EM-0 ⊕ & EM-1 ⊕ & M1 PLUS	3
15	桌上型X射線螢光分析儀 / Desk-Top X-ray Fluorescent Analyzer, XRF	EA1000AIII	1
16	分光式色差機 / Spectrophotometer	CM-2600d	1
17	線距線徑量測儀 / Line distance wire diameter measuring instrument	TOPRO TDS-12A	4

定量結果報告書 佳總興業股份有限公司

樣品訊息

計測名稱	BA1000A
測試日期	12/02/2016-46
產品編號	549-532
樣品編號	046
測試位置	1
批次號	
備註	

測定條件

標準	007 Ruster測試			
	1st	2nd	3rd	4th
測定時間(sec)	200	200	200	400
脈波時間(%)	37	5	47	
管電壓(V)	50	50	15	
管電流(A)	200	1000	1000	
濾光片	P-FIL	C-FIL	C-FIL	
大氣環境	充氦	充氦	充氦	
機型	BA1000A-SD EXG13 (11.05.9.3)			
準直徑	5.0mm			
測定方法	希爾曼標準 C-VOLTA/ASAP/HPT/HRDA/ZEISS L2D test			
備註	PackingTime=6.4sec / Mplm=MLM-PPLM			

樣品圖像

分析結果

		Pass	更改備註	
綜合判定		3		
Z target				
	濃度 (ppm)	濃度判定	更改備註	
Cd(M)	≤α	3 Pass		0%
Pb(M)	≤α	15 Pass		0%
Hg(G)	≤α	0 Pass		0%
Bz(M)	≤α	0 Pass		0%
Cd(B)	≤α	0 Pass		0%
Cd(L)	0.00	Pass		0%
Cd(T)				0%
Packaging				
Cd/Pb/Hg/Cr	17			
Bz+Cl	0	Pass		

主要元素

濃度 (wt%)	
----------	--



X-RAY Measurement

Looking forward to working with you for success.

合作共創雙贏

