

PANJIT International Inc

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Dec. 2020

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關於強茂



PANJIT International Inc.
Est. 1986.05
Product: Discrete Packaging & Testing



PYNMAX Technology Inc.
Est. 2000.03
Product: Wafer Foundry



Sumnergy Co., Ltd.
Est. 2017.06
Product: BMS, Battery Pack
Application: EV, 3C

Wafer Capacity

Assembly Capacity



PYNMAX Kaohsiung, Taiwan

- 4"/5"/6" EPI Wafer: 70,000 pcs/month
- 5"/6" Schottky Wafer: 50,000 pcs/month
- 6" ESD/TVS Wafer: 3,000 pcs/month
- 6" ZENER Wafer: 3,000 pcs/month
- 8" wafer: In construction



PANJIT Kaohsiung, Taiwan

Package:
Small Signal Devices/SMD Bridge

Capacity:
2,100 KK /month



PANJIT Shandong, China

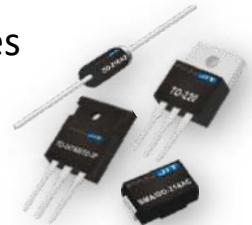
- 4" ESD/TVS Wafer: 25,000 pcs/month



PANJIT Wuxi, China

Package:
Power Package Devices

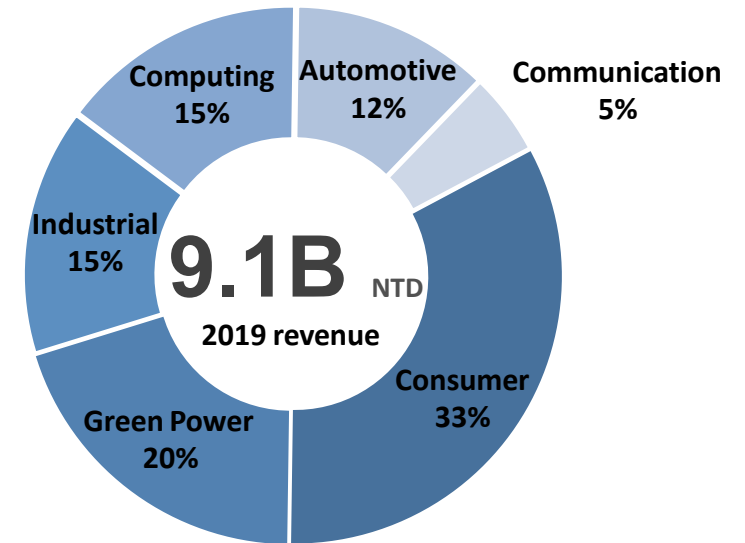
Capacity:
400 KK /month



PANJIT International Inc. is a leading global manufacturer dedicating in supplying high quality semiconductors, serving the consumer, green power, industrial, automotive, communication and computing segments.

- Capital: \$3.3 Billion NTD
- TWSE: 2481 (2001 IPO)
- 2019 Consolidated revenue: \$9.1 Billion NTD
- Approximately 2,500 employees worldwide
- 2 front-end fabrication sites
- 2 back-end manufacturing sites

Market Segments



Establish HQ in Gangshan

- Wuxi factory
- Pynmax (FE)

TS16949 certificated

Set up PANJIT Korea

Set up Beijing Office

IATF16949 certificated

IBU R&D center

8" Key process foundry

1986

2000

2005

2008

2014

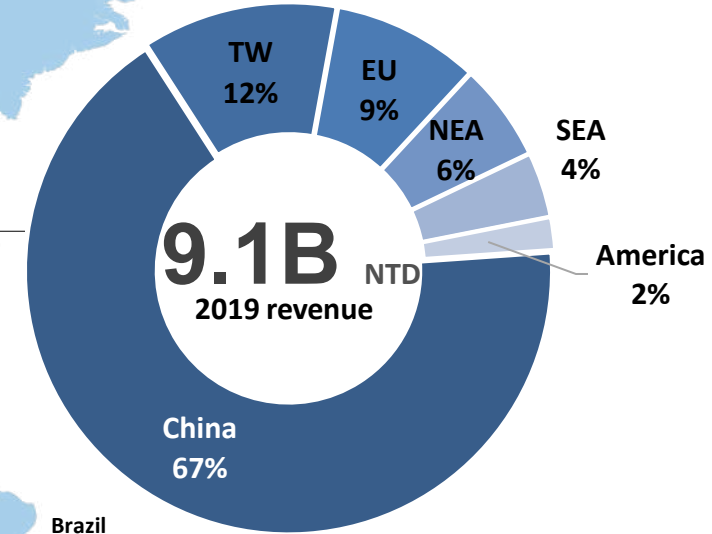
2018

2019

2020



Region Revenue

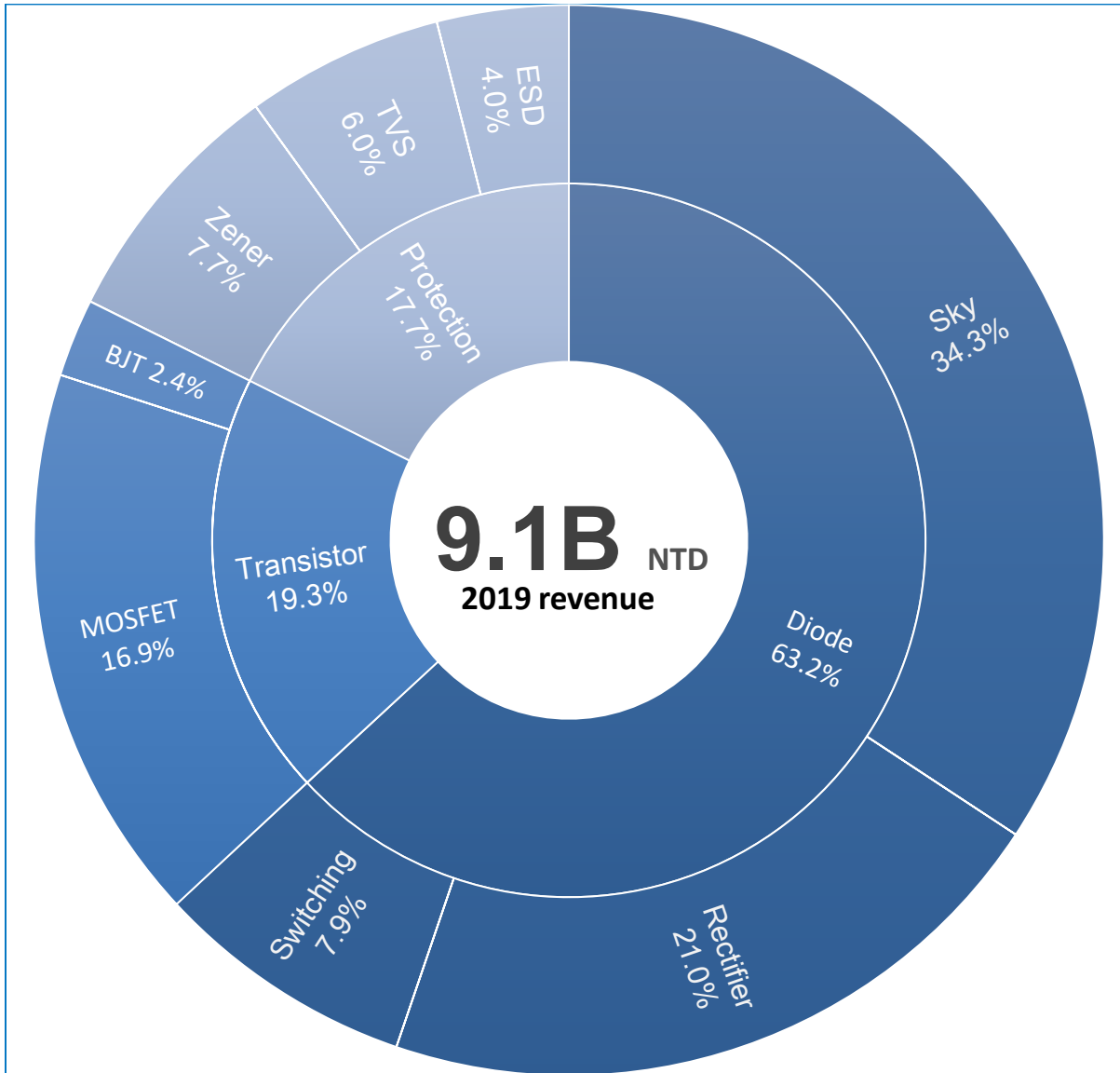


- Headquarters
- Sales Office
- R&D Sites
- Frond-End
- Back-End

全球功率式器件排名

Ranking	2018	2019
1	Infineon	Infineon
2	ON Semiconductor	ON Semiconductor
3	STMicroelectronics	STMicroelectronics
4	Mitsubishi	Nexperia
5	Vishay	Rohm
6	Nexperia	Toshiba
7	Rohm	Vishay
8	Toshiba	Mitsubishi
9	Renesas Electronics	Fuji Electric
10	Diodes	Diodes
11	Fuji Electric	Renesas Electronics
12	Littelfuse	Microchip
13	AOS	Littelfuse
14	CREE	AOS
15	Microchip	CREE
16	PANJIT	Denso
17	Shindengen Electric	Shindengen Electric
18	Denso	Toyota
19	Toyota	PANJIT

2019 營收產品分析 & 產品開發藍圖



New Product Focus

MOSFET

- SGT MOSFET 60 - 80V
- SGT MOSFET 100 - 150V
- SJ MOSFET 600 - 650V

IGBT

- FS Trench IGBT 650 - 750V
- FS Trench IGBT 950 - 1200V

FRED

- Si FRED 600 - 650V
- Si FRED 1000 - 1200V

SiC

- SiC Diode 650 - 1200V
- SiC MOSFET 900 - 1200V

財務資訊

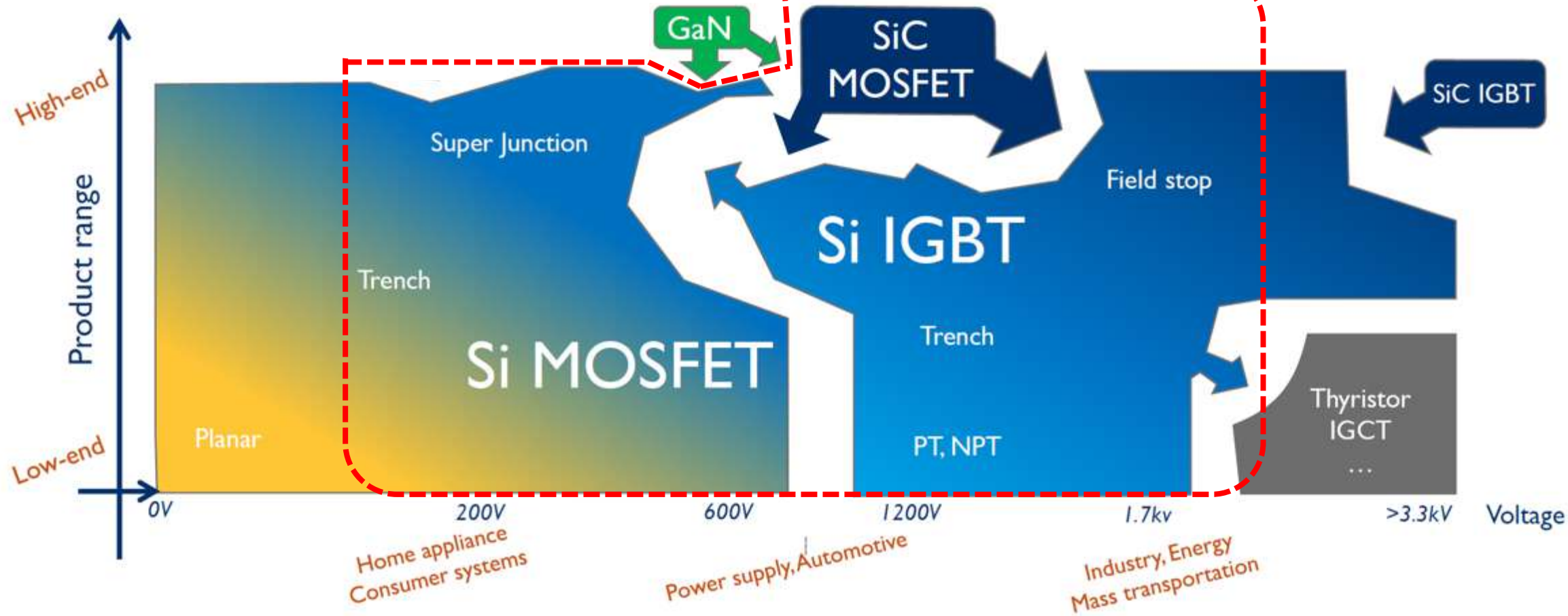
主要財務訊息 2019 YTD Q3 vs 2020 YTD Q3

2019 YTD Q3	營收	毛利 & 毛利率	EBITDA & Margin	EPS	Cash Flow from Operating Activities
	NTD 6.78 Bn	NTD 1,417 Mn 20.9%	NTD 1,148 Mn 16.9%	NTD 1.02	NTD 894 Mn
2020 YTD Q3	營收	毛利 & 毛利率	EBITDA & Margin	EPS	Cash Flow from Operating Activities
	NTD 7.49 Bn	NTD 1,730 Mn 23.1%	NTD 1,402 Mn 18.7%	NTD 2.05	NTD 979 Mn
YoY	10.5% ↑	22.1% ↑		101.0% ↑	

功率器件市場趨勢 & 新技術發展

強茂功率元件技術發展

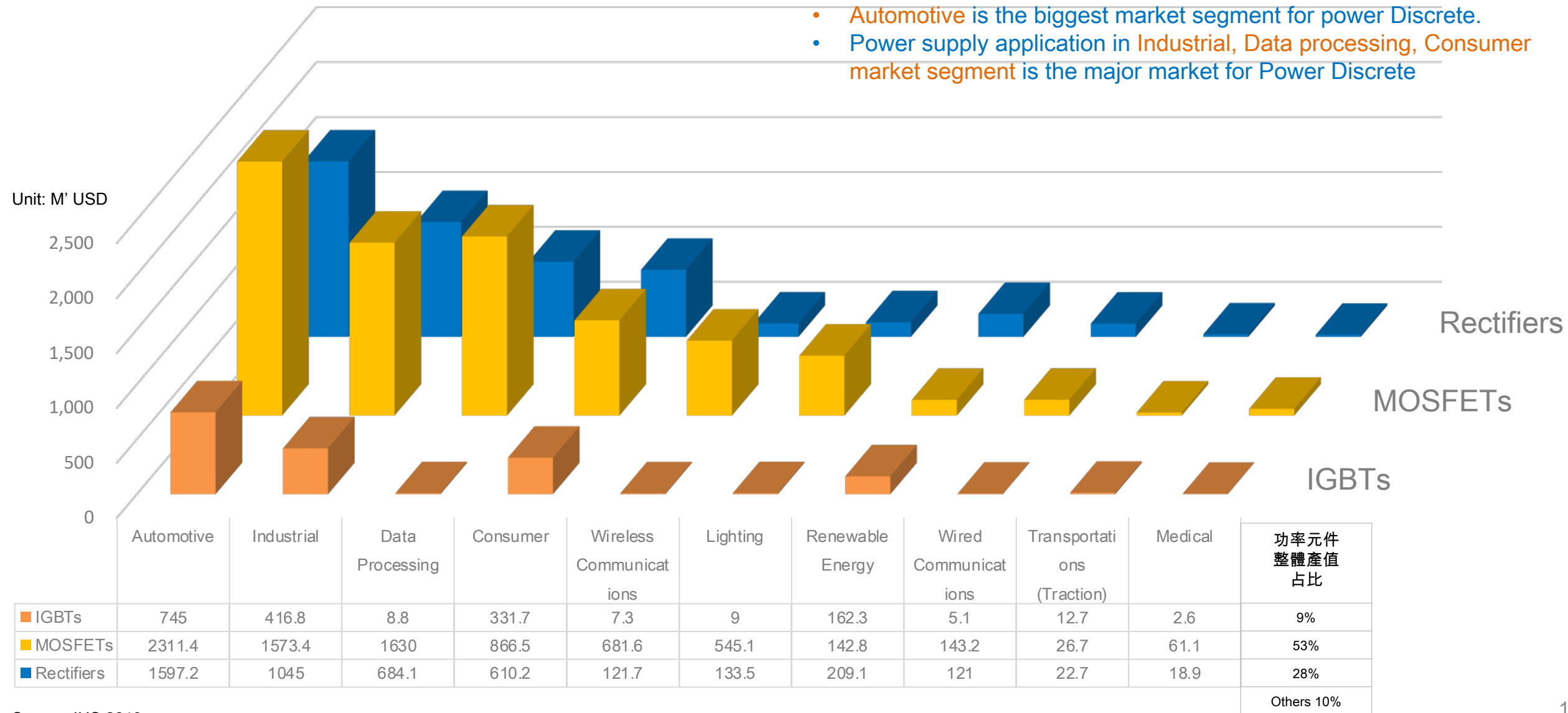
40V – 1.7 kV is PANJIT focus



2022 功率器件 TAM

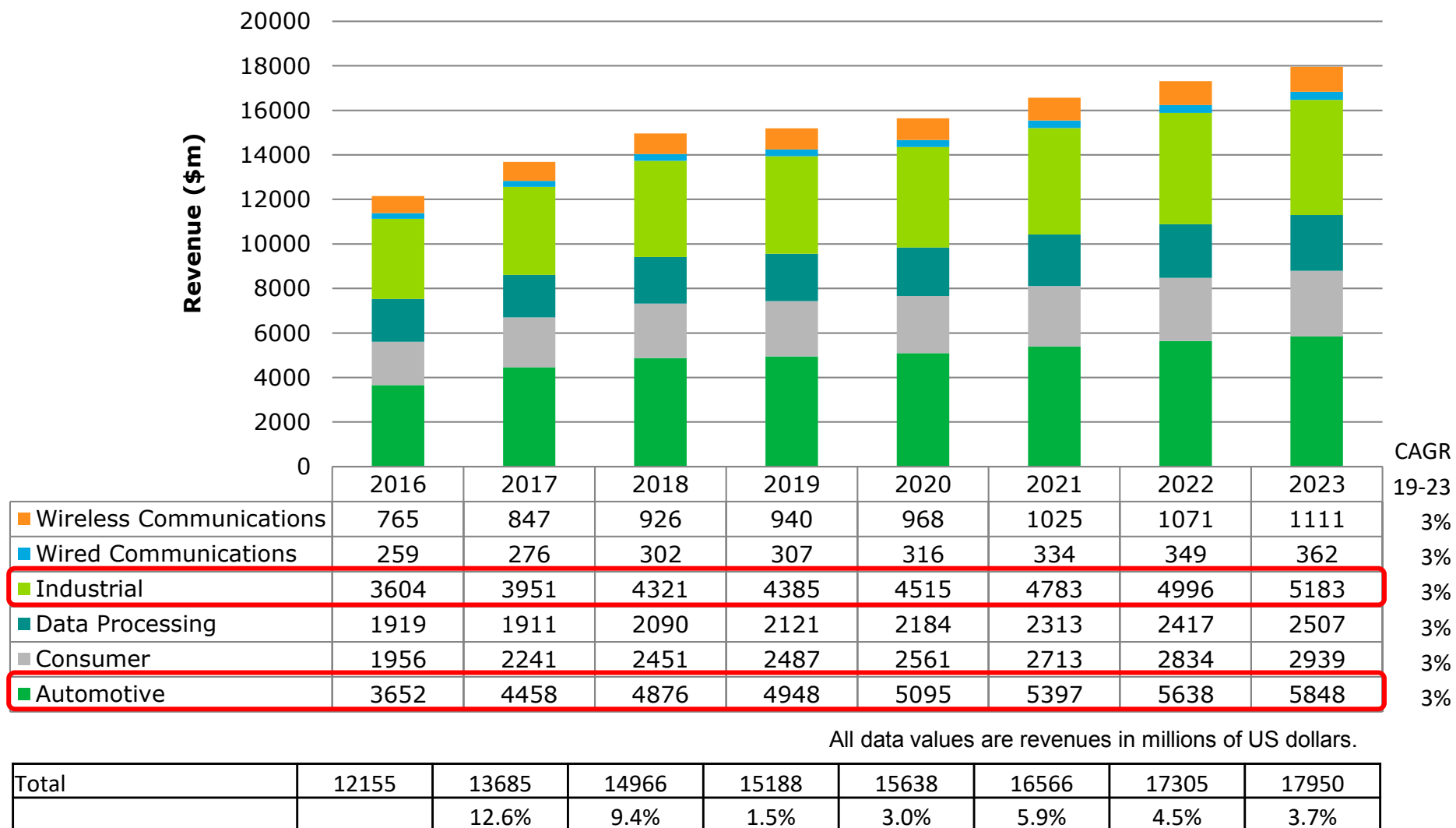
Diodes/ MOSFETs/ IGBTs 在各應用市場產值

- Automotive is the biggest market segment for power Discrete.
- Power supply application in Industrial, Data processing, Consumer market segment is the major market for Power Discrete



功率器件發展趨勢 – 應用市場

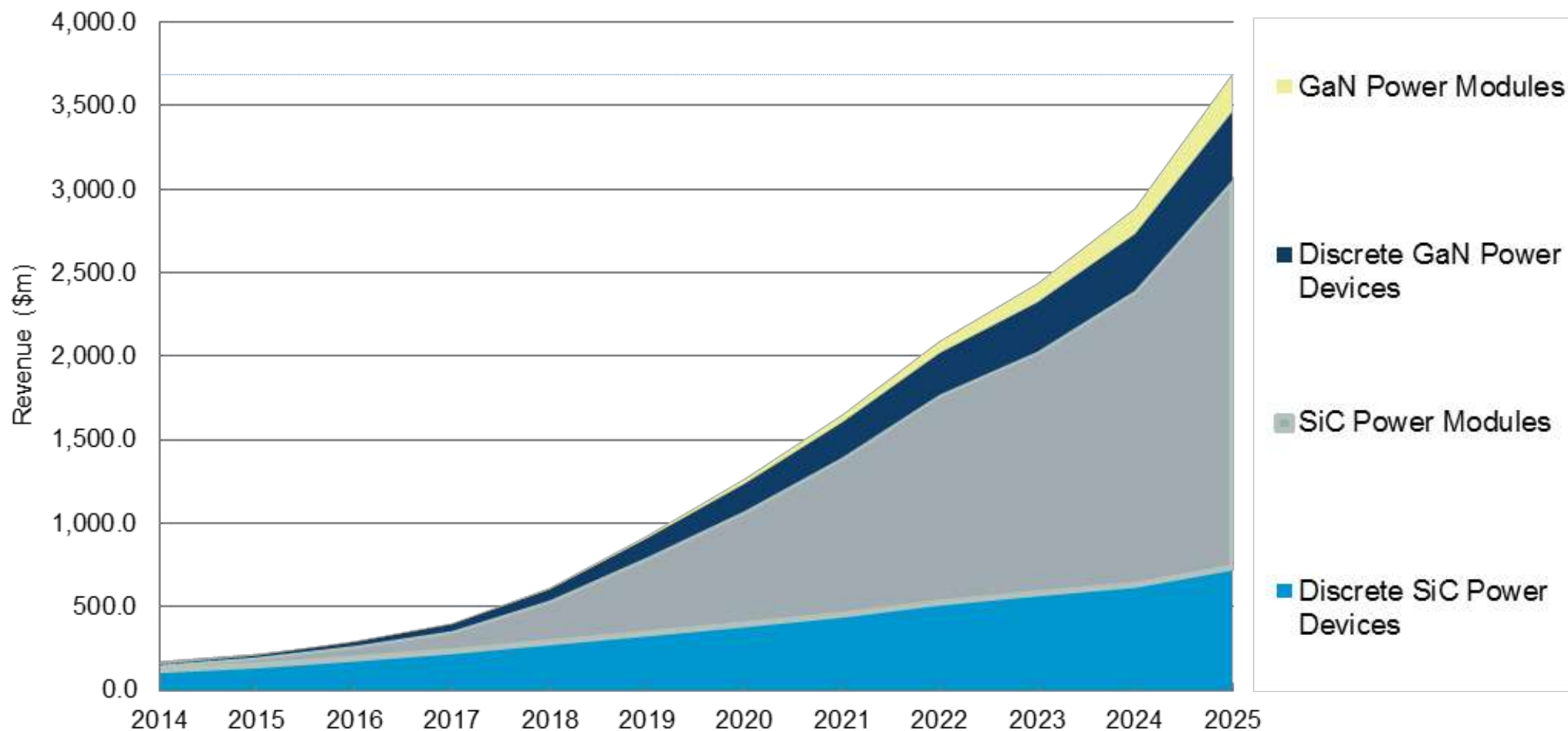
2023 整體市場產值 USD \$17.95 B



➤ 在功率元件市場，汽車應用和工業應用，一直以來都是最大市場

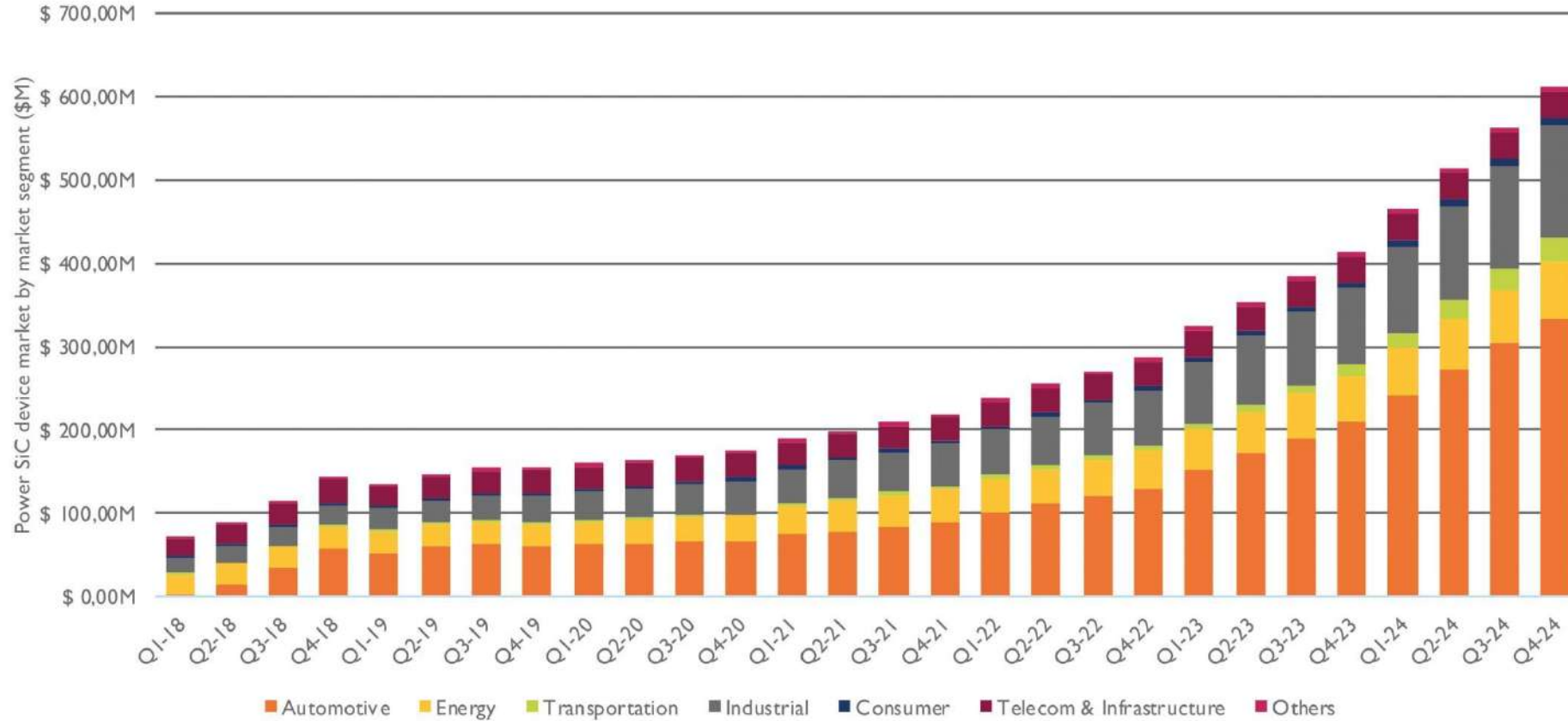
第三代半導體材料 SiC & GaN 在功率器件市場的趨勢

2025 總產值來到 USD \$3.7B, SiC 佔 84% & GaN 佔 16%



SiC 元件在各應用市場的走勢

汽車應用市場占比超過50%



- This figure represents the estimated market for SiC devices, including both open and captive markets.
- The ramp up of automotive market in 2018 was mainly due to Tesla's adoption of SiC in its main inverter.
- Similar to automotive application, other applications such as industrial, energy and transportation are expected to grow.

Thank You



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