



Your Best Choice



THINKING Legal Person Briefing Session





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Financial Status



Company Introduction



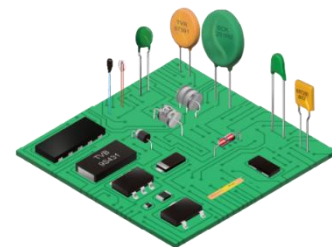
Markets and Customers



Competitive Strength



Strategy for Growth





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Operation Overview: Sales Revenue Analysis

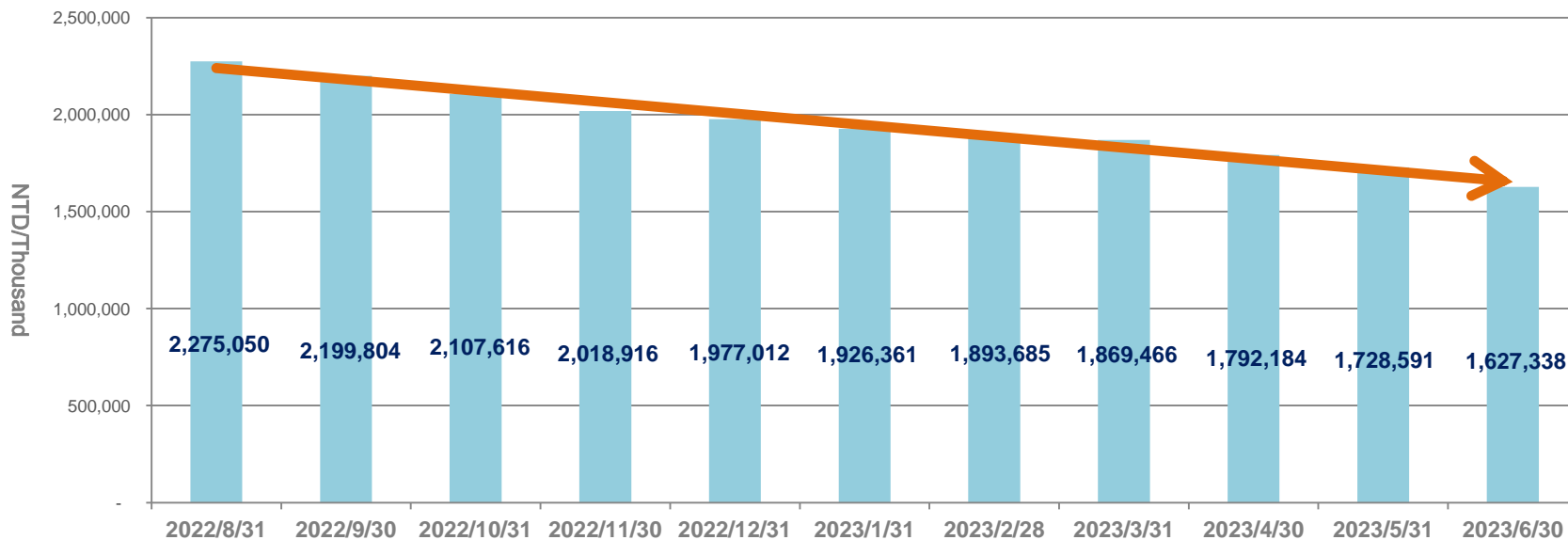
			Unit: NTD Thousand	
Accumulated	2023 Q2	2023 Q1	Diff	%
THINKING	1,816,576	1,718,765	97,811	6%

			Unit: NTD Thousand	
Accumulated	2023.1~2023.6	2022.1~2023.6	Diff	%
THINKING	3,535,341	3,698,655	(163,314)	-4%



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Inventory Trend

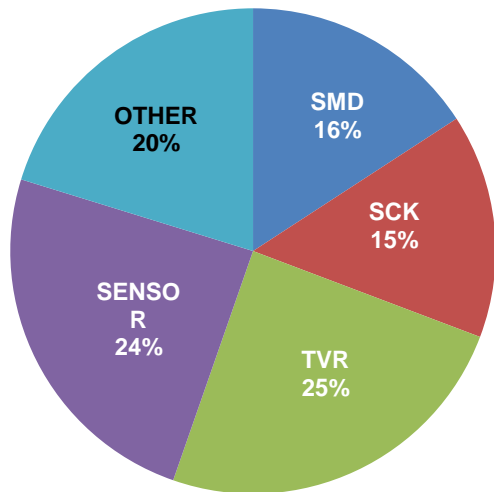


Reduction of 28% in inventory since August 31, 2022.



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Gross Margin Improvement Strategy



Internal Improvements:

1. Implementing strategic transfers of production bases for mature products among group companies to regions with a competitive advantage in labor and electricity costs, aiming to reduce overall production costs. **E.g., SCK+TVR revenue accounts for 40%.**
2. Continuously optimizing the yield of SMD surface-mount products and introducing foreign labor to achieve a reduction in labor costs.
3. Lowering overall production costs for SENSOR products, which are highly customized, through material system integration, process automation, and relocation to regions with lower labor costs.

External Expansion:

1. Sustaining growth in the export market and targeting an increase in **revenue share from exports to 40% from the current 25%.**
2. Enhancing capacity utilization to effectively reduce depreciation and fixed amortization costs.



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Corporate Mission

Mission Statement:

Contribute to safety and operation efficiency of electronics

We “think” and “are keen” to offer customers “service.”



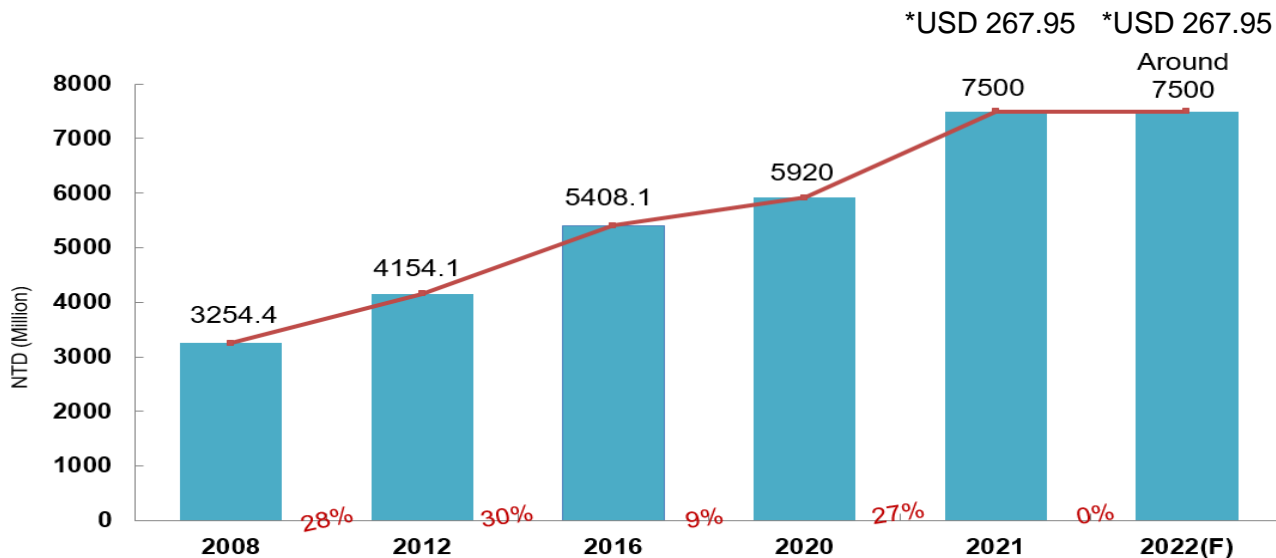
<i>T</i>	<i>Think</i>
<i>K</i>	<i>Keen</i>
<i>S</i>	<i>Service</i>



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Company Introduction

- Established in 1979
- 7 factories and 4500 employees
- 2008-2022 Net Revenue:

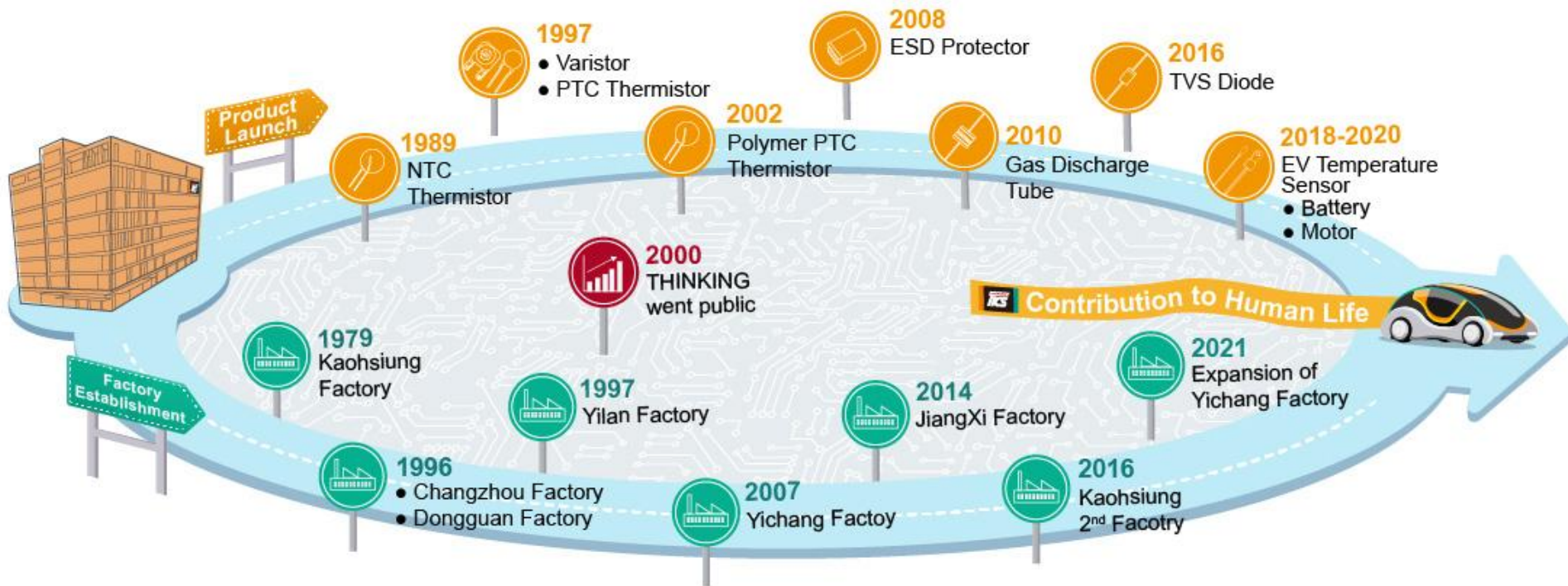


* Using an exchange rate of 1 USD =27.99 NTD



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Milestone





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THINKING All Around the World

All Around The World.



Factories of THINKING

Yichang Factory



Changzhou Factory



Yilan Factory



Kaohsiung 1st Factory



JiangXi Factory



Dongguan Factory



Kaohsiung 2nd Factory





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Total Solution for Customers

Over-Temperature Protection



NTC Thermistor



PTC Thermistor



Temperature Sensor

Over-Current Protection



NTC ICL



PTC Thermistor



Polymer PTC Thermistor

Over-Voltage Protection



Varistor



Gas Discharge Tube



ESD Protection



TVS Diode



Spark Gap Protector



Thyristor Surge Suppressor



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Major Markets

Information and Communication Technology



Telecom



Power Supply



Consumer Electronics



Computer

Home Appliances and Lighting



Home Appliances



Lighting

Automotive and Industrial



Automotive
(12%)



Industrial

Medical and Others



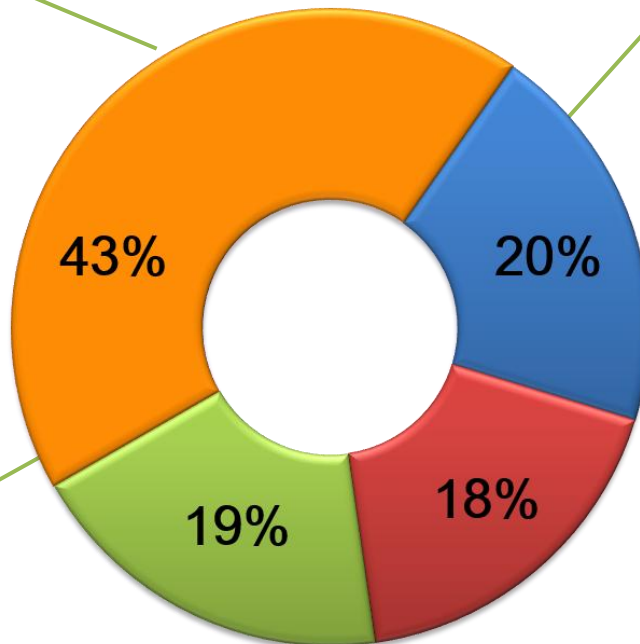
Medical



Other
applications



Distributor

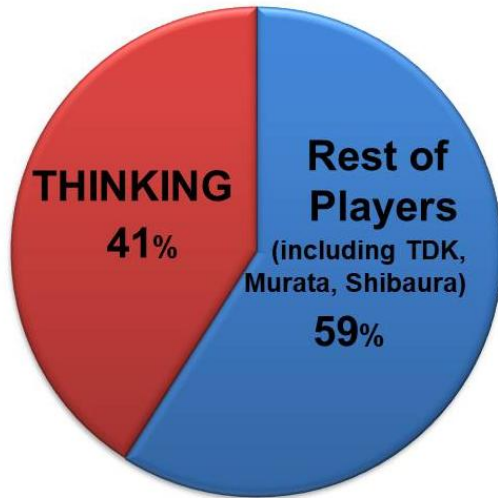




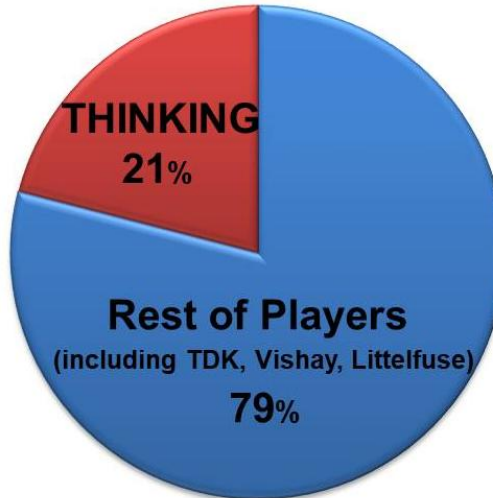
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Market Positions of THINKING Products

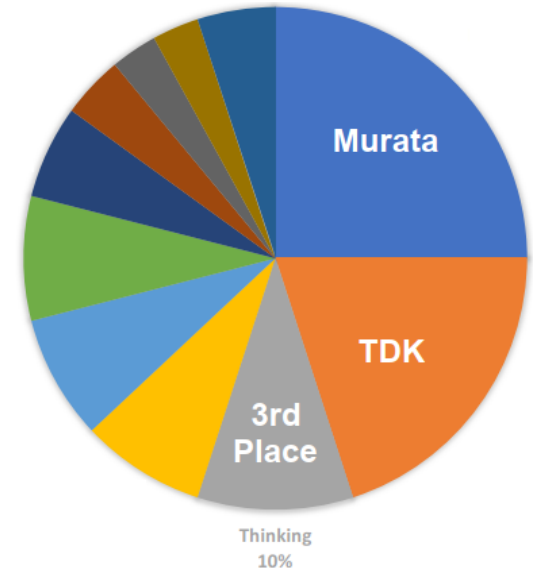
THINKING
NTC Thermistor



THINKING
Disc Varistor



THINKING
Ceramic PTC Thermistor



Note:

- 1.Data source: Circuit Protection Components: World Markets, Technologies & Opportunities: 2019-2024, Paumanok Publication
- 2.Fiscal year 2020 calculation of THINKING NTC thermistor and disc varistor ended in December 31, 2020.



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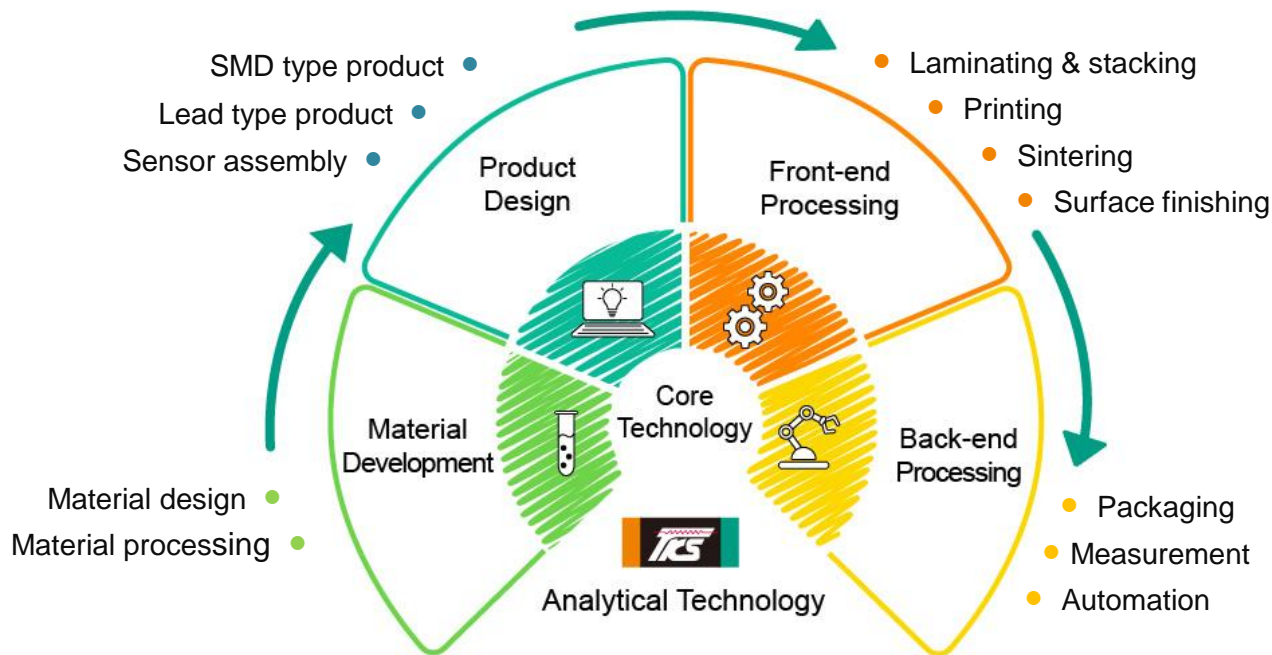
Strategy for Growth



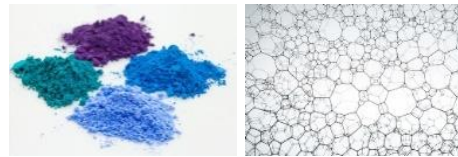


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Core Technology

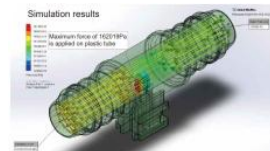


Material Development



Our know-how of key raw material and ceramic recipes make our products competitive in the market.

Product Design



Our simulation technology ensures our precise product design.

Back-end Processing








Automated production ensures our stable product quality.



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Agency Approval of Product

							
NTC Thermistor	✓			✓	✓		
Varistor	✓	✓	✓	✓	✓	✓	
PTC Thermistor	✓		✓	✓	✓		
Polymer PTC Thermistor	✓			✓	✓		
Gas Discharge Tube	✓						
NTC Temperature Sensor	✓		✓	✓	✓		
TVS Diode	✓					✓	

Note:  is for UL + cUL



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UL and TUV Certified Laboratories

- Laboratories of THINKING passed the CTDTP (Client Test Data Program) of UL and witness testing qualification of TUV.





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Technical Support

THINKING AE team provides comprehensive technical support.

- **Technical Consultation:** Discussion of technical problems with customers
- **Product Selection Suggestion:** Selecting products in accordance with customer's needs
- **Circuit Design Assistance:** Discussion of circuit design for problems that customers encounter
- **Application Example:** Application experience sharing with customers



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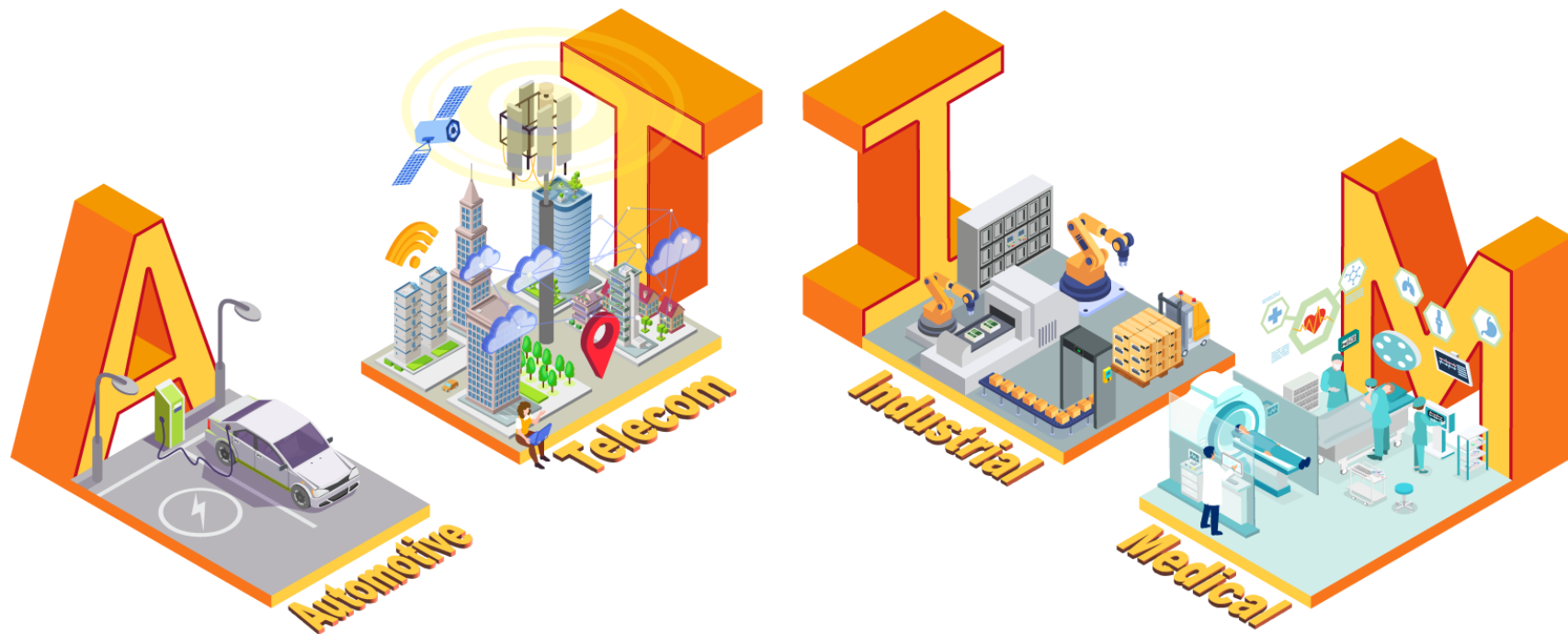
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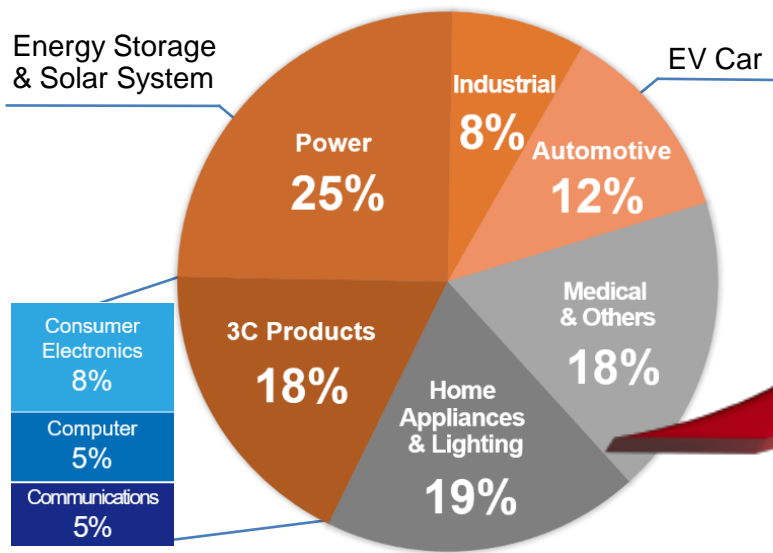


Focus Markets

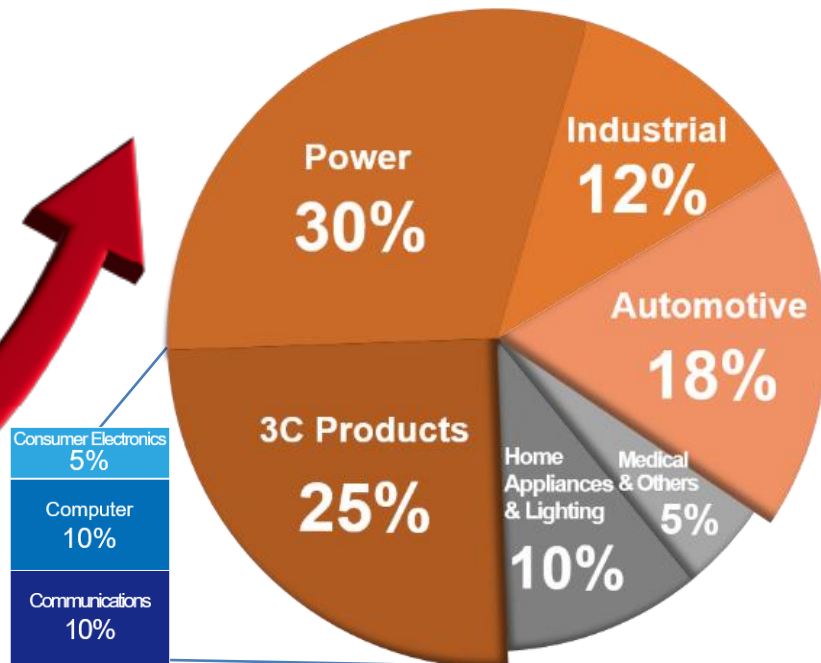


Growth Strategy – Application Focus

2022 Sales by Applications



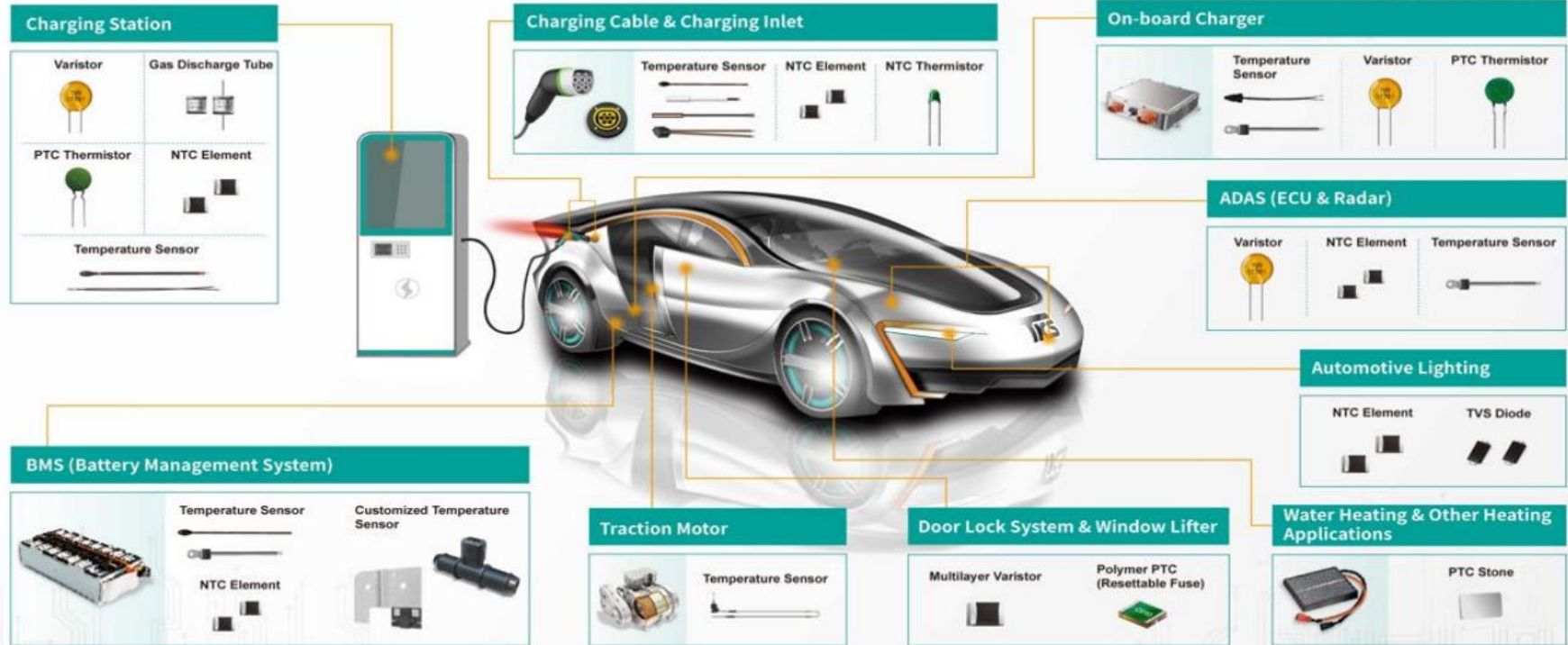
2025 Sales by Applications





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EV Applications



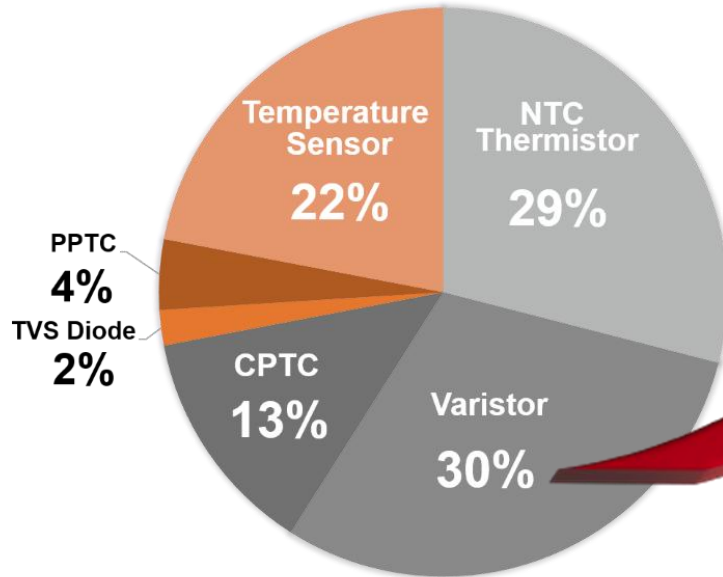
THINKING ELECTRONIC INDUSTRIAL CO., LTD.



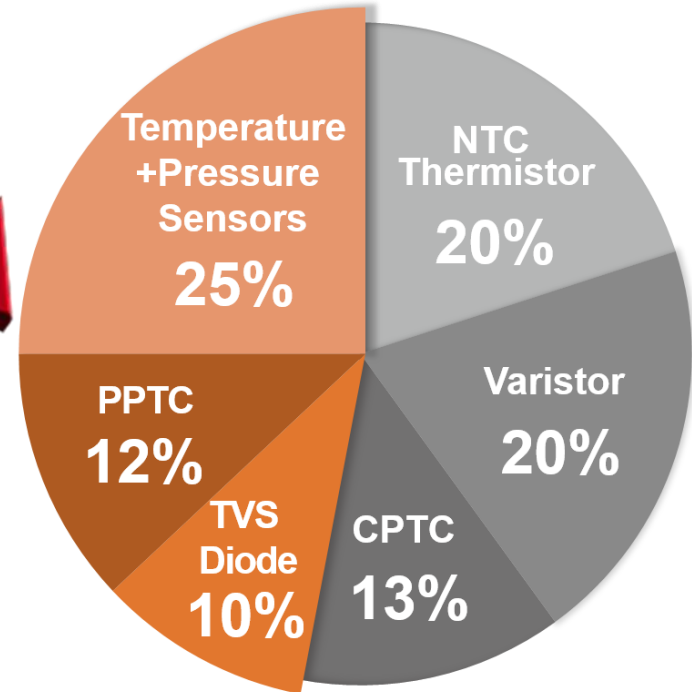
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Growth Strategy – Products Development

2022 Sales by Products



2025 Sales by Products



● Comparison of PPTC and CPTC

Parameter	CPTC	PPTC
Material	Ceramic	Polymer
Resistance (R25)	High initial resistance	Low initial resistance
Response time	Fast	Faster ✓
Power Consumption	Higher	Lower ✓
Product structure	Less	More ✓
Resettable functionality	Yes	Yes ✓
Reset type	Self-reset ✓	Self-reset ✓
Price	Higher ✓	Lower ✓

For PPTC, its faster response time and lower power consumption meet the market trend of energy saving. It also helps customers reduce cost and increase their design flexibility. Therefore, THINKING plans to promote PPTC more.



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Growth Strategy – Products Development

THINKING PPTC offers over-current protection, and it is recommended for the following applications.



PCB



Portable Electronics



Notebook Computer



DC Power Module



USB Port



Light Bulb



Set Top Box

- Comparison of TVS Diode and Other Over-voltage Protection Components

Parameter	TVS Diode	Varistor	Gas Discharge Tube
Surge withstand capability	Medium	High	High
Varistor tolerance	Accurate ✓	Medium	Wide
Residual voltage	Low ✓	High	Low ✓
Pulse surge life	Good ✓	Limited	Good
Capacitance	Low	High	Low
Response time	Faster ✓	Fast	Fair
Size v.s.Ipp	Medium	Large	Small
Price	High	Medium	Low

TVS diode provides better over-voltage protection because of its accurate varistor tolerance and low residual voltage. Its low capacitance also makes it a recommended ESD suppressor. Consequently, THINKING promotes TVS diodes for over-voltage protection.

Growth Strategy – Products Development

THINKING TVS diode offers either over-voltage protection or ESD protection, and it is recommended for the following applications.



Automotive Electronics



5G Base Station



Notebook Computer



Set Top Box



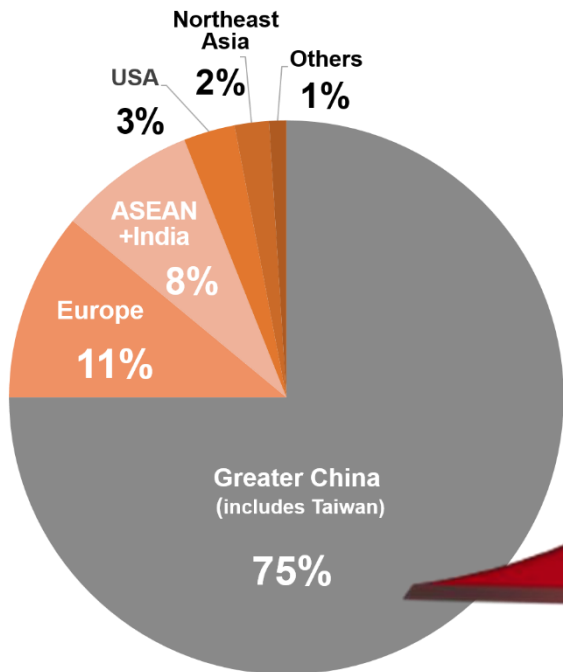
Mobile Phone



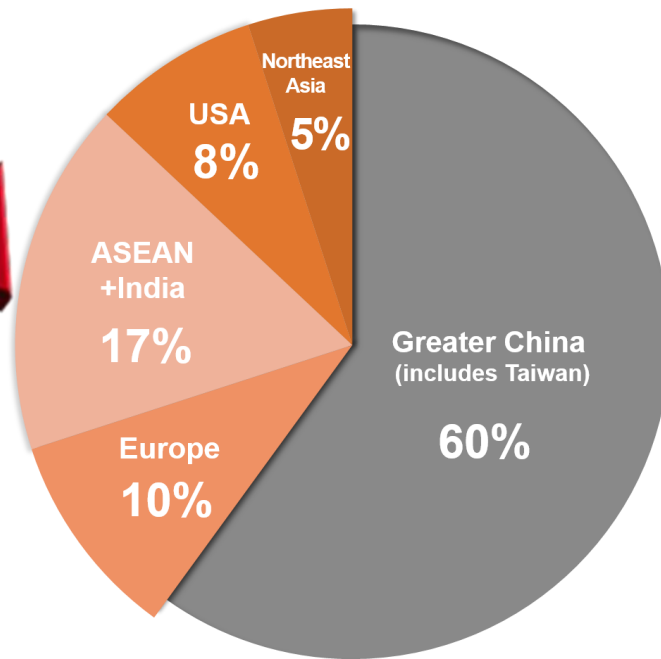
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Growth Strategy – Regional Market

2022 Regional Market



2025 Regional Market





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Update Schedule for Vietnam Factory

Stage 1

2022:

Acquire land
ownership of
Hai Phong factory.

Stage 2

2023-2024 :

Factory construction
& Equipment
arrangement

Stage 3

2025(Q1-Q2):

Employees
recruitment, Job
training..etc

Stage 4

2025(Q3) :
Factory MP



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Continuous Expansion Plan



Zhongshan Factory

Southern CN: IT & Home appliance, 2024



Kaohsiung Factory

TW: Automotive: 2023 H2



THANK YOU!

THINKING

Contribute to safety and operation efficiency of electronics