



英屬開曼群島商

虹揚發展科技股份有限公司

HY Electronic (Cayman) Limited

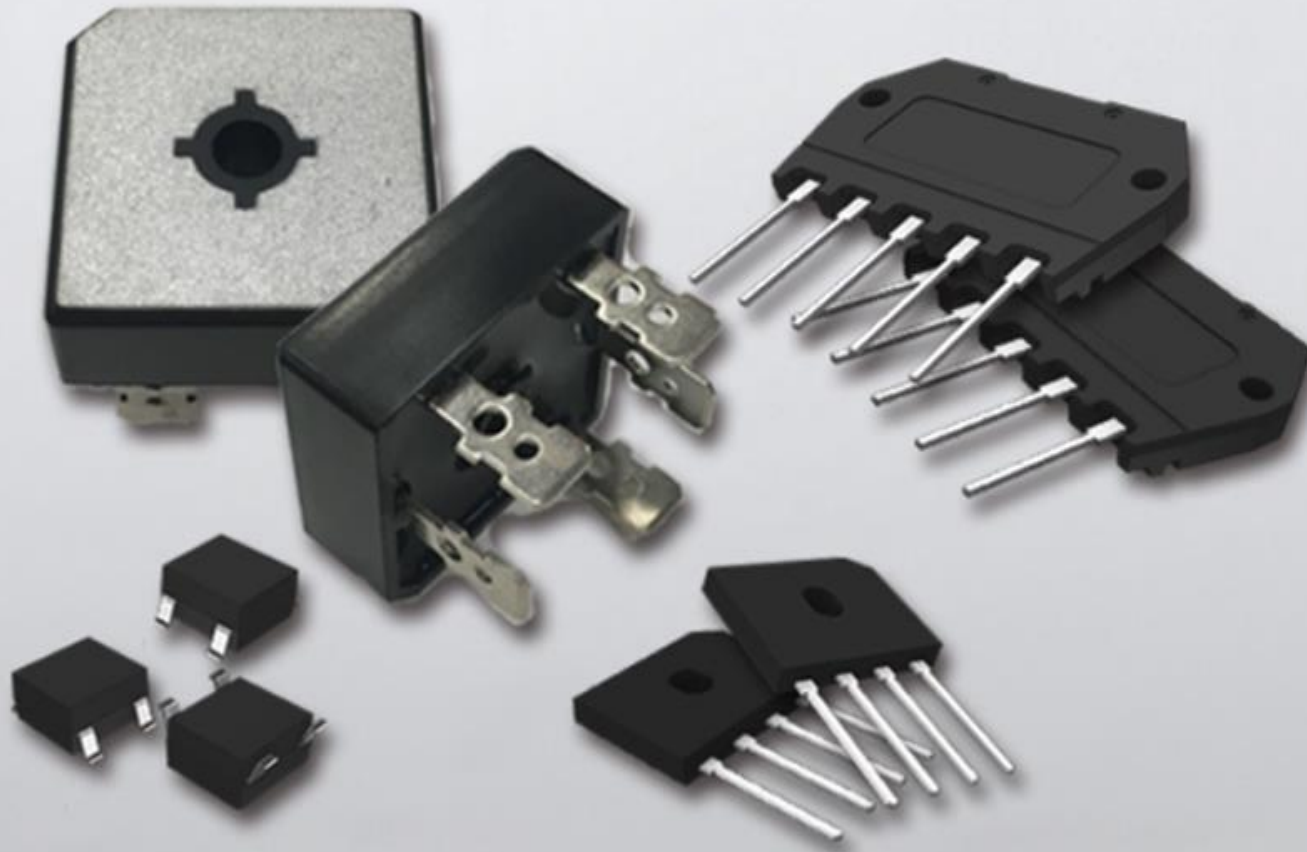
Company Introduction

Stock code : 6573





Outline



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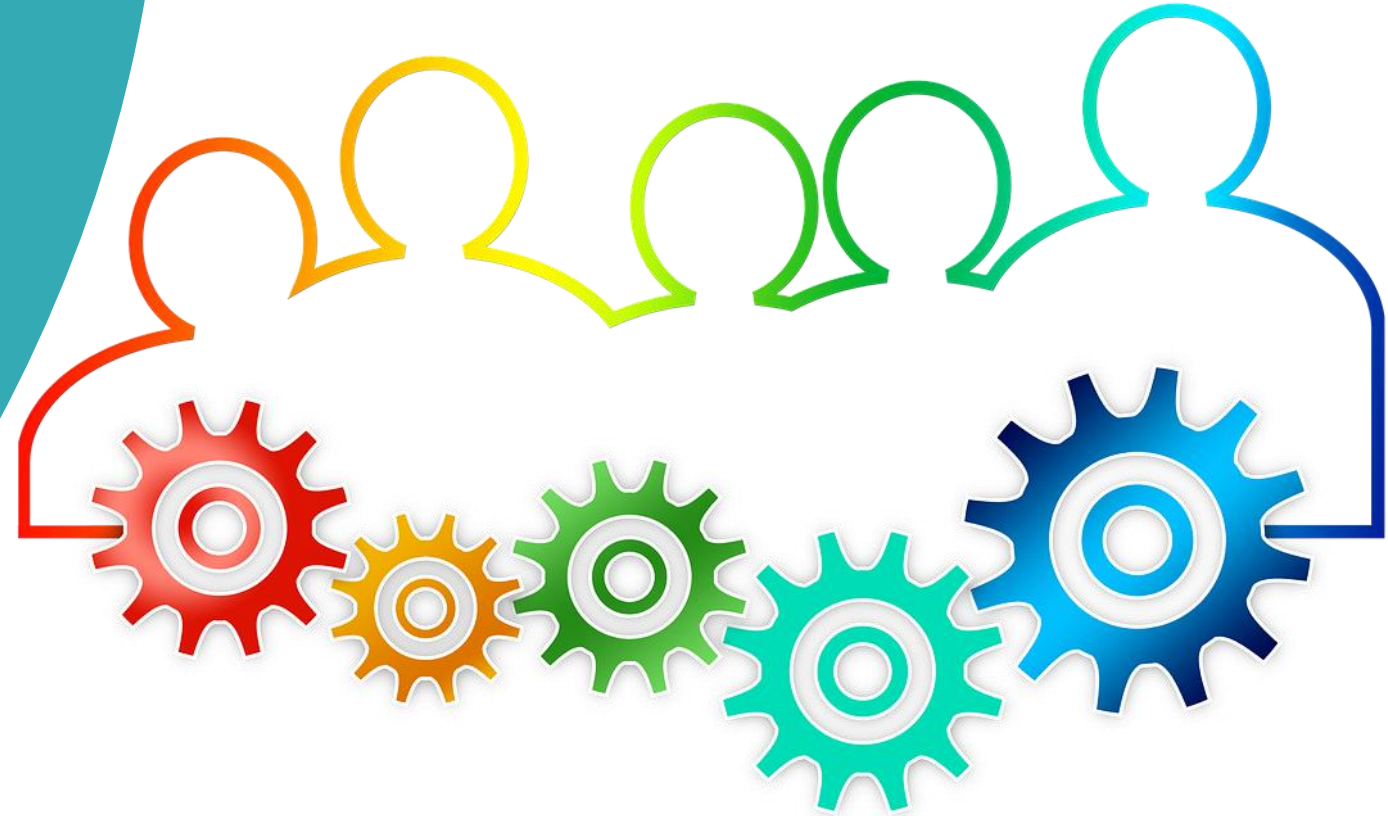
Quality Assurance
System

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Future Prospects

01

Organization & Background





Business Philosophy & Core Value



HY is a professional manufacturer which mainly engaged in the design, development, manufacture and sale power discrete semiconductors. We provide best quality products according to its superior R&D team, automatic production and strictly quality control system. In addition, bases on complete product combination, HY fully offer total solutions to our customers.

HY is the transliteration abbreviation of the company's Chinese name. It means that we hope we could have open mind and carry forward the right path and the best.

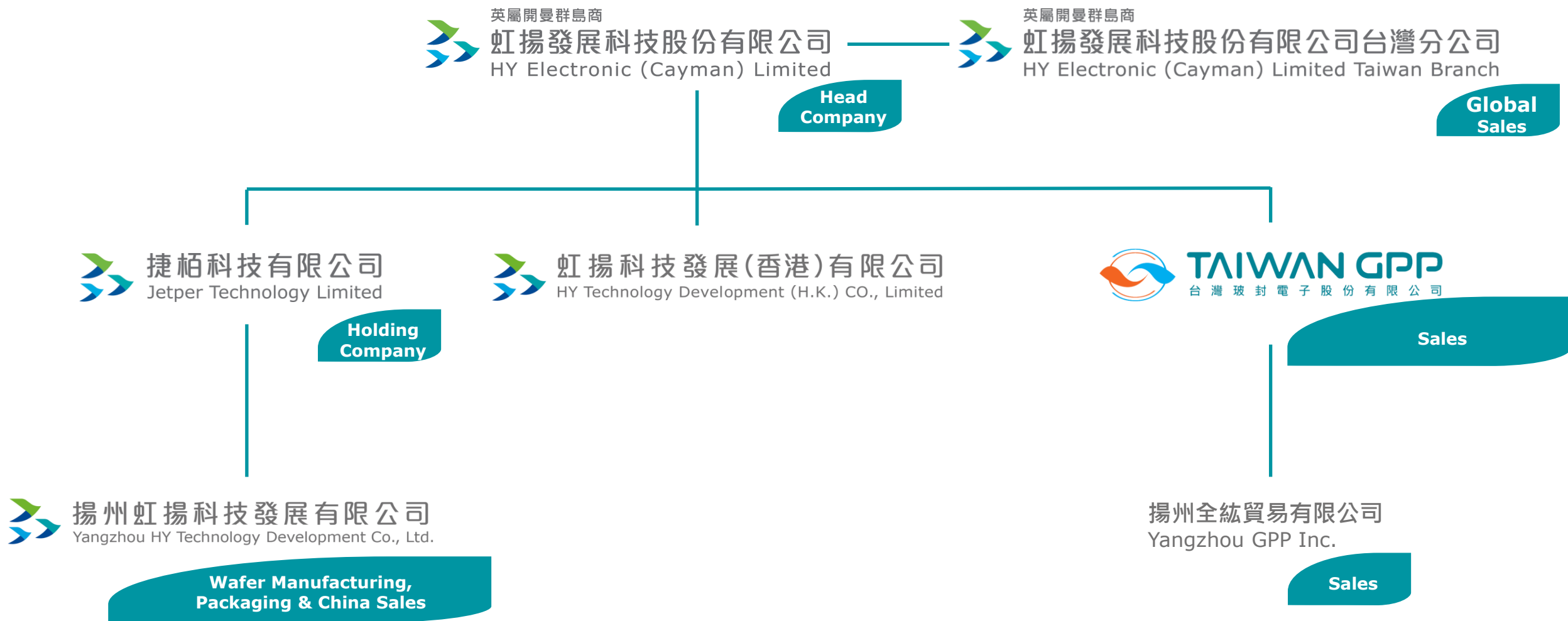
HY's sales networks are distributed all over the world. We have 17 sales offices located in the main cities of China. Moreover, Taipei branch office is responsible for the sales in Taiwan and the oversea marked areas. Except HY own brand, we also offer OEM, ODM and OBM services to many well-known companies around the world.

HY will try its best to provide valuable products and services and continuously targets to a professional total solution provider.





Group Structure





Locations



**HY Electronic (Cayman)
Limited Taiwan Branch**

Square measure : 1,500 M2
Employees : 60
Task : HY group management
and global sales



**YangZhou HY Technology
Development Co., Ltd.**

Square measure : 60,000 M2
Employees : 500
Task : Production & China sales
Capacity per month :
200 kk pcs (Package)
100,000 pcs (Wafer)



Management Team



**Chairman
David
Fang**

EXPERIENCE:
GM of YangZhou HY
Technology
Chairman of HY Group



**Group
President
Jane Kao**

EXPERIENCE:
GM of HY Electronic Corp.
CEO of HY Group



**GM
Pat Lin**

EXPERIENCE:
DIODES Inc.



**Special
Assistant
to GM
Steve Lee**

EXPERIENCE:
Production Manager of Vishay
VP of Gulf Semi



**TE
Director
Daniel Lo**

EXPERIENCE:
Assistant Manager of Taiwan Semi
Director of Yenyo



**VP
Miller Lo**

EXPERIENCE:
VP of Lite-On Semiconductor



Milestones

1984

HY Built up in Taipei

1992

Established factory in Yangzhou, China

2000

ISO9000 certified

2006

ISO14001 certified

2008

Passed ISO/TS16949 certification

2009

Established HY Electronic (Cayman) Limited in the British Cayman Islands

2010

Set Up 3" GPP Wafer Fab

2012

Acquired SONY Green Partner Certification

2013

Obtained 14 patents
Got Innovation Company Certification
Set up Press fit production line

2014

Set Up 4" GPP Wafer Fab
Obtained 29 patents
Low VF Bridge rectifiers

2015

Ultra low VF Bridge Low VF Schottky Diode
Obtained 36 patents

2016

Obtained 12 patents
Set Up Solar schottky wafer
Set Up Solar Module

2017

HY became a publicly traded company listed in Taiwan

2018

Got 70% shareholding of TGI
HY second factory Re-layout

2019

HY Yangzhou ceremony of new plant

2020

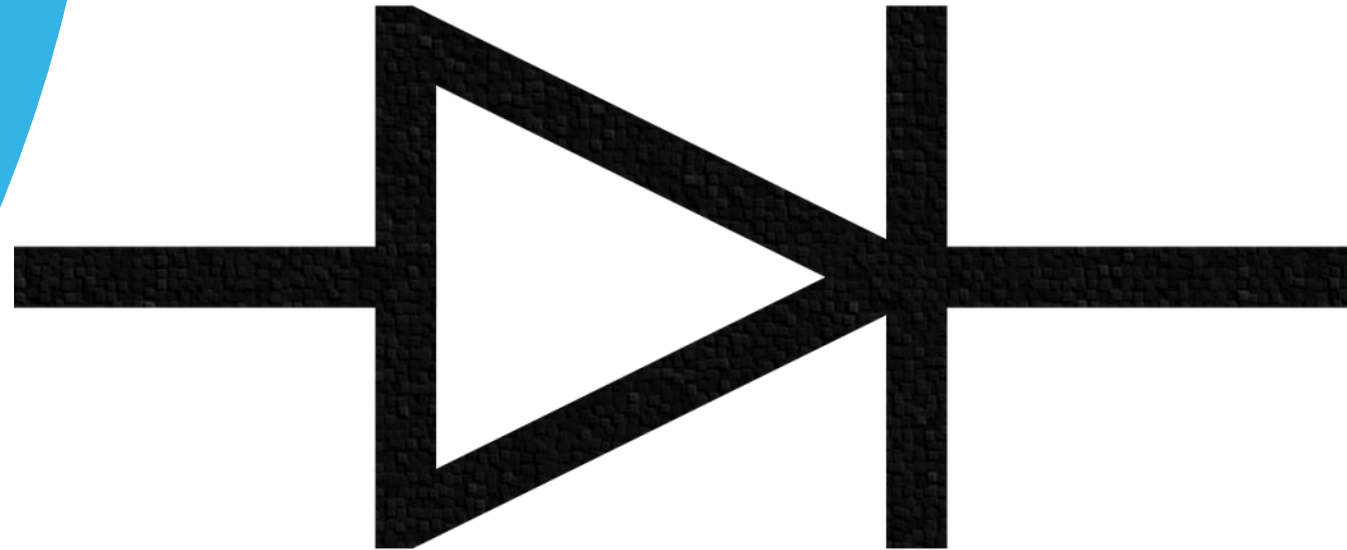
Obtained 12 patents
MOSFET products come out
SiC Schottky diodes come out

2022

Passed CNAS laboratory accreditation

02

**Products
Overview**





Competitive Advantages



E-Management



- ✓ E-Management & Intelligent manufacturing.
- ✓ Using bar code in production and manufacturing to do quality and traceability management.
- ✓ Using ERP & BPM systems to do paperless process and timely abnormal control.



Design



- ✓ Tell the difference between products performance and SOA(safe operation area) for customer.
- ✓ Popular field application product performance further improve.
- ✓ Customer collaboration design.

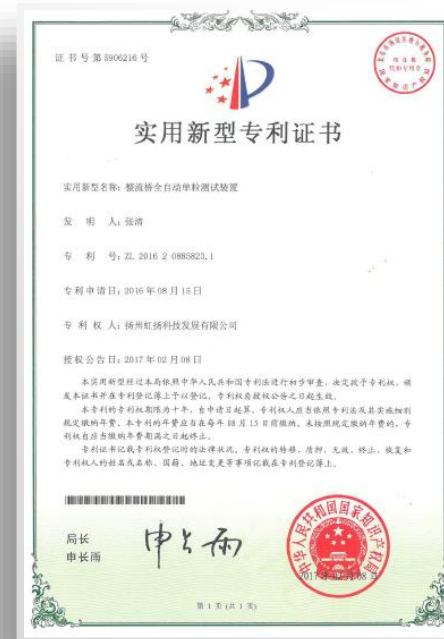
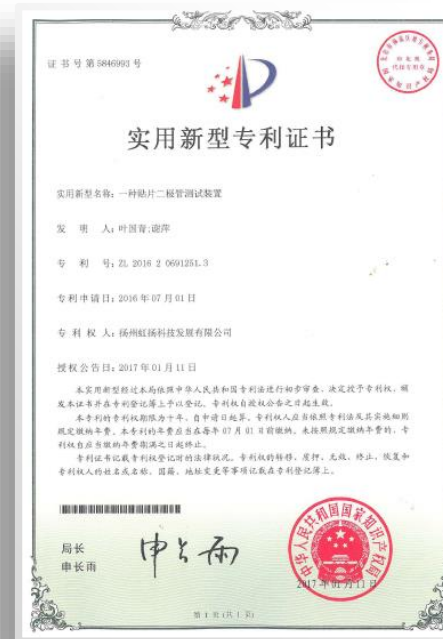
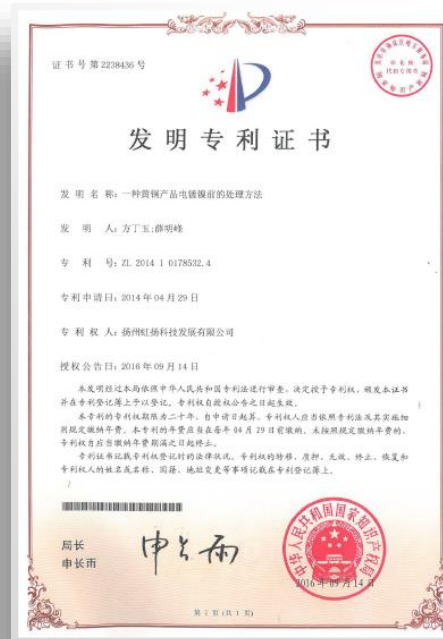
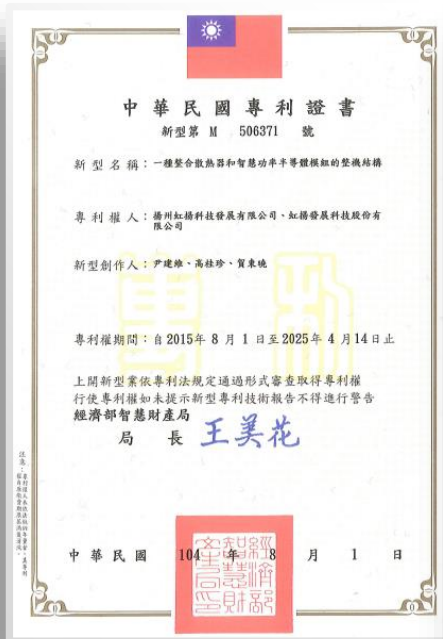


Service



- ✓ Delivery period reply within 24 hours.
- ✓ CNAS Laboratory.
- ✓ Product quality & After sales service.





Accumulate up to 141 patents

- A total of 34 patents were filed in 2022, including 5 invention patents, 29 utility model patents.
- From 2012, HY Obtains 141 patents in China and Taiwan, and will keep continuing to research and innovate new products.



Products Overview



DIODES

Standard Rectifiers · FAST Recovery Diode · High Efficiency and Ultra Fast Recovery Diode · Superfast Recovery Rectifiers · Schottky Rectifiers · Low VF Schottky Barrier Diode · High Voltage Glass Passivated Rectifiers · PV Solar Cell Protection Schottky Rectifiers · Silicon Carbide Schottky Diodes



BRIDGE RECTIFIERS

Standard Bridge Rectifiers · Low VF Bridge Rectifiers · Fast Recovery Bridge Rectifiers · Three-phase Bridge Rectifiers · Schottky Barrier Bridge Rectifiers



Protection Device

Transient Voltage Suppressors Diode (TVS) · Zener Diode · Electrical Static Discharge Guard



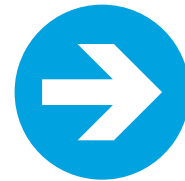
Small Signal Diode

Schottky Rectifiers · Switching Diode · Zener Diode · Electrical Static Discharge Guard · TRANSISTOR



AUTOMOTIVE DIODES

Standard Rectifiers · Schottky Rectifiers · High Efficiency and Ultra Fast Recovery Diode · Superfast Recovery Rectifiers · Bridge Rectifiers · Transient Voltage Suppressors Diode (TVS)



MOSFET

Synchronous Rectification MosFETs · Super Junction MosFETs · Wide Band Gap Semiconductor



Power Module

Diode Modules



Press Fit

Press Fit



Applications

SMPS

Adapter/Charger/Server
Power/Open Frame Power



Automotive

Car/Motorcycle/Electric Vehicle



Consumer Electronics

3C/Home Appliances



Green Energy

Solar Junction Box/Inverter



Communications

Network Equipment/Mobile
Phones/Digital Cameras



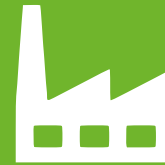
Lighting

LED Drive Power



Industrial Equipment

Power/Motor/Drivers/Inverter



Security System

System Controller / Alarm /
Lighting Power Supply



Smart Home

Smart Home Appliances/Smart
Meters/Display



Medical Equipment

Medical equipment power supply in
the health industry





Capacity Information



Package	Monthly/Capacity (KKpcs)	Package	Monthly/Capacity (KKpcs)	Package	Monthly/Capacity (KKpcs)	Package(ESD)	Monthly/Capacity (KKpcs)	Package(TVS)	Monthly/Capacity (KKpcs)
DO-41	179	ABS	10	GBU	9	SOD323	8	SOD-123FL	30
DO-15	28	BS	7.8	GBJ	5	SOD523	10	SMA	30
DO-201AE	10	BS SCHOTTKY	2.8	KBL	1	SOT26	10	SMB	20
DO-27	16	DB/DF	1.3	KBU	0.9	SOT23	10	SMC	10
R-6	1.6	DBS/DFS	3.3	BR6/8	0.6	DFN0603	10	DO-15	10
R-6 SCHOTTKY	39	MSBL	2	KBPC/W	0.6	DFN1006	10	DO-201	10
SMA	86	CBS	2	GBPC/W	0.6	DFN2510	6	R-6	10
SMB	6	WOG	1	BR-L	0.2	DFN1610-6L	6		
SMC	5	GBP	1.3	SBR	0.1				
TO-277A	1.4	2GBJ	1.3	CVB	0.02				
TO-263	8.8	GBL	1.3	SGBJ/HGBJ	0.3				
TO-220	8.8	4GBJ	1.3	3-Phase Bridge	0.5				
CELL	2.6	D3K	3	Solar Module	2				



Product Roadmap

2023

2024

2025



- TVS 1000W/SMB



- ESD Low CJ VR 2.5V/5V
- Auto ESD DFN1006/SOD323 3.3V/5V/36V



- Bridge Low VF GBU/GBJ 600V



- Small-Signal Mosfet
- Small-Signal Zener
- Small Signal Switching
- Small-Signal Transistor
- Small-Signal Schottky SOD-123/SOD-323 SOT-23/SOT-363



- Bridge Low VF ABS/D3K 2A/1000V
- SKY Bridge (DB/ABS)
- Anti-lightning GPP Chip



- Auto Small-Signal Zener
- Auto Small-Signal Schottky
- Auto Small-Signal Switching
- SOD-123/SOD-323/SOD-523
- ABS 2A/1000V IFSM>70A



- ESD High Surge SOT-26 3.3V/5V 12A/24A



- TVS 8000W/SMC



- Auto Small-Signal Zener
- Auto Small-Signal Schottky
- Auto Small-Signal Switching
- Auto Small-Signal Mosfet
- SOT-23/SOT-26/SOT-363
- High Power 3-Phase Bridge



- Auto ESD DFN2510/SOT023 Low Cj 3.3V/5V



- ESD Low CJ Low Clamping VR 2.5V/1.5V



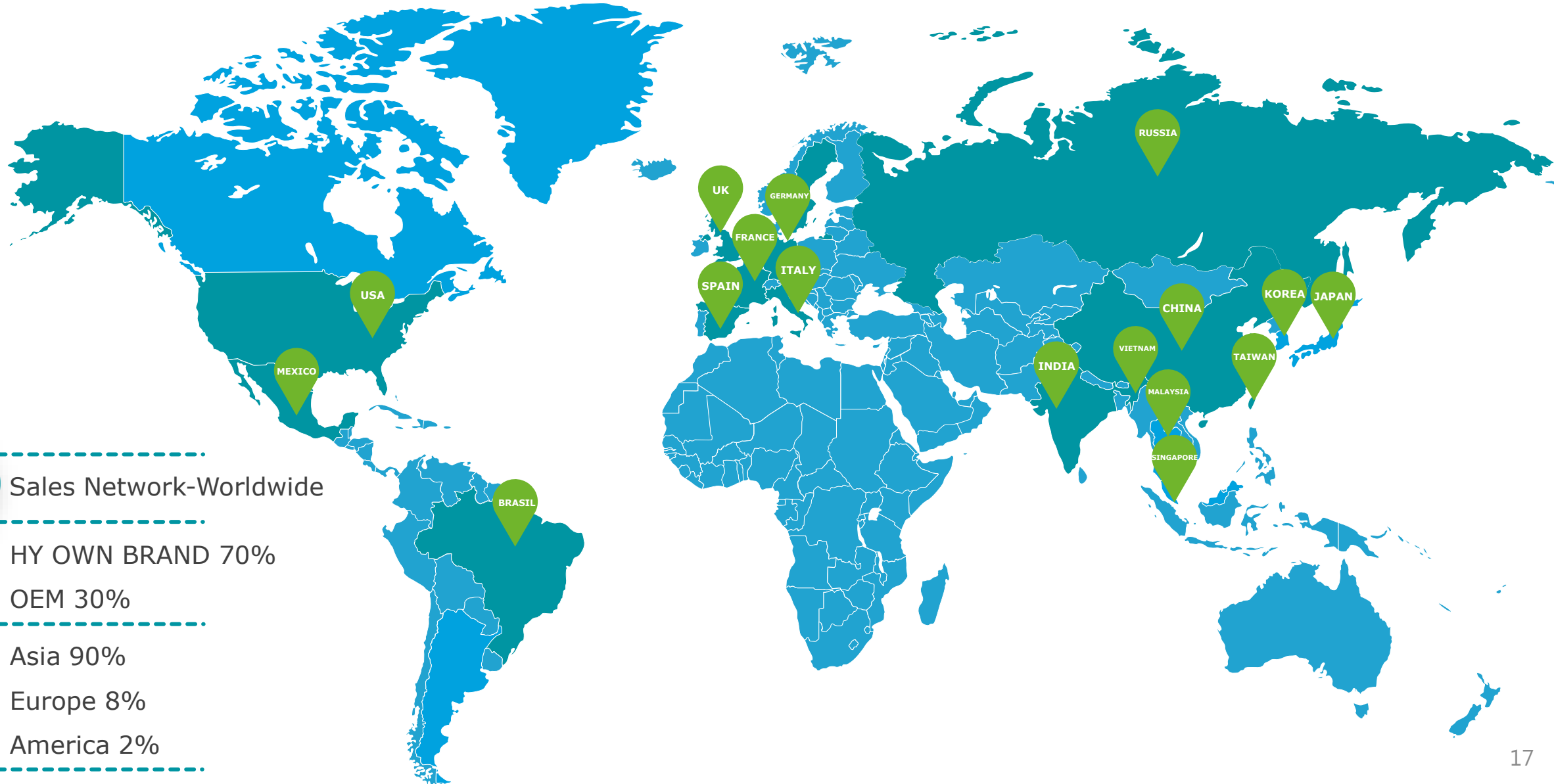
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Sales Network





Sales Network-Worldwide



Sales Network-Worldwide

HY OWN BRAND 70%

OEM 30%

Asia 90%

Europe 8%

America 2%



Sales Network-China



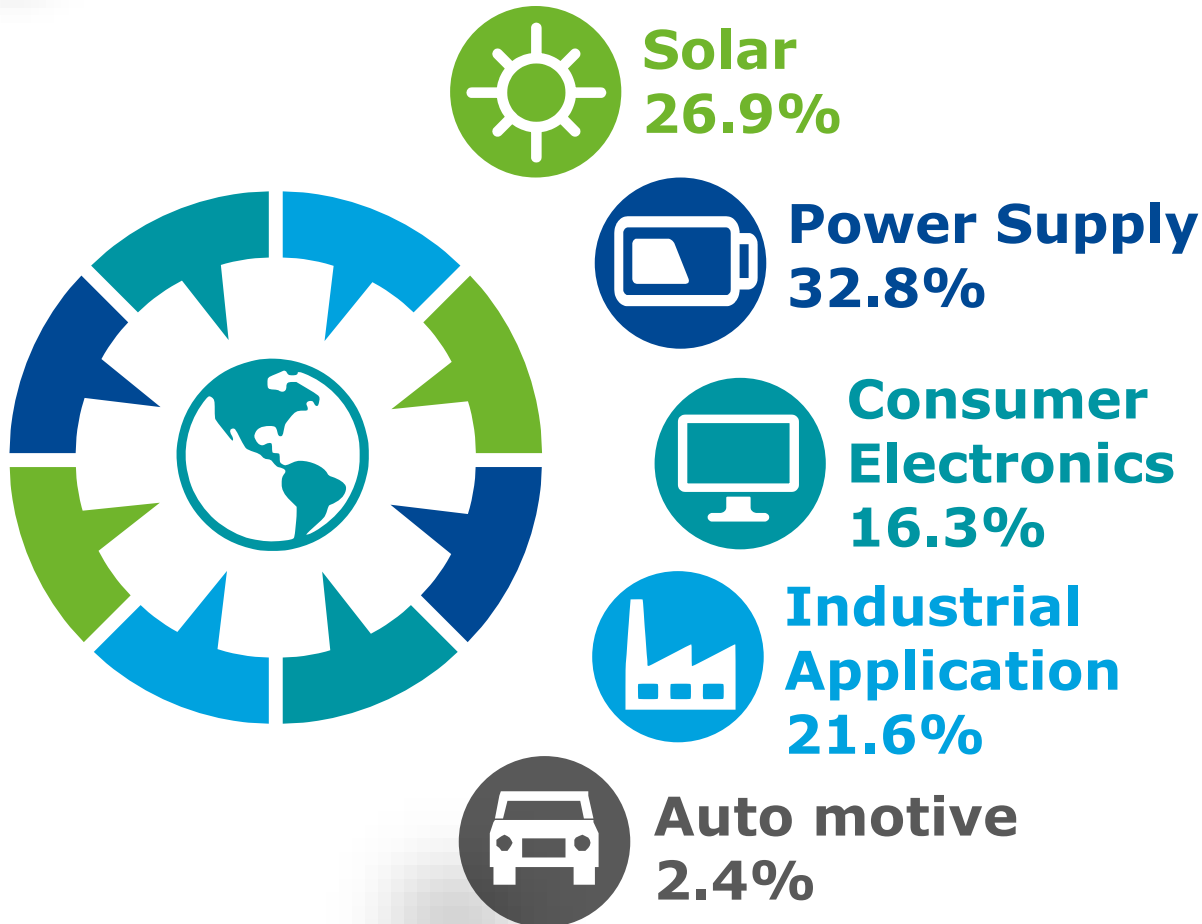
- Chong Qing Office
- Wen Zhou Office
- Shang Hai Office
- Ning Bo Office
- Wu Xi Office
- Ji Nan Office
- Nan Jing Office
- Xia Men Office
- Hang Zhou Office
- Wu Han Office
- Tian Jing Office
- Su Zhou Office
- Yang Zhou Office
- Shen Zhen Office
- Shun De Office
- Yang Zhong Office
- Cheng Du Office
- Dong Guan Office



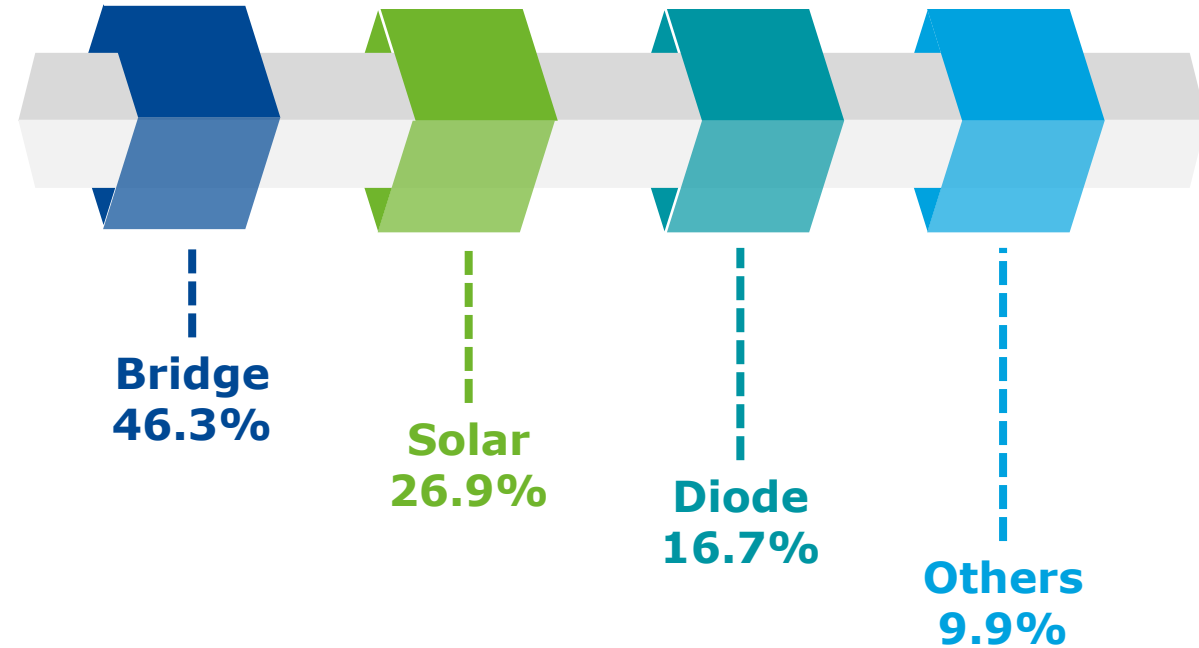
other Proportion



Application Fields



Sales Proportion





Customers

Automotive



Lighting



Consumer Electronics



Solar



Power Supply



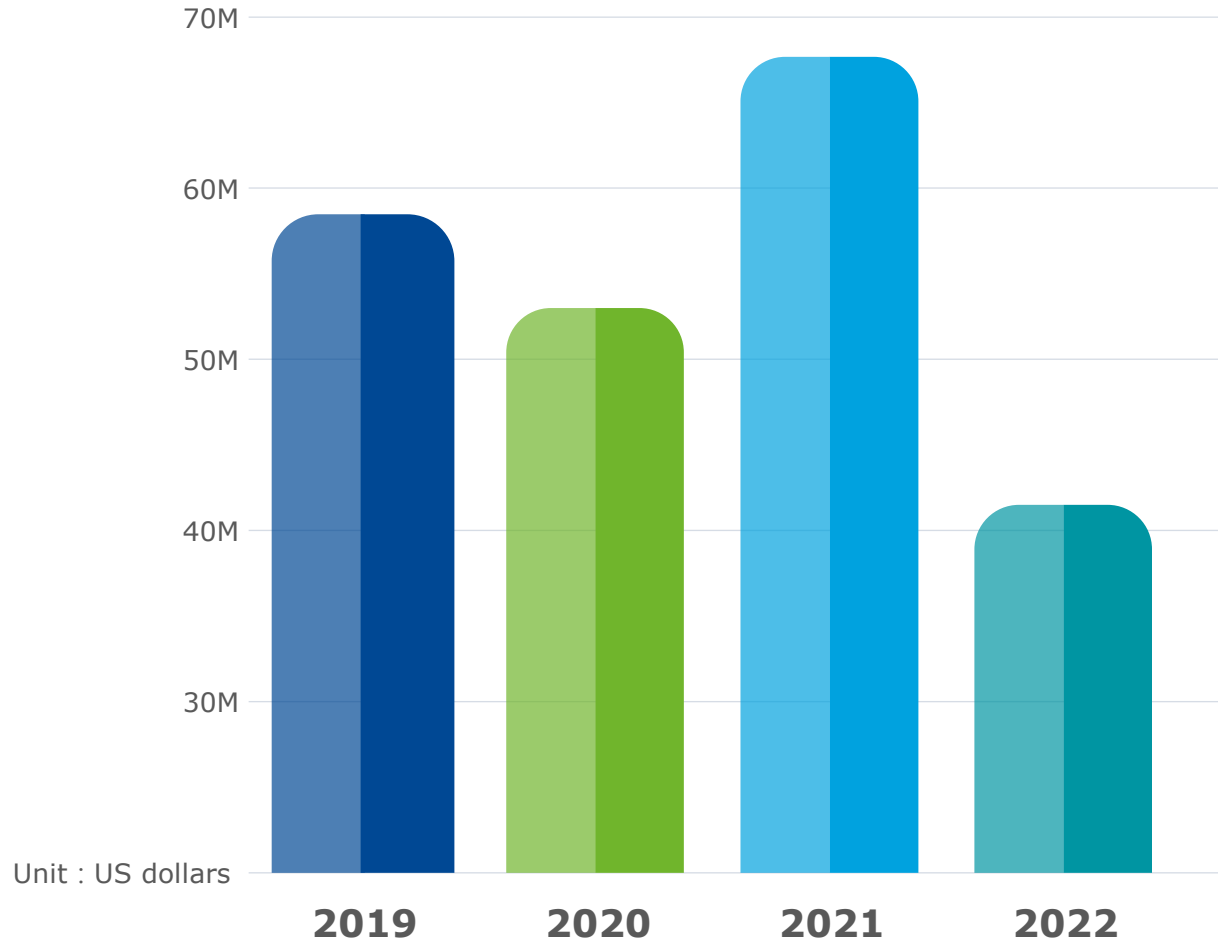
Industrial Application





Recent Revenue

Annual operating income in 2022



40.7 million

2021

67.7 million

2020

53.7 million

2019

57.9 million

04

Quality Assurance System





Comprehensive Hi-Reliability



No.	Test Items	Test purpose	Condition
1	AC/ PCT	Assessing the product's capability to withstand high temperature, high humidity, and high pressure conditions.	TA=121°C, 100%RH, 2 atm
2	HTHH	Assessing the product's capability to withstand high temperature and high humidity conditions.	TA=85°C, 85%RH
3	TC	Assessing the product's capability to withstand repeated temperature cycling between high and low extremes.	TA=-55°C to +150°C, dwelled for 30min
4	HTS	Assessing the product's capability to withstand prolonged exposure to high temperature conditions.	TA=150°C/ 175°C (press fit diodes)
5	LTS	Assessing the product's capability to withstand prolonged exposure to low temperature conditions.	TA=-40°C/ -55°C
6	SH	Assessing the product's capability to withstand transient high temperature during welding process.	260+5/-0°C, 10±1 sec. 270±5°C, 7+2/-0 sec.
7	HTRB	Assessing the product's capability to withstand reverse bias under high-temperature conditions.	TA=125°C/ 150°C/ 175°C, 80%VR
8	H3TRB	Assessing the product's capability to withstand reverse bias under long-term high-temperature and high-humidity conditions.	TA=85°C, 85%RH 80%VR up to 100V
9	IOL	Assessing the product's capability to withstand power cycling and rapid temperature changes.	TA=25°C, 5 min. on/5 min. off, ΔTJ≥100°C
10	TF	Assessing the product's resistance to thermal fatigue under repeated high-low temperature alternation conditions.	TA=40°C to 175°C On/Off=2/2 min.
11	Solderability	Assessing the product's ability to achieve proper soldering of pins.	245±5°C, 5±0.5 sec.
12	ESD	Assessing the product's ability to withstand electrostatic discharge (ESD) shock.	ESD @ HBM, TA=25°C (C=100pF, R=1.5KΩ)
13	FS	Assessing the product's ability to withstand momentary large forward current.	F/S @ 8.3mS, Single half-sine wave superimposed on rated load



Comprehensive Reliability Testing



Life Testing for Reliability



**Environmental Testing
for Reliability**



Comprehensive Analyzing Abilities



X-RAY analyzer



SZ6210P testing equipment



Halogen-free testing equipment



Thermal resistance testing equipment

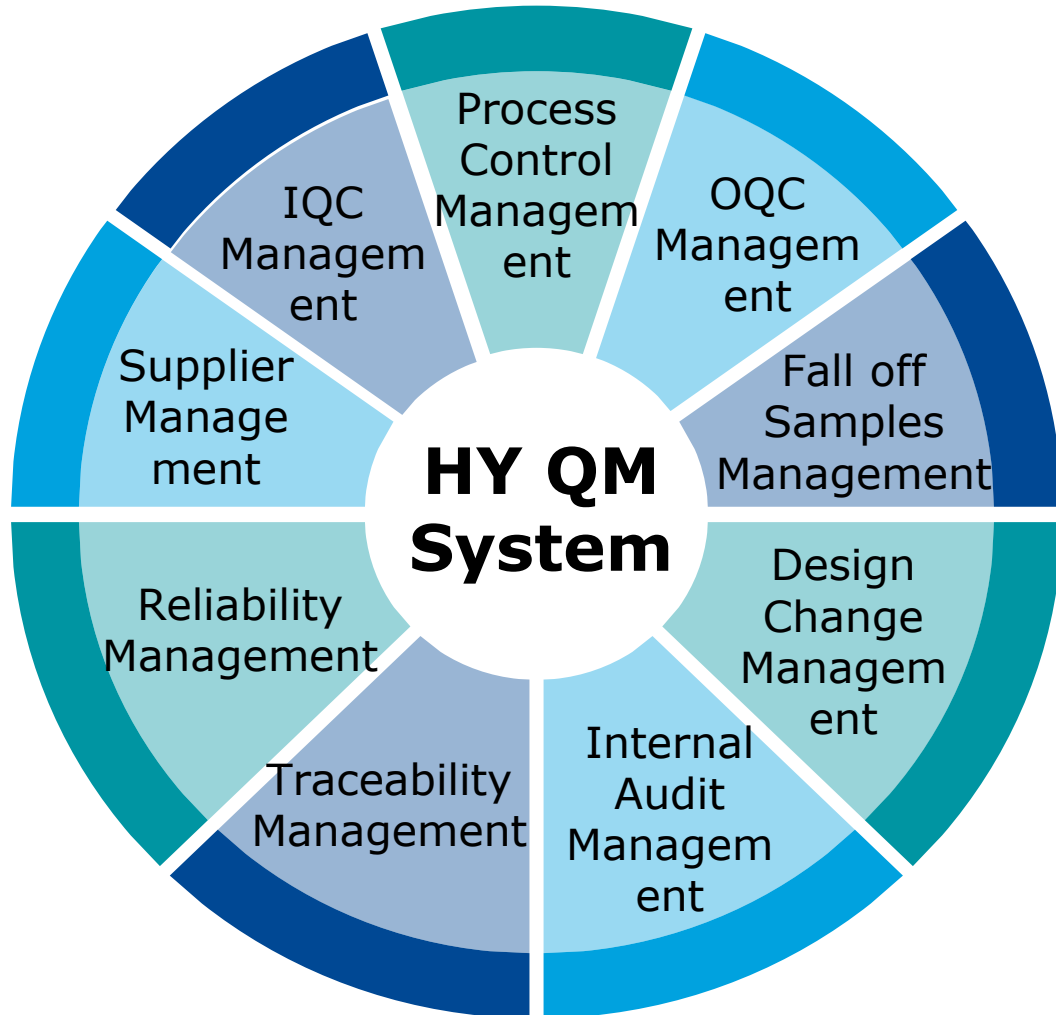


ESD tester



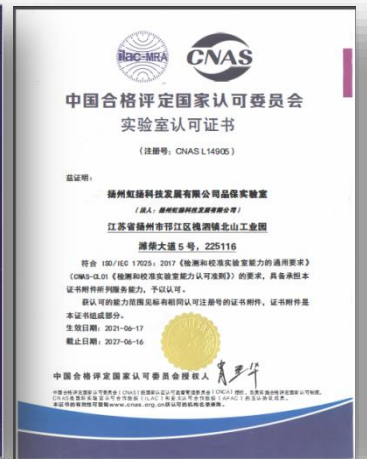
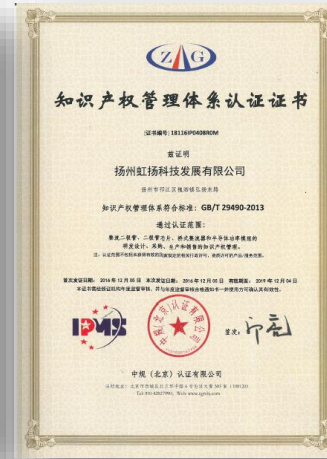
Electron microscopy & Energy spectrum analyzer

QM System





Quality Certification



ISO 9001
Quality
Management
System

ISO 14001
ENVIRONMENTAL
MANAGEMENT
SYSTEM

IATF 16949
Automotive
Quality
Management
System

ISO 45001
occupational
health and
safety
management
system

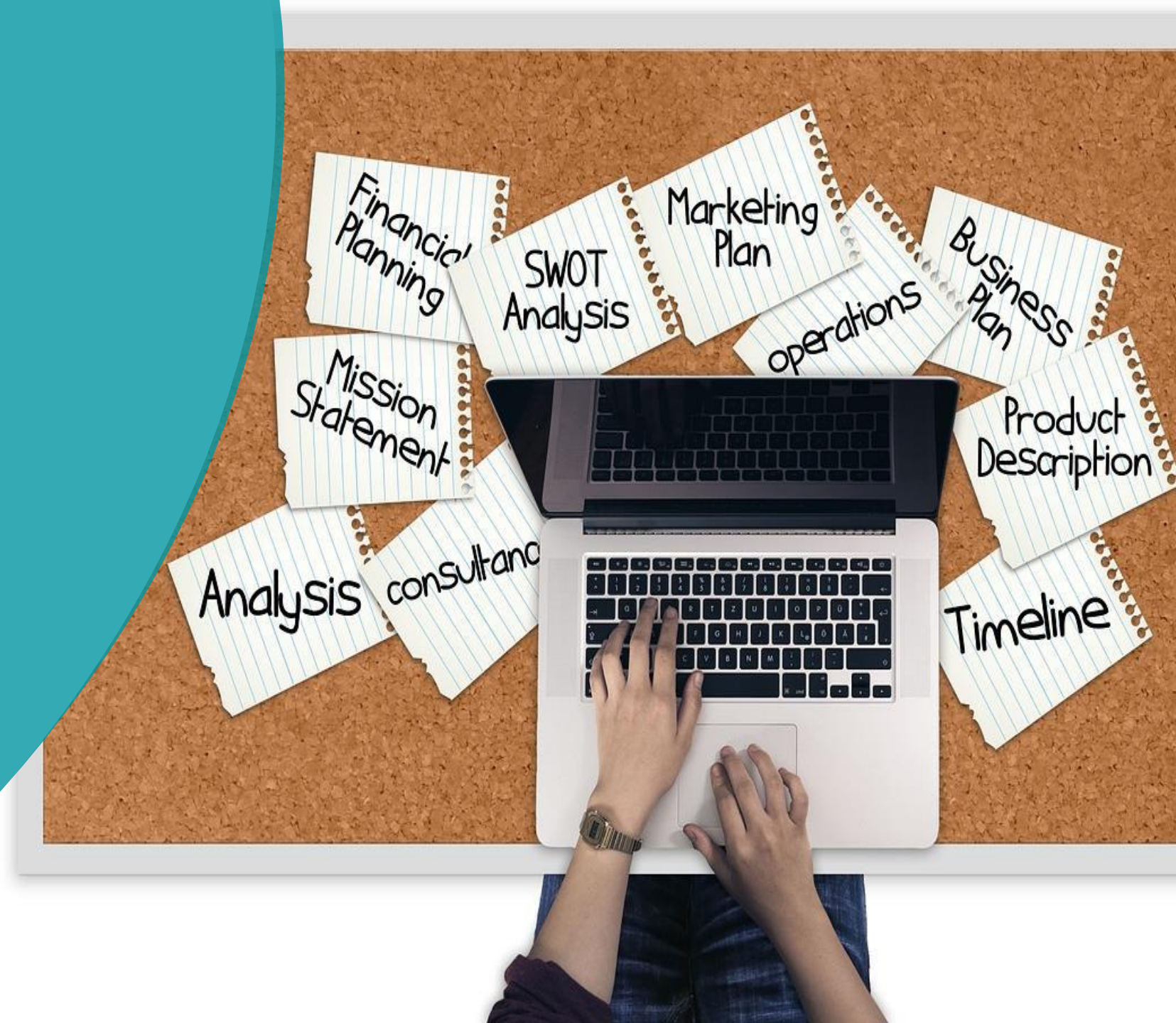
Intellectual
Property
Management
System

Integration
of
Information and
Industrialization
Management
System

CNAS
Laboratory
Accreditation
Management
System

05

Future Prospects





Product Strategies

Power Supply

- High Voltage, Low power loss, Fast switching, Low leakage products
Low profile packages

Home Appliance IOT

- Low power loss, variable frequency & anti-lightning product.

Industrial Automation Control

- Continue to improve power module series.

Solar Energy Market

- Applying trench schottky to module type with low thermal resistivity assembly materials
- Outdoor Lamps surge proof · high withstanding voltage & better heat dissipation
- Low power loss & surge proof

New material product development

- Product development including Schottky, SiC, GaN and other materials.

Automotive Electronics Application

- Continue to develop other related automotive electronics, towards high current; high voltage under high safety regulations.



Social Responsibilities

HY has the obligation to carry out corporate social responsibility policy. While pursuing sustainable business operations and profit-making, HY pays attention to the interests of stakeholders and the maintenance of environmental protection and social welfare. HY's practice of corporate social responsibility will be implemented by the following principles:

**Code of Conduct
for Business Ethics**

**Gives Back to Our
Societies**



**Environmental
Protection**

**Employee Care
Management &
Human Rights Policy**



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<http://www.hygroup888.com>

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