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■ ■ SwissSEM China

# SwissSEM China

PACIFIC SEMICONDUCTOR TECHNOLOGY (ZHEJIANG) CO., LTD



# Group Introduction



**Founded in 2002**

**Listed on the Hong Kong Main Board,  
stock code 580. HK**

**The business is oriented to the whole new energy  
industry chain**

In particular, wind power, photovoltaic, DC transmission,  
electric vehicles, energy storage, industrial control, ships,  
railways, etc.

**It has more than 10 subsidiaries in China and Europe**

**1100+**

Total number of employees

**30%+**

Proportion of technical R&D personnel

**280+**item

Patent certificate

**20+**item

Provincial and municipal  
innovation honors

**5**item

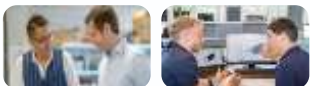
National energy technology  
achievement certification



# Group distribution

## Othmarsingen, Switzerland

Astrol Electronic AG  
SwissSEM Technologies AG



## Hamburg, Germany

morEnergy GmbH



## Rotterdam, Netherlands

Astrolkwx B.V.



## Wuhan, Hubei

Wuhan Langde Electric Co., Ltd



## Beijing Group Headquarters



## Wuxi, Jiangsu

Wuxi Saijing Power Capacitor Co., Ltd



## Jiashan, Zhejiang

Jiashan Huarui SwissSEM China Electrical Equipment Technology Co., Ltd  
SwissSEM China Pacific Semiconductor Technology (Zhejiang) Co., Ltd  
Jiashan SwissSEM China Capacitor Co., Ltd  
Zhejiang Saiying Electric Power Technology Co., Ltd  
Zhejiang Jiashan Keneng Power Equipment Co., Ltd  
SwissSEM China New Energy Technology Co., Ltd



## Ningbo, Zhejiang

Ningbo Hairong Electric Appliance Co., Ltd



# Core components of the new energy industry chain

## New energy power generation



Self-developed SiC and IGBT chips and modules



Cascading busbar



Integrated busbar

## New energy Large-scale grid connection and long-distance delivery



anodic saturation reactor



Power electronics capacitors



Cascading busbar



High-power IGBTs



Power capacitors

## New energy electricity



Self-developed SiC and IGBT chips and modules



Cascading busbar



Integrated busbar



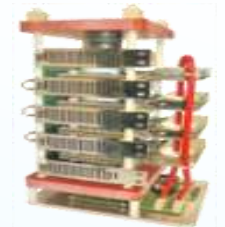
## Smart grid online monitoring

- It is one of the key technologies for the intelligent development of power grids, covering all aspects of power systems such as transmission, distribution, and substation
- Greatly improve the level of intelligent management, improve the safety and stability of power grid operation, and reduce operation and maintenance costs
- It has achieved outstanding results in more than ten domestic UHV DC transmission and smart grid scientific research demonstration projects, as well as overseas projects such as Russia, Israel, and Bangladesh



## Solid-state pulse switch

- The most internationally authoritative technical expert teams with over 20 years of technical accumulation possess globally leading technological capabilities.
- **Representative Cases:**
  - Nuclear fusion research by multiple U.S. companies
  - The positron-electron collider project at the Institute of High Energy Physics (IHEP), Chinese Academy of Sciences
  - The high-voltage laboratory at ETH Zurich (Swiss Federal Institute of Technology)
  - The U.S. Electric Fish Barrier Project





## Solid-state pulse switches

- Microsecond switching speed, intelligent and modular design
- Norwegian Classification Society certification
  - China Classification Society certification
  - Siemens supplier in the marine sector
- **Typical Cases:**
  - China's Zhuhai cloud intelligent mothership
  - China offshore wind operation and maintenance mother ship
  - A railway scientific research project in China
  - European offshore wind power installation vessel
  - UK Smart Grid Demonstration Project
  - European CERN Particle Collider



## In-line real-time impedance measurement

- Innovative technology with international invention patents realizes online and real-time impedance data measurement
- It is of great value to new energy power generation, charging, energy storage and other power distribution systems
- Outstanding performance in the fields of wind and photovoltaic power plants, electrified ships, car charging stations, electrified railway vehicles, and inverter elevators in Europe



## Flexible AC transmission units

- The comprehensive solution of AC transmission technology FACTS includes: SVC, SVG, DC ice melting device, low-voltage ride-through device and other products
- It has made many outstanding achievements in the fields of electrified railways, new energy power plants, metallurgy, and industrial control

## SwissSEM China

### PACIFIC SEMICONDUCTOR TECHNOLOGY(ZHEJIANG) CO., LTD

SwissSEM Semiconductor possesses domestically scarce and internationally leading independent chip technology

#### Chip products

Fine trench gate technology

Micro trench gate technology

SiC technology

- **IGBT Product coverage**

1050V 1200V 1700V

- **SiC The product voltage range covers**

650V 750V 1200V 1700V 2000V

- **Low voltage MOS has a rich product line**

ComplementaryN+P Dual NMOS SGT LVMOS SJ MOS Trench LVMOS

#### Company Business

A high-tech enterprise specializing in the research and manufacturing of high-end power semiconductor products such as IGBT, FRD, and silicon carbide chips and modules;

#### Corporate Vision

Committed to promoting the development of energy towards a more sustainable and green direction, and promoting the transformation of traditional fossil fuels into green electricity.

# About us



## R&D Center

Located in Othmarsingen, Switzerland

The technical research and development team is composed of top experts in IGBT and SiC design and manufacturing from Europe and China, as well as industry leaders with excellent performance and decades of practical experience in the field of power semiconductors.



## Manufacturing Center

Located in Jiashan County, Zhejiang Province, China

The first phase of the manufacturing center project covers an area of 22000 square meters, and the second phase project covers an area of 50000 square meters. It plans to construct multiple fully automatic intelligent IGBT and SiC production lines with international first-class level, as well as a domestic technology center.



# Module Products



## ◆ ST —IGBT

- 1200V/200A • 1200V/250A • 1200V/300A • 1200V/450A • 1200V/600A • 1200V/800A
- 1700V/200A • 1700V/300A • 1700V/450A • 1700V/600A

## ◆ ED —IGBT

- 1200V/450A • 1200V/600A • 1200V/750A • 1200V/900A
- 1700V/450A • 1700V/600A • 1700V/900A

## ◆ BEVD —IGBT

- 1200V/400A
- 1200V/500A

## ◆ EP —IGBT

- 1700V/75A • 1700V/100A • 1700V/150A
- 1700V/200A

## ◆ EVD —IGBT/SiC

- 1200V/600A • 1200V/ 2mΩ • 1200V/ 3mΩ
- 1200V/ 4mΩ

## ◆ TF —IGBT

- 1700V/75A • 1700V/ 100A
- 1700V/ 150A





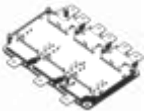
## ◆ FP —IGBT

- 1050V/650A

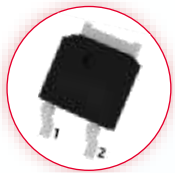
## ◆ HEEV —SiC

- 1200V/ 2mΩ • 1200V/ 3mΩ
- 1200V/ 4mΩ

# IGBT model Roadmap

IGBT products	Specification	Lead time for samples	Mass production lead time
XP model 	2300V 1400A	July 2026	December 2026
ST model 	1200V 1000A	March 2026	July 2026
EP model 	1200V 75A/100A/150A	September 2026	TBD
FP model 	1400V 600A	June 2026	TBD
EVD model 	1200V 2mΩ/3mΩ/4mΩ	February 2026	August 2026
	1200V 600A	February 2026	August 2026

# Discrete Device Products



## TO-252-2L SiC SBD

- 650V/4A
- 650V/6A
- 650V/8A
- 650V/10A
- 650V/16A
- 650V/20A
- 650V/30A
- 1200V/2A
- 1200V/3A
- 1200V/5A
- 1200V/10A
- 1200V/15A



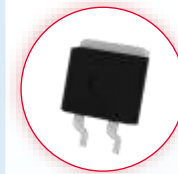
## TO-220-2L SiC SBD

- 650V/4A
- 650V/6A
- 650V/8A
- 650V/10A
- 650V/16A
- 650V/20A
- 1200V/2A
- 1200V/3A
- 1200V/5A
- 1200V/10A
- 1200V/15A
- 1200V/20A



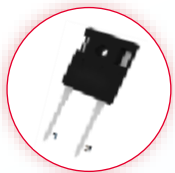
## SMBF —SiC SBD

- 650V/1A
- 1200V/1A
- 1200V/2A
- 1200V/3A



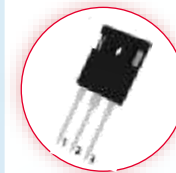
## TO-263-2L SiC SBD

- 650V/8A
- 650V/10A
- 650V/20A
- 650V/30A
- 650V/40A
- 650V/50A
- 1200V/ 10A
- 1200V/20A



## TO-247-2L SiC SBD

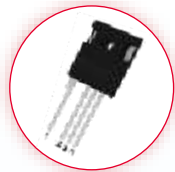
- 650V/8A
- 650V/16A
- 650V/20A
- 650V/30A
- 650V/40A
- 650V/50A
- 1200V/15A
- 1200V/20A
- 1200V/30A
- 1200V/40A
- 1200V/50A
- 1200V/60A
- 1700V/50A
- 1700V/5A
- 1700V/25A
- 2000V/40A
- 2000V/20A



## TO-247-3L SiC SBD

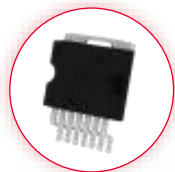
- 650V/16A
- 650V/20A
- 650V/30A
- 650V/40A
- 650V/60A
- 1200V/10A
- 1200V/ 20A
- 1200V/30A
- 1200V/40A
- 1200V/60A

# Discrete Device Products



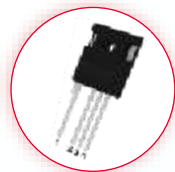
## TO-247-4L SiC MOSFET

- 650V/18mΩ
- 650V/27mΩ
- 650V/35mΩ
- 650V/50mΩ
- 650V/65mΩ
- 750V/9mΩ
- 750V/7mΩ
- 1200V/13mΩ
- 1200V/14mΩ
- 1200V/20mΩ
- 1200V/32mΩ
- 1200V/ 40mΩ
- 1200V/ 60mΩ
- 1200V/75mΩ
- 1200V/120mΩ
- 1400V/20mΩ
- 1400V/32mΩ



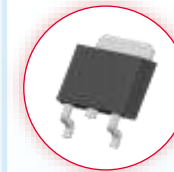
## TO-263-7L SiC MOSFET

- 650V/ 18mΩ
- 650V/ 27mΩ
- 650V/ 35mΩ
- 650V/ 50mΩ
- 650V/ 65mΩ
- 1200V/ 32mΩ
- 1200V/ 40mΩ
- 1200V/ 60mΩ
- 1200V/ 75mΩ
- 1200V/ 120mΩ
- 1700V/ 1Ω



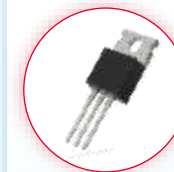
## TO-247-3L SiC MOSFET

- 650V/ 18mΩ
- 650V/ 27mΩ
- 650V/ 35mΩ
- 650V/ 50mΩ
- 1200V/ 32mΩ
- 1200V/ 40mΩ
- 1200V/ 75mΩ
- 1700V/ 1Ω



## TO-252-2L SiC MOSFET

- 650V/ 200mΩ



## TO-220-3L SiC MOSFET

- 1200V/ 60mΩ
- 1200V/ 50mΩ

# LVMOSFET Product Catalog

## Mass Production

### ◆ SGT MOS

#### • G3

30V 60V 100V 40V 80V

#### • G2

30V 60V 100V 40V 80V  
120V 150V 200V

### ◆ Trench MOS

40V 80V 100V 60V 30V  
12~20V

## 2025 Under Developing

### ◆ SGT MOS

#### • G3

120V 150V 200V

#### • G2

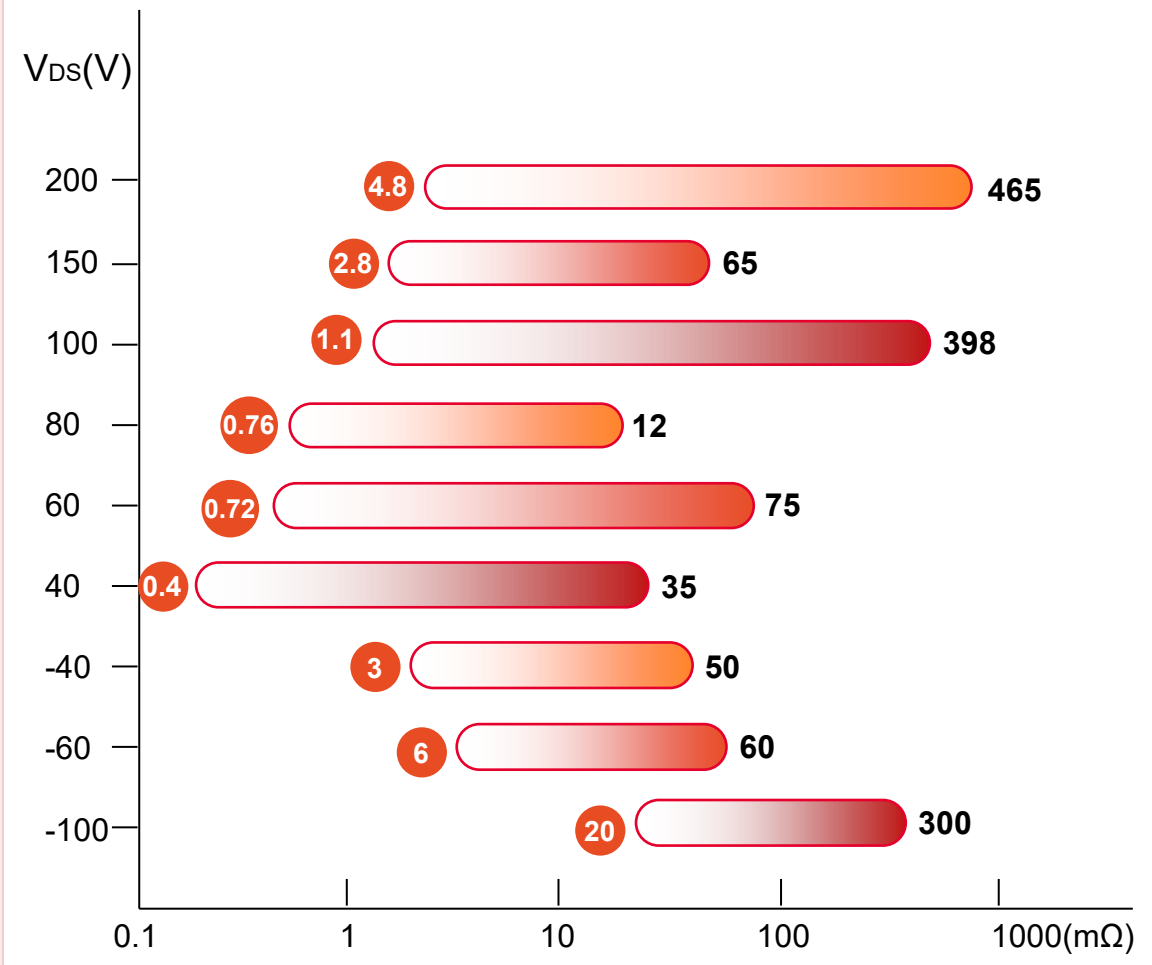
250V

#### • G4

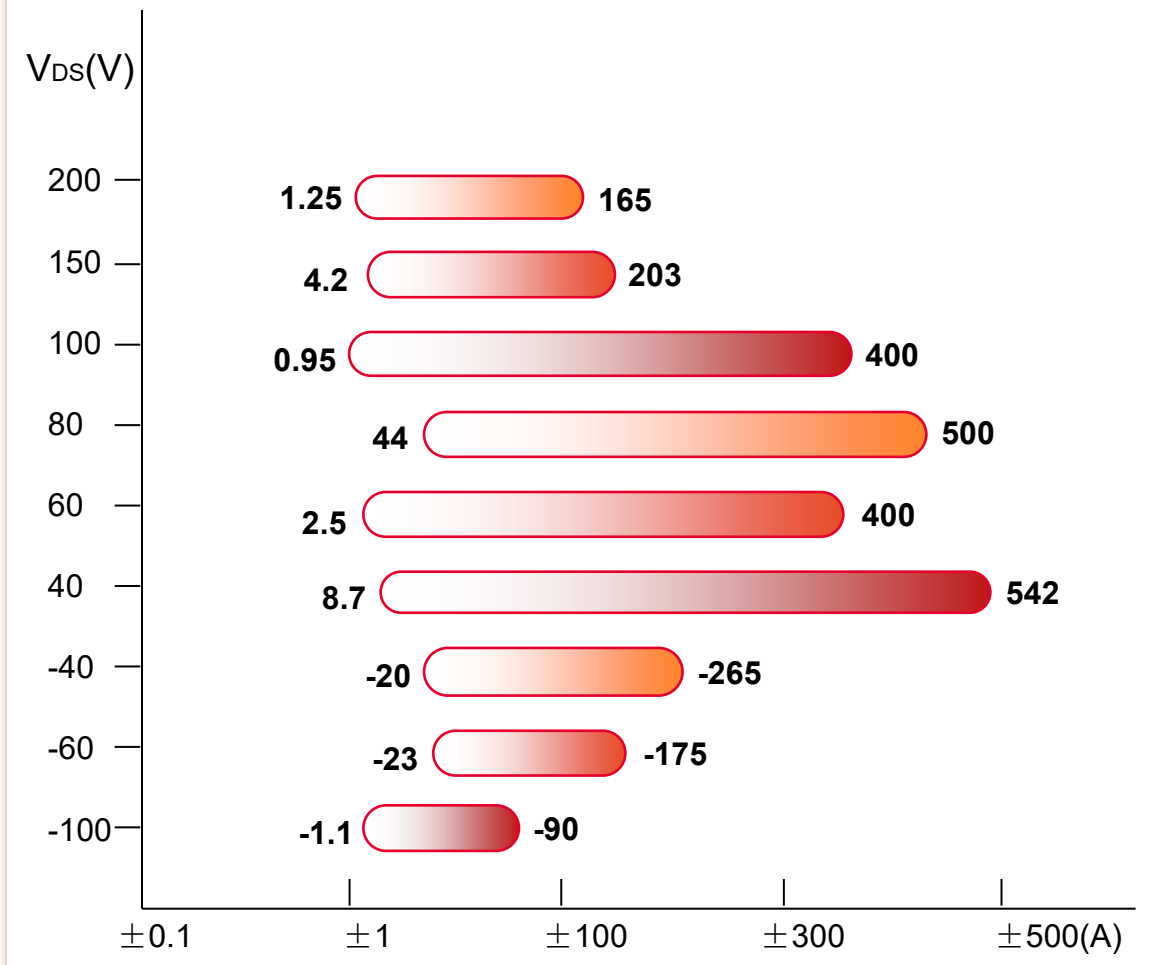
30V 60V 40V

# LVMOSFET product series

$R_{DS(ON)Max@VGS=10V}$



$I_{DS@TC=25^{\circ}C}$



# SJ MOSFET Product

## SJ MOSFET Product atlas

### SJ MOS

#### ◆ Mass Production

##### • G2

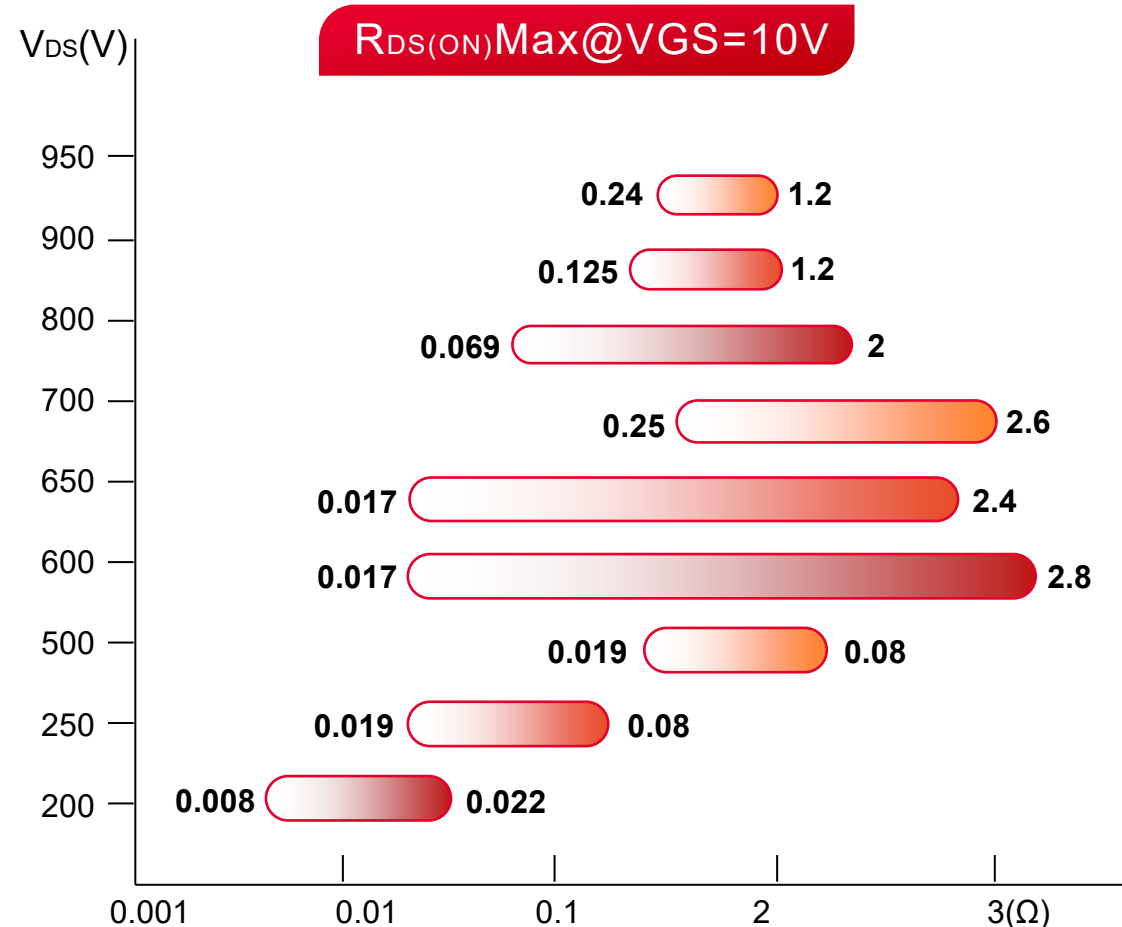
- 200V
- 250V
- 500V
- 600V
- 650V
- 700V
- 800V
- 900V
- 950V

#### ◆ Under Developing

##### • G3

- 650V

## SJ MOSFET Product range



# Discrete Device and module products

Power module related capability is unde planning.

Need customer provide product design details and requirements 8 months ahead.

## ● Production

### ◆ Discrete



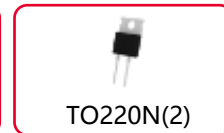
TO220(3)/247(2)



DFN QFN



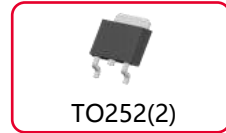
TO220(2)/247(3)



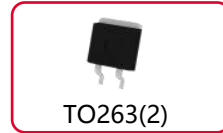
TO220N(2)



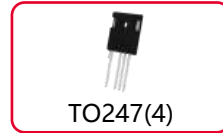
SAPKG-9L



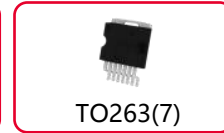
TO252(2)



TO263(2)



TO247(4)



TO263(7)

### ◆ Power Module (Molding)



SOT227

## ● Development

### ◆ Discrete

2025



TOLL

2026



SPAK-16L

### ◆ Power Module(Molding)



SPAK-4L



SSC Module

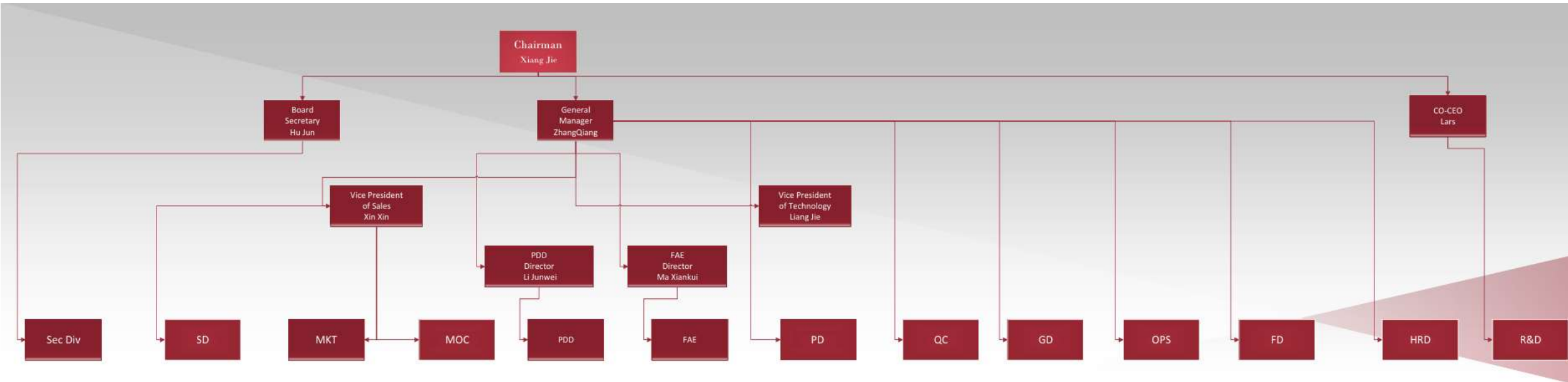


SPAK-4L Plus



xPAK

# Organizational Chart



# Technical team

## Technical R&D team

Composed of top technical experts from Europe and China in IGBT, SiC design and manufacturing, as well as industry leaders with excellent performance and decades of practical experience in the field of power semiconductors.



**Co-CEO Lars**

PhD, 33 academic papers  
From 2014 to 2022, served as the head of SiC research and development at Hitachi Energy (formerly ABB Semiconductor, Switzerland)



**Co-CEO Zhang qiang**

From 2016 to 2019, Wuxi Sichuang Power Electronics  
From 2009 to 2016, China CRRC Xi'an Yongdian



**DIRECTOR Roland**

From 2019 to 2025, CEO of Saijing Asia Pacific Semiconductor  
From 2000 to 2018, ABB Semiconductor Company in Switzerland  
Vice President, member of the senior management team

# Technical team



Chantal

## SwissSEM SCM and Quality(VP)

2002-2019  
Head of Supply Chain and Quality Management, ABB Semiconductor, Switzerland



Raffael

## SwissSEM PM and Testing(VP)

36 academic papers and 12 patents  
From 1996 to 2018, he was the Global Product Strategy Manager & Head of Product Development at ABB Semiconductor, Switzerland



Sven

## SwissSEM VP

Ph.D., 25 academic papers, 6 patents  
From 2008 to 2018, he was the head of the medium voltage device department of ABB Semiconductor Company in Switzerland



Liang jie

## Deputy General Manager

It has 10 patents, 2 provincial and ministerial awards, and 1 municipal award  
From 2015 to 2019, Wuxi Infineon served as the head of the field process of electric vehicle products

## SwissSEM Senior R&D Engineer

From 2019 to 2023, worked as a Senior R&D Engineer for IGBT&SiC power semiconductor devices at Hitachi Energy (formerly ABB Semiconductor, Switzerland)



Nick



Remi

## SwissSEM Senior Process Engineer

From 2014 to 2022, worked as a Senior Process Engineer (Process and Quality Control, Industry 4.0 Manufacturing Intelligent Manufacturing) at Hitachi Energy (formerly ABB Semiconductors, Switzerland)

## SwissSEM Senior R&D Engineer

2021-2023, Senior R&D Engineer for IGBT&SiC Power Semiconductor Devices at Hitachi Energy (formerly ABB Semiconductors Switzerland)



Paula



Roger



Tommaso

## SwissSEM R&D Engineer Chip Design

PhD, 2 academic papers  
Researcher at IBM Zurich Research Laboratory from 2014 to 2024

## SwissSEM Senior Test Engineer

PhD, 33 academic papers  
From 2014 to 2022, served as the head of SiC research and development at Hitachi Energy (formerly ABB Semiconductor, Switzerland)

# Fully automated intelligent manufacturing

**Our product is produced in a 1000 level clean workshop throughout the entire process**

Adopting fully automated intelligent manufacturing design and implementing extremely strict quality management standards, ensuring that every product has excellent electrical performance, consistency, and reliability.

1000 级

# Fully automated intelligent manufacturing



◆ The most advanced and automated manufacturing equipment in the world, with no need for manual intervention in all process steps

◆ **Intelligent management system:**

It includes components such as ERP, EAP, MES, and BI to jointly build an efficient and intelligent production environment.

All process parameters, materials and accessories used for each product are traceable, and every process step and test result is monitored in real-time and intelligently.

◆ **Total Quality Control and Management System:**

**AQG324**

Vehicle grade power module standard

**IATF16949**

2016 Automotive Quality Management System

**ISO9001、ISO14001、ISO45001**

management system

**RoHS2.0**

EU Standard

**UL**

American certification



# Advanced information management system

## The most advanced information management system in the entire industry

Strictly control product reliability and consistency through data from various stages. We can provide testing data for each product along with the shipment according to the customer's needs.



- ◆ The MES system is responsible for monitoring, managing, and optimizing various aspects of the production process, and using BI big data analysis systems to analyze large amounts of data in the production process, extract valuable information and data, in order to better understand business operations and discover trends.
- ◆ MES system can also manage the testing process in the production process, including product testing, quality inspection, etc. Real time collection and analysis of test data (SPC system analysis) is achieved through connection with testing equipment. During the testing process, the MES system can automatically determine the qualification of the product based on its testing results and quality standards, and record relevant data for subsequent traceability.

# Comprehensive testing system

We have the most comprehensive testing system in the industry, with complete and reliable testing data for new products

TEST	TEST PROJECT	TEST REQUIREMENTS	TEST CONDITION
<b>HTS</b>	High Temperature Storage	High-temperature storage	$T_a = 150^{\circ}\text{C}$ , $t = 1000\text{h}$
<b>LTS</b>	Low Temperature Storage	Low-temperature storage	$T_a = -40^{\circ}\text{C}$ , $t = 1000\text{h}$
<b>HTRB</b>	High Temperature Reverse Bias Test	High temperature reverse bias test	$T_a = 150^{\circ}\text{C}$ , $t = 1000\text{h}$ , $V_{ce} = 80\%$ $V_{cemax}$ , $V_{ge} = 0\text{V}$
<b>HTGB</b>	High Temperature Gate Bias Test	High temperature gate bias test	$T_a = 150^{\circ}\text{C}$ , $t = 1000\text{h}$ , $V_{ce} = 0\text{V}$ , $V_{ge} = \pm 20\text{V}$
<b>H3TRB</b>	High Temperature High Humidity Test	High temperature and high humidity test	$T_a = 85^{\circ}\text{C}$ , $t = 1000\text{h}$ , $V_{ce} = 80\text{V}$ , $V_{ge} = 0\text{V}$ , $\text{RH} = 85\%$
<b>TST</b>	Thermal Shock Test	Thermal shock test	$T_{cmin} = -40^{\circ}\text{C}$ , $T_{cmax} = 125^{\circ}\text{C}$ , $t_{\text{storage}} = 0.5\text{h}/0.5\text{h}$ , $N_{\text{cycles}} = 1000\text{cycles}$
<b>PCsec</b>	Powercycling sec. Test	Power cycle second-level test	$t_{\text{on}} < 5\text{s}$ , $I_L > 85\%I_{\text{norm}}$ Termination conditions: $V_{CEsat} / V_F \geq 5\%$ ; $R_{th} \geq 20\%$
<b>PCmin</b>	Powercycling min. Test	Power cycle minute-level testing	$t_{\text{on}} > 15\text{s}$ , $I_L > 85\%I_{\text{norm}}$ Termination conditions: $V_{CEsat} / V_F \geq 5\%$ ; $R_{th} \geq 20\%$



# IGBT chip and diode chip products



## i20/i21 IGBT Chip features:

- Advanced trench gate technology, low saturation drop  $V_{ce(sat)}$  and low switching loss ( $E_{on}+E_{off}$ )
- Optimized the design of the N-enhancement layer
- The i21 IGBT chip is optimized for high stray inductance ( $L_s$ ) applications

## i23 IGBT Chip features:

- Micro-fine trench gate IGBT technology for ultra-low loss  $E_{on}+E_{off}$
- Controllability of soft shutdown and turn-on with  $R_g$  for a wide range of applications
- High Short Circuit Capability (ISC)
- Local Carrier Limit Control (LC3)

Sunking is based on application requirements with the goal of high quality and high reliability, the i20/i21/i23 series of IGBT chips have been developed

Model	series	Vces(V)	IC(A)	ICM(A)	Vce(sat) @125°C	Max. Dies Per Wafer	size (mm*mm)	thickness (μm)
SIS0100C120i20	i20	1200	100	200	2.05	784	8.8×8.8	135
SIS0150C120i20	i20	1200	150	300	2.05	547	10.5×10.5	135
SIS0200C120i20	i20	1200	200	400	2.05	420	11.9×11.9	135
SIS0250C120i20	i20	1200	250	500	1.95	126(8')/315(12')	15.7×12.1	135
SIS0075C175i20	i20	1700	75	150	1.85	320	8.9×8.9	185
SIS0100C175i20	i20	1700	100	200	1.85	247	10.1×10.1	185
SIS0150C175i20	i20	1700	150	300	1.85	166	12.1×12.1	185
SIS0200C175i20	i20	1700	200	400	1.85	126	15.8×12.1	185
SIS0200C120i21	i21	1200	200	400	1.68	386	15.8×12.1	145

Model	series	Vces(V)	IC(A)	ICM(A)	Vce(sat)@125°C	Max. Dies Per Wafer	size (mm*mm)	thickness (μm)
SIS0150C105i23	i23	1050	150	300	1.95	765	9×9.8	100
SIS0150C120i23	i23	1200	150	300	1.7	597	10×10.1	135
SIS0200C120i23	i23	1200	200	400	1.7	454	11.5×11.5	135
SIS0300C120i23	i23	1200	300	600	1.7	315	15.7×12.1	135
SIS0300C170i23	i23	1700	300	600	1.95	290	16.4×12.4	175

# IGBT chip and diode chip products



Based on application requirements, Saijing has developed a series of diode chips with high quality and high reliability as the goal

## d20 Diode chip characteristics

- Low Forward Conduction Drop VF and Low Reverse Recovery Loss (Erec)
- Advanced emitter efficiency design
- positive temperature coefficient

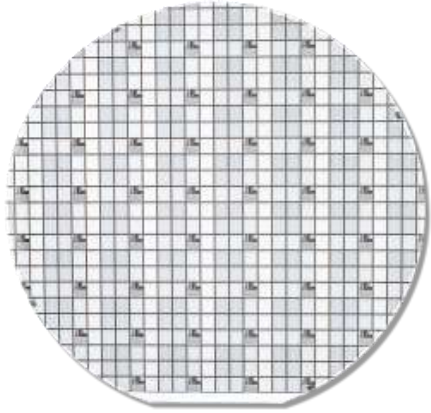
Model	series	VRRM(V)	IF(A)	VF(V)@125°C	Max. Dies Per Wafer	size (mm*mm)	thickness (μm)
SID0075C120d20	d20	1200	75	1.90	1741	6.0×6.0	130
SID0100C120d20	d20	1200	100	1.90	1363	6.8×6.7	130
SID0150C120d20	d20	1200	150	1.90	955	8.1×8.0	130
SID0250C120d20	d20	1200	250	2.15	236(8')/594(12')	8.5×12.1	130
SID0075C175d20	d20	1700	75	1.85	579	6.7×6.7	130
SID0100C175d20	d20	1700	100	1.85	453	7.6×7.6	130
SID0150C175d20	d20	1700	150	1.85	314	8.5×9.5	130
SID0200C175d20	d20	1700	200	1.85	236	8.5×12.1	185

## d23 Diode chip characteristics

- 1200V/1700V Quasi-Local Lifetime Control (QLLC)
- Ultra-low forward voltage drop VF and low reverse recovery loss EREC while maintaining soft reverse recovery characteristics
- Neutral temperature coefficient

Model	series	VRRM(V)	IF(A)	VF(V)@125°C	Max. Dies Per Wafer	size (mm*mm)	thickness (μm)
SID0100C105d23	d23	1050	100	2.1	2227	5.3×5.3	100
SID0300C120d23	d23	1200	300	1.9	236	8.47×12.07	130
SID0340C120d23	d23	1200	340	1.75	214	9.19×12.47	130
SID0300C175d23	d23	1700	300	2.15	220	8.9×12.4	175

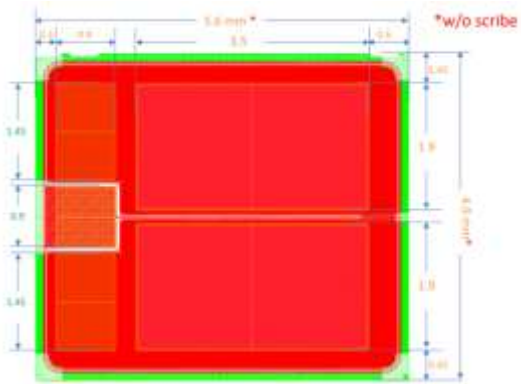
# SiC chip products - target specifications



## SiC Chip parameters

Model	series	size(mm*mm)	Rds,on (mΩ)@25°C/175°C	Short-circuit pulse tpsc(μs)@125°C	thickness (μm)	of each wafer Maximum number of chips
SC0012C120m24	m24	5.0 x 5.7	12/20	2	180	470
SC0013C120m23	m23	5.0 x 5.7	13/24	3	180	470
SC0015C140m23	m23	5.0 x 5.7	15/28	3	180	470

## SiC Chip features

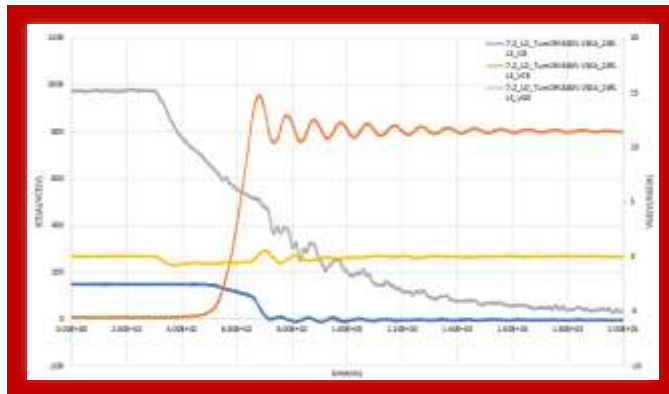


- Performance surpasses that of third-generation SiC MOSFET technology
- The top is metallized for bonding or DTS
- Static performance matches the performance requirements of advanced automotive MOSFET products
- Dynamic switching performance is suitable for applications in EVD and HEEV modules
- High reliability and high robustness
  - Satisfy AEC-Q101 request
  - SCSOA, HTRB & H3TRB

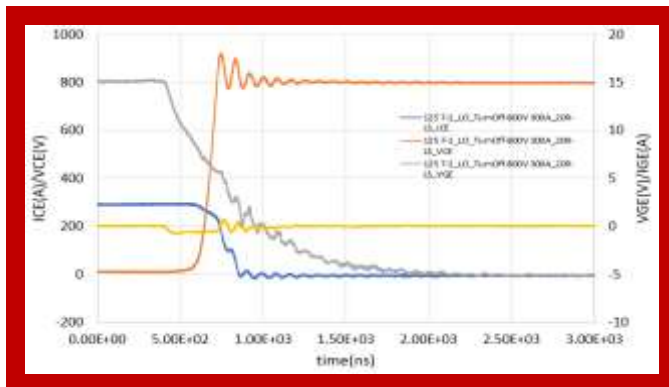
# SiC chip products - switch characteristics

## Dynamic characteristics 25°C waveform

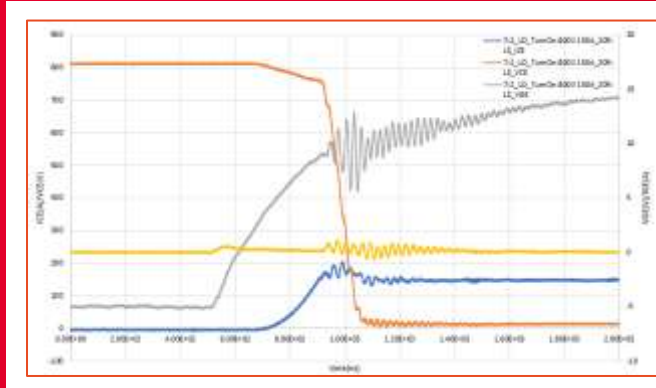
### Turn-off



Turn-off ID >300A @ 800V, 125°C



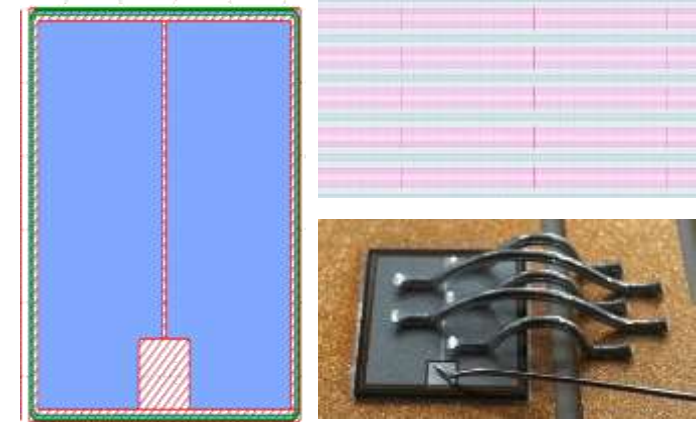
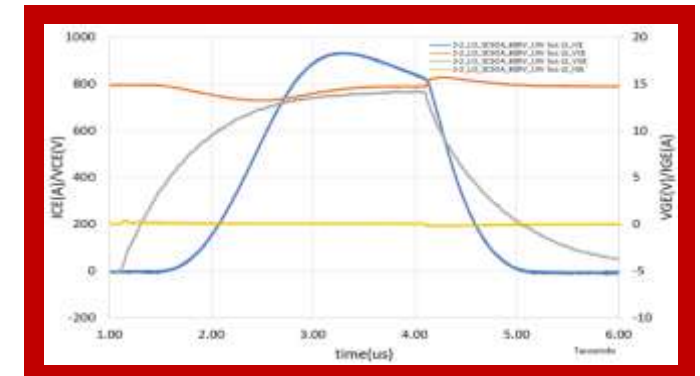
### Turn-on



- The controllable rate of current change and rate of voltage change pass through the gate resistor
- The gate running line layout features no oscillation and fast switching
- Body diode operation and MOS control
- A large area of bonding area

### Short circuit and reverse blocking of the safe work area

Up to 3us short-circuit safe working area at 800V



# SiC Chip Products - Performance Comparison

* measured		Competitor 1 (5.0 x 5.0 mm <sup>2</sup> )		Competitor 2 (5.6 x 4.9 mm <sup>2</sup> )		Competitor 3 (~4.5 x 4.5 mm <sup>2</sup> )		SSEM specification (5.7 x 5.0 mm <sup>2</sup> )		
Leakage source breakdown voltage	V <sub>DSS</sub> (V)	1200 I <sub>D</sub> <30mA		1200 I <sub>D</sub> <1mA		1200 I <sub>D</sub> <0.1mA		>1500* I <sub>D</sub> <1mA		
Continuous drain current	I <sub>D</sub> (A)	122 V <sub>G</sub> =+18V, R <sub>th</sub> <sup>j-c</sup> =0.31K/W		160 V <sub>G</sub> =+18V, R <sub>th</sub> <sup>j-c</sup> =0.19K/W		89 V <sub>G</sub> =+18V, R <sub>th</sub> <sup>j-c</sup> =0.43K/W		<b>140</b> <b>V<sub>G</sub>=+18V</b>		
gate source voltage range	V <sub>Gmin..</sub> (V) V <sub>Gmax..</sub> (V)	-2 +21		-5 +18		-3 +18		<b>-10</b> <b>+20</b>		
Gate threshold voltage	V <sub>TH</sub> (V)	2.8 - 4.8 (3.8) I <sub>D</sub> =36mA		2 - 4.2 (3.1) I <sub>D</sub> =10mA		2.0 - 4.4 (2.7) I <sub>D</sub> =20mA		<b>2 - 3 (3*)</b> <b>I<sub>D</sub>=10mA</b>		
Static leakage resistance at room temperature and 175°C	R <sub>DS,on</sub> (mOhm)	11 / 23 I <sub>D</sub> =68A, V <sub>G</sub> =+18V		13.5 / 24 I <sub>D</sub> =100A, V <sub>G</sub> =+18V		22 I <sub>D</sub> =40A, V <sub>G</sub> =+18V		<b>(13-15) / (20-22)</b> <b>I<sub>D</sub>=100A, V<sub>G</sub>=+18V</b>		
Diode forward voltage	V <sub>SD</sub> (V)	3.3 I <sub>SD</sub> =68A		4.9 I <sub>SD</sub> =80A		4.5 I <sub>SD</sub> =40A		<b>5.0</b> <b>I<sub>SD</sub>=100A</b>		
Gate input resistor	R <sub>Gint</sub> (Ohm)	4		1*		1.5		<b>2-3</b>		
Warmth	°C	175		200		175		<b>175</b>		
Short-circuit capability	us	<1.5		-				<b>2-3</b>		
Opening loss	V <sub>DS</sub> =800V V <sub>Gmin..</sub> V <sub>G</sub> max	Eon (uJ)	842	R <sub>G</sub> =0Ohm I <sub>D</sub> =68A	1336	R <sub>G</sub> =2.2Ohm I <sub>D</sub> =80A	1212	R <sub>G</sub> =4.5Ohm I <sub>D</sub> =40A	<1400	<b>R<sub>G</sub>=10hm</b> <b>I<sub>D</sub>=100A</b>
Shutdown and loss		Eoff (uJ)	635		608		307		<700	

# Core components of the new energy industry chain



Energy storage



Other power generation



Flexible and conventional UHV DC transmission  
Flexible DC and flexible low-frequency power transmission



Rail transit vehicles



Residential and commercial electricity



Photovoltaic power generation



Onshore and offshore power generation



Energy storage



Electric vehicle



Industrial control

Saijing is deeply involved in the field of power electronics, has accumulated rich customer resources and industry experience, and has long-term cooperation with customers for mutual benefit and win-win results with excellent products and services



# Thanks for listening

SwissSEM China PACIFIC SEMICONDUCTOR TECHNOLOGY (ZHEJIANG) CO., LTD

Looking forward to cooperation ▾



public platform



official website

