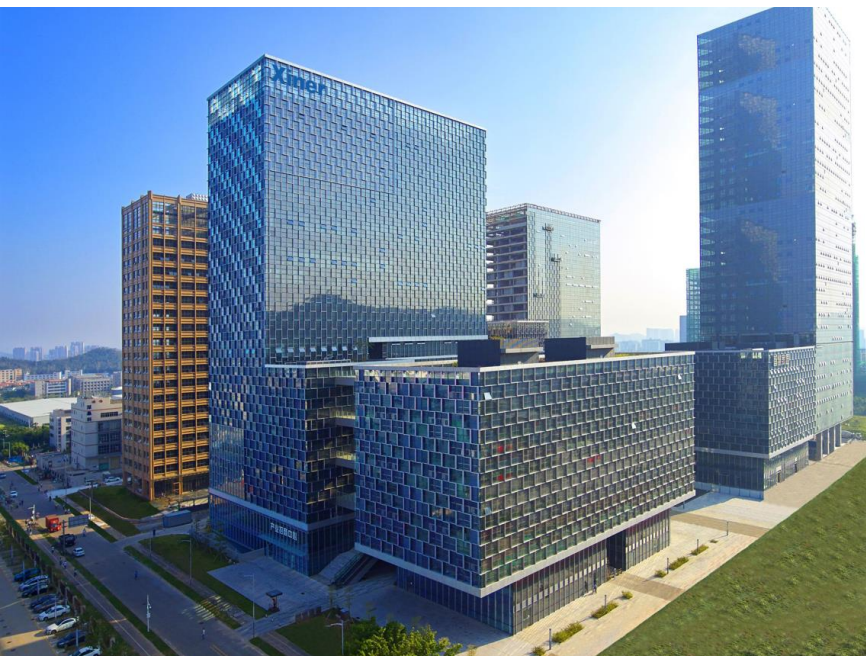




COMPANY PROFILE



Company Introduction

July. 2024

Shenzhen Invsemi Technology Co., Ltd

Responsibility

Innovation

Tenacity

Trust

<http://www.invsemi.com>

A large graphic consisting of two overlapping diamonds. The left diamond is blue and the right one is gray. A white box with the word 'Contents' is centered over the intersection of the two diamonds.

Contents

- 01** About Invsemi and Technologies
- 02** Product Overview
- 03** Applications and Services
- 04** Packaging manufacturing base



01

About Invsemi and Technologies

- + About Invsemi
- + Organization
- + Patent & Qualification
- + Technology&Partners
- + Capability
- + Main customer



More than 10 Years

Our company was established in September 2013
Focusing on power chip development and application
R&D Centers in ShenZhen、Shanghai、SuZhou

Honorary

National high-tech enterprise
A high-tech enterprise in Shenzhen
Little giant of national high-tech enterprise
Guangdong Engineering Center (IGBT)

150+

more than 150 employees
more than 50% R & D personnel

Focus markets

industrial control
new energy
household appliances

Our factory

Self-built high power module of vehicle level packaging manufacturing base

200+

IGBT-related product models

1000+

more than 1000 customers

200 million+

The total shipments of IGBT-related products

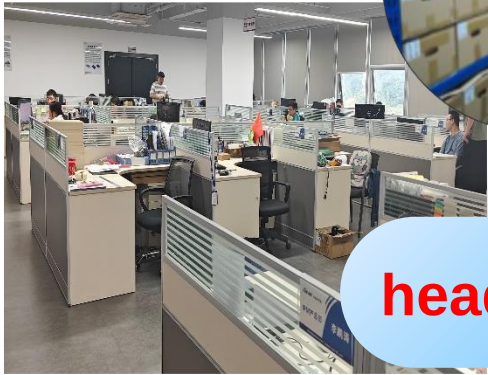
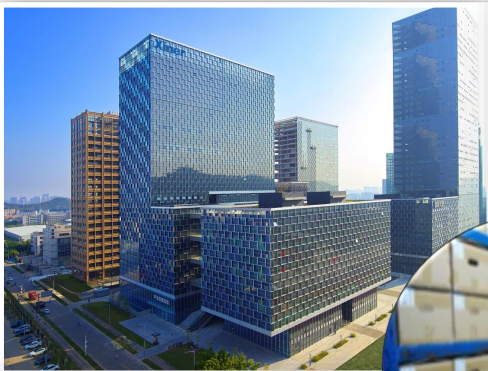




Company layout

Xiner INVSEMI

Factory



headquarters





Vision

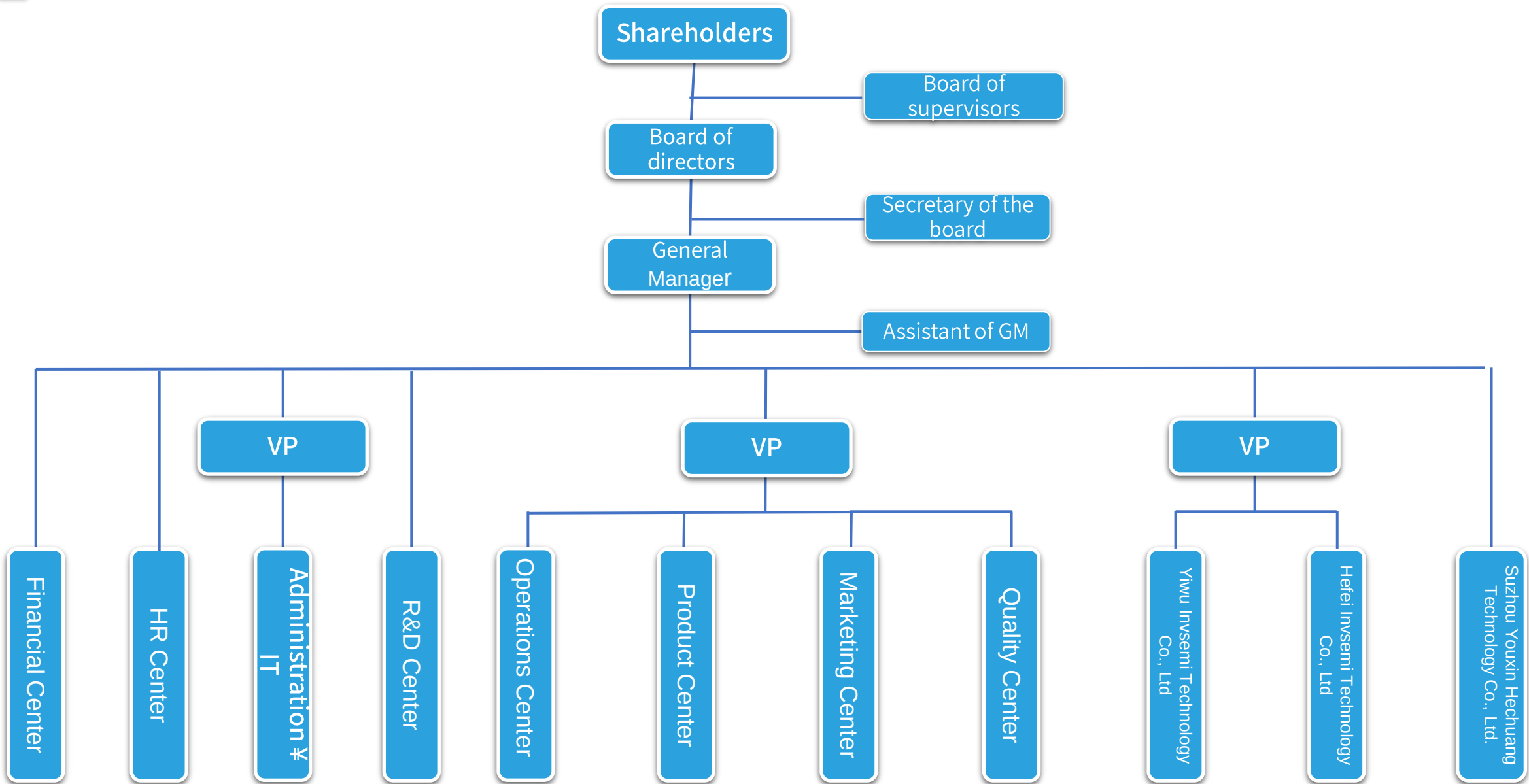
To be the most trusted power semiconductor company in the energy conversion chain

Mission

Through continuous technological innovation to make more efficient energy transfer

Core Values

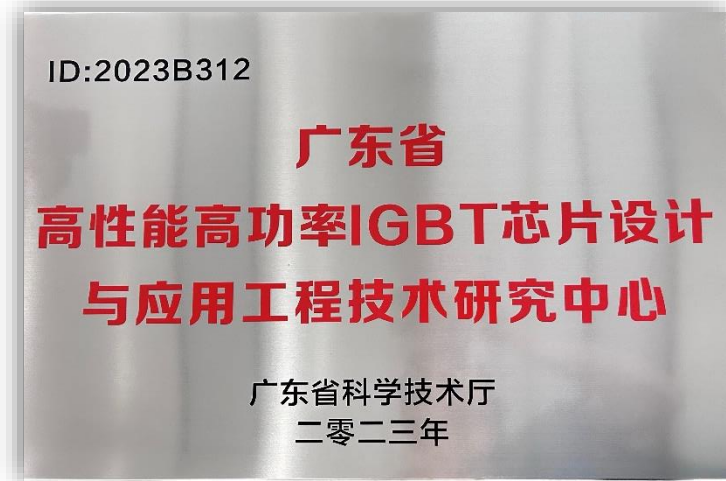
Responsibility Innovation Tenacity Trust



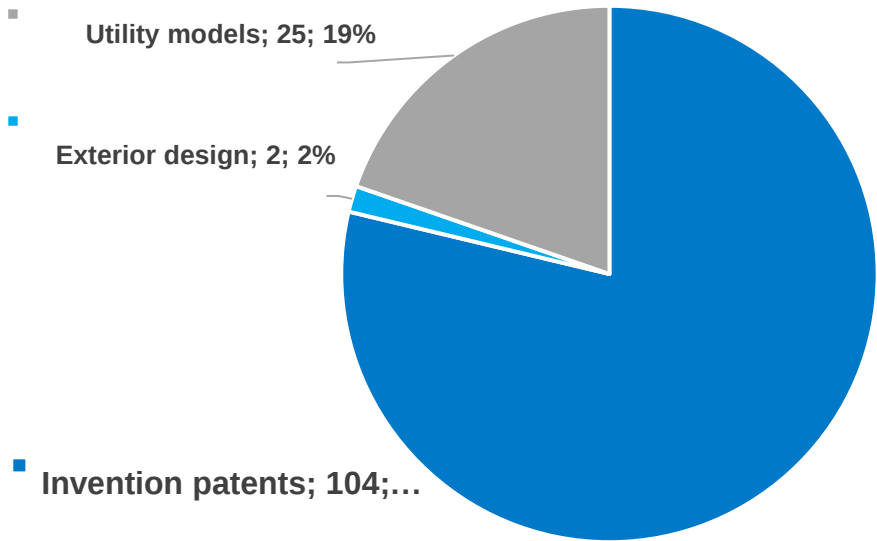


Content	Total
integrated circuit layouts	67
patents	131
invention patents have been actually authorized	64

As of July 1st, 2024



Status of patent applications





IATF-16949:2016



深圳市环通认证中心有限公司
质量管理体系认证证书

编号: 02423Q32291337R0M-1

深圳芯能半导体技术有限公司

(统一社会信用代码: 91440300078994156M)

(地址: 深圳市龙岗区宝龙街道宝龙社区宝荷大道 76 号智慧家园二期 2B1301)
(其他场所地址见附页)

质量管理体系符合标准:

GB/T19001-2016/ISO9001:2015

1. 深圳芯能半导体技术有限公司 范围: 分立式功率器件、功率模块产品设计开发和销售服务; 2. 芯能半导体技术有限公司 范围: 车规级分立式功率器件筛选测试和功率模块的生产

发证日期: 2022-09-28 证书有效期至: 2025-09-27

(本证书自签发之日起实行监管制度, 证书持有者须按照质量管理体系标准的要求进行维护。)



深圳市环通认证中心有限公司
质量管理体系认证证书

编号: 02422Q32291337R0M-1

芯能半导体技术有限公司

(统一社会信用代码: 91330782MA2HR0QH1E)

(地址: 中国(浙江)自由贸易试验区金华市义乌市稠江街道成德光路 648 号 2 号楼 3 楼南侧(自主申报))

质量管理体系符合标准:

GB/T19001-2016/ISO9001:2015

车规级分立式功率器件筛选测试和功率模块的生产

发证日期: 2022-09-28 证书有效期至: 2025-09-27
(本证书自签发之日起实行监管制度, 证书持有者须按照质量管理体系标准的要求进行维护。)



质量管理体系符合标准: GB/T19001-2016/ISO9001:2015



深圳市环通认证中心有限公司
环境管理体系认证证书

编号: 02422E32300848R0M-1

深圳芯能半导体技术有限公司

(统一社会信用代码: 91440300078994156M)

(地址: 深圳市龙岗区宝龙街道宝龙社区宝荷大道 76 号智慧家园二期 2B1301)
(其他场所地址见附页)

环境管理体系符合标准:

GB/T24001-2016/ISO14001:2015

1. 深圳芯能半导体技术有限公司 范围: 分立式功率器件、功率模块产品设计开发和销售服务及相关管理活动; 2. 芯能半导体技术有限公司 范围: 车规级分立式功率器件筛选测试和功率模块的生产及相关管理活动

发证日期: 2022-09-28 证书有效期至: 2025-09-27



环境管理体系符合标准: GB/T24001-2016/ISO14001:2015



知识产权管理体系认证证书

经北京中安质环认证中心有限公司审核, 确认

深圳芯能半导体技术有限公司

统一社会信用代码: 91440300078994156M

(注册地址: 深圳市龙岗区宝龙街道宝龙社区宝荷大道 76 号)

智慧家园二期 2B1301 邮编: 518000

知识产权管理体系符合:

GB/T 29490-2023 《企业知识产权合规管理体系 要求》

认证范围见如下:

分立式功率器件、功率模块产品设计开发、

销售服务涉及的知识产权管理活动

地址: 广东省深圳市龙岗区宝龙街道宝龙社区宝荷大道 76 号

智慧家园二期 2B1301

注册号: 240281P10185R0M

有效期: 2024 年 07 月 04 日至 2027 年 07 月 03 日

发证日期: 2024 年 07 月 04 日

自签发之日起, 证书的有效性依赖于获证企业每年接受认证机构的监督审核。



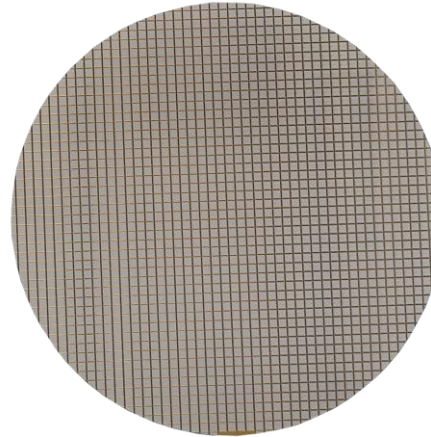
证书查询方式
The website of certificate inquiry:
http://www.cnca.gov.cn
http://www.cnca.com.cn





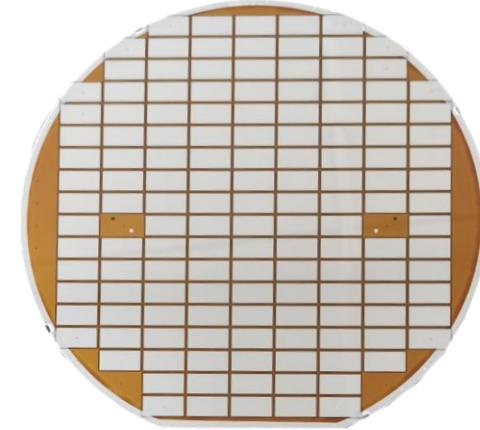
IGBT chip

- Experimental iterations of more than 270 engineering batches
- Mass production of international seventh generation (MPT technology) IGBT
- Leading domestic shipments of the sixth generation IGBT chips



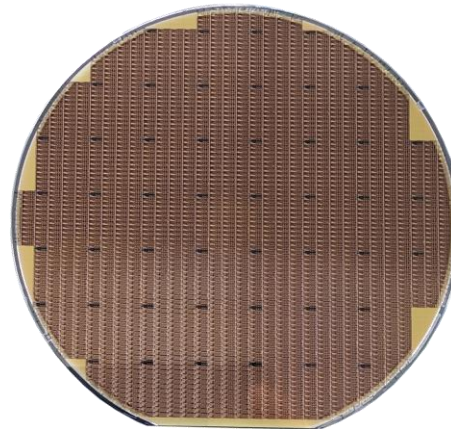
FRD chip

- Mass production of Si FRD
- Mass production of SiC FRD
- Better matching with IGBT



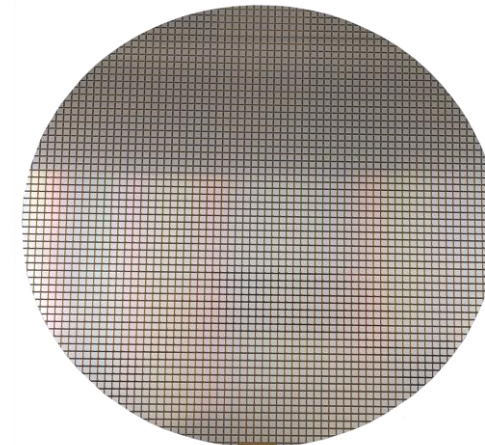
Gate driver chip

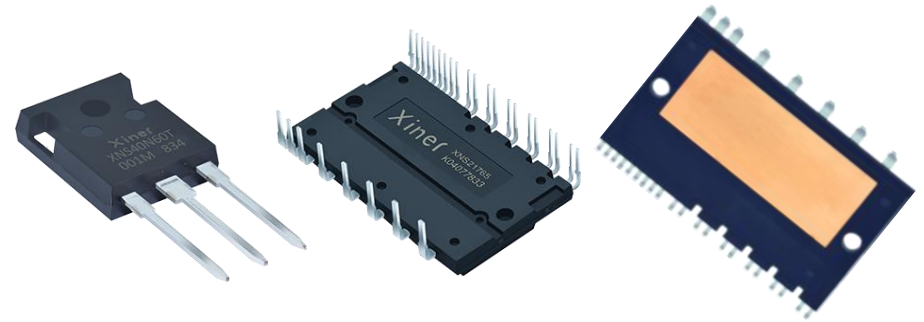
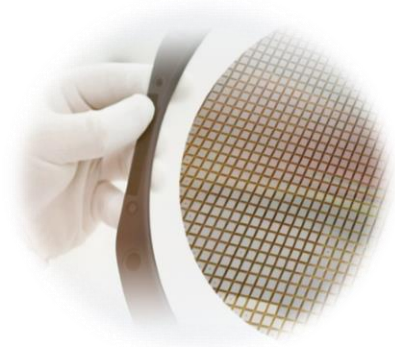
- HVIC with own BCD process
- Designed for IGBT/MOS driving
- Optimize the EMC characteristics of IPM
- High surge Resistance



MOS chip

- Mass production of SiC MOS
- Mass production of Si SGT MOS
- Mass production of Si Trench MOS
- High switching speed, low on-resistivity





Foundry



HHGRACE, SMIC, CSMC, GTA

HT-Tech, Anst, GTBF, CHMC



Capability

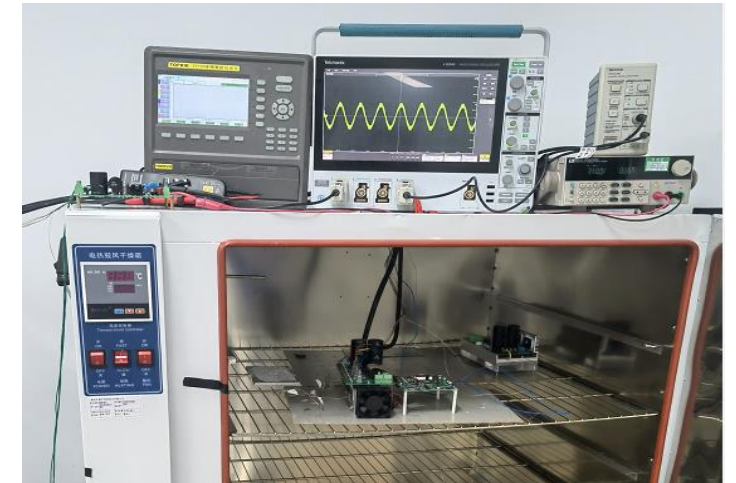
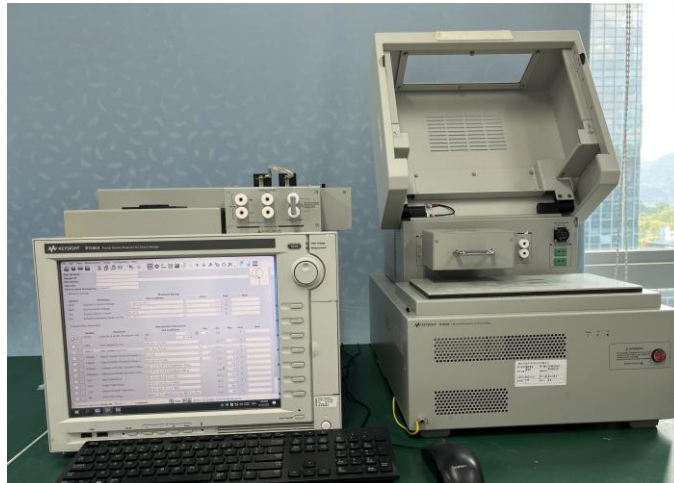
The experimental capability of static and dynamic test and short circuit test under high temperature and normal temperature is built independently.



Capable of static platform, dynamic parameter scanning and small batch production test from single tube to module.



Independently build a test and evaluation bench for the combined application of devices in power supply and motor applications





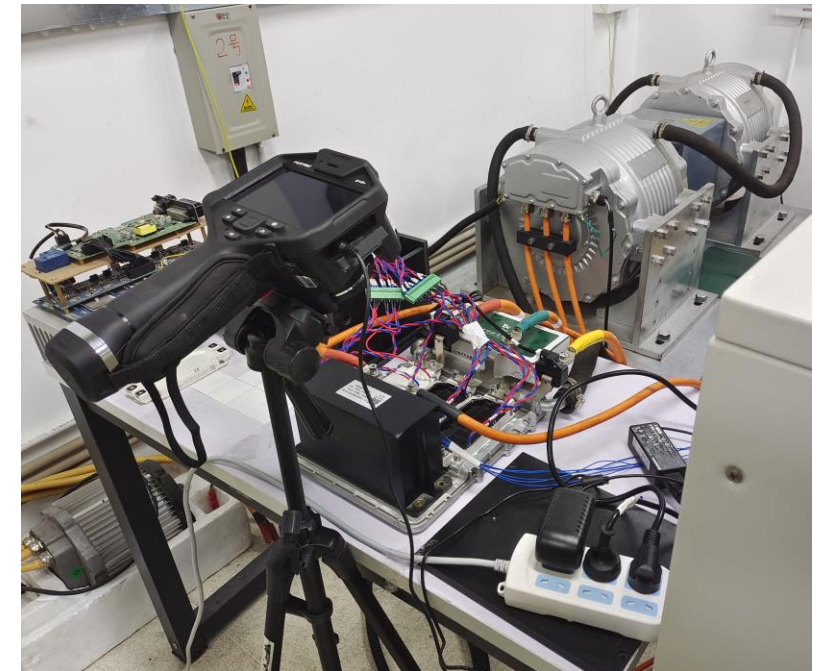
- ◆ Self-built high temperature and normal temperature dual-pulse test bench for automotive module



- ◆ High power module static and dynamic complete parameter scanning test equipment, up to 6000 A short circuit test, and small batch production test



- ◆ Independently built a 200 KW automotive motor tow-bench for IGBT module test





At the same time, a reliability laboratory has been built in Yiwu & Shenzhen

At the same time, the laboratory has the ability to test and evaluate the packaging process, electrical characteristics, environmental testing, life testing, application welding and other related reliable projects of discrete devices, power modules, IPM, HVIC.

- ◆ High Temperature Reverse Bias (HTRB)
- ◆ High Temperature Gate Bias (HTGB)
- ◆ High Humidity High Temp Reverse Bias (H³TRB)
- ◆ Temperature Shock Testing (TST)
- ◆ Intermittent Operational Life (IOL)
- ◆ Power Cycle in Seconds (PCsec)
- ◆ Power Cycle in Minutes (PCmin)
- ◆ High Temperature Storage Life (HTSL)
- ◆ Low Temperature Storage Life (LTSL)
- ◆ Resistance to Solder Heat
- ◆ Solderability





Main customer

Xiner INVSEMI

In no particular order

INOVANCE
汇川技术

MEGMEET

 **中国电气装备**
China Electrical Equipment
许继集团有限公司
XJ GROUP CORPORATION

 **Midea**[®]
美的

XINJE 信捷电气
信以致远 捷行弘毅

HCFA

Sinexcel 盛弘股份

 **xiaomi**

VEICHI

 **禾望电气**
Hopewind

Winline | 永联科技
Technology

CHANGHONG 长虹

SUPOR 苏泊尔

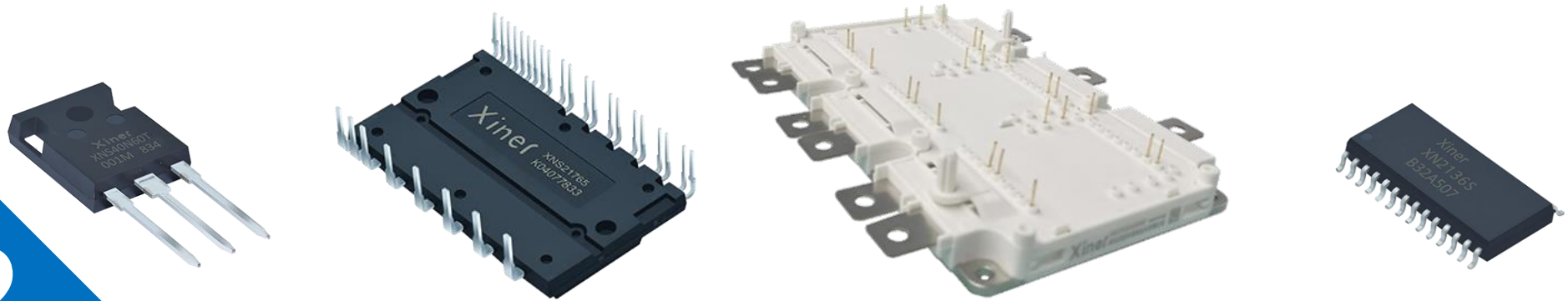
ROBAM 老板
创造中国新厨房

GOODWE
固德威

 **GREE** 格力
掌握核心科技



02



Product overview

+ Discrete

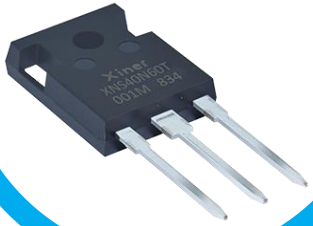
+ IPM

+ IGBT Module

+ Driver IC



Discrete



Standard package

Discrete

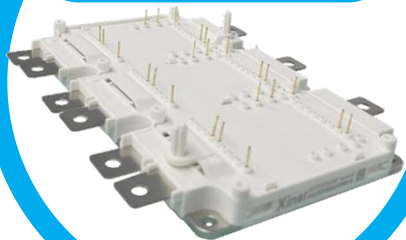
Intelligent module integrating discrete components such as IGBT, driver IC, NTC, diode, resistor, etc

IPM Module

IPM



IGBT Module



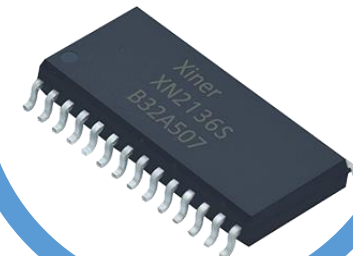
IGBT Module

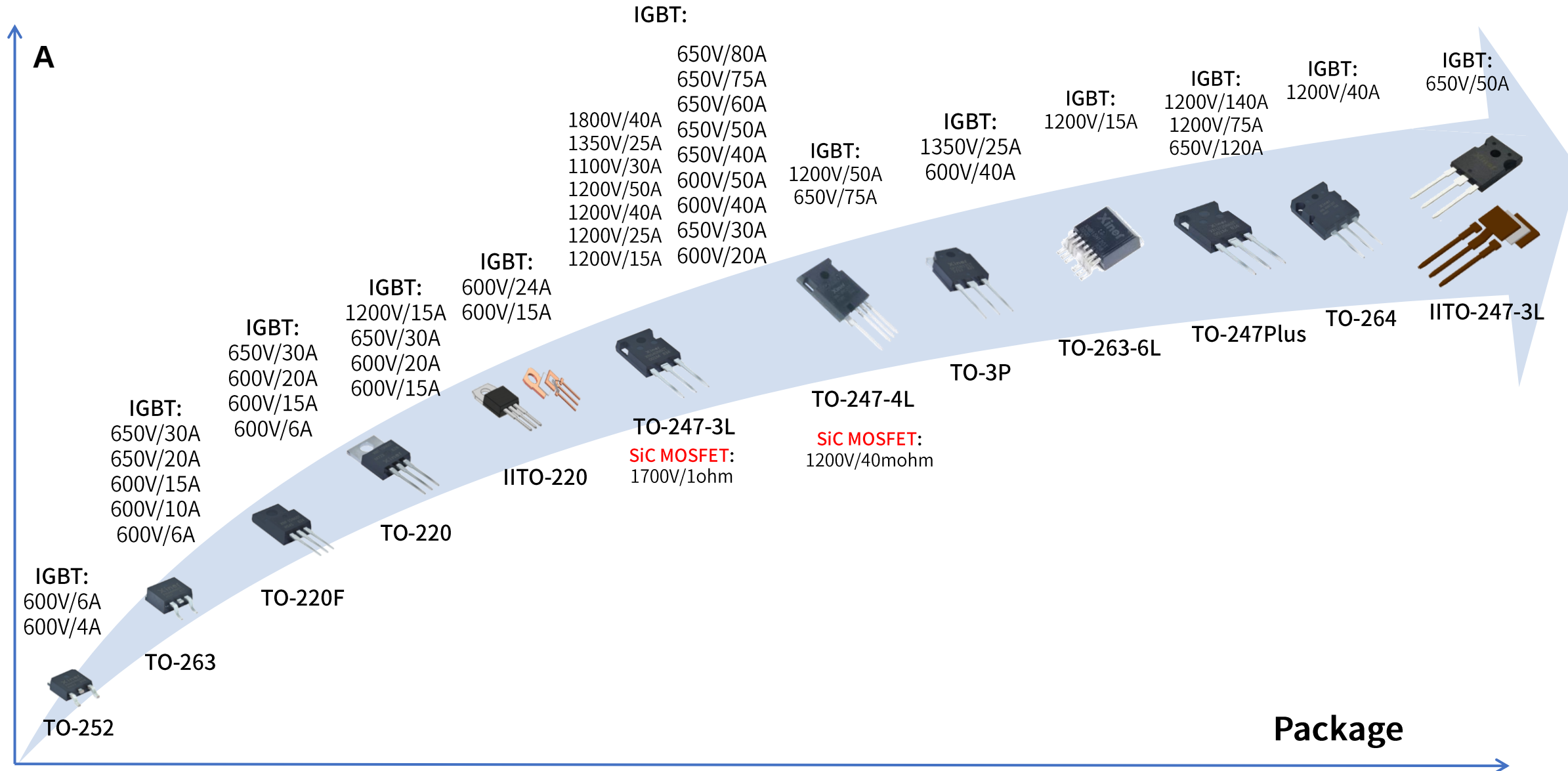
IGBT, NTC, FRD, etc. are sealed together according to different topologies

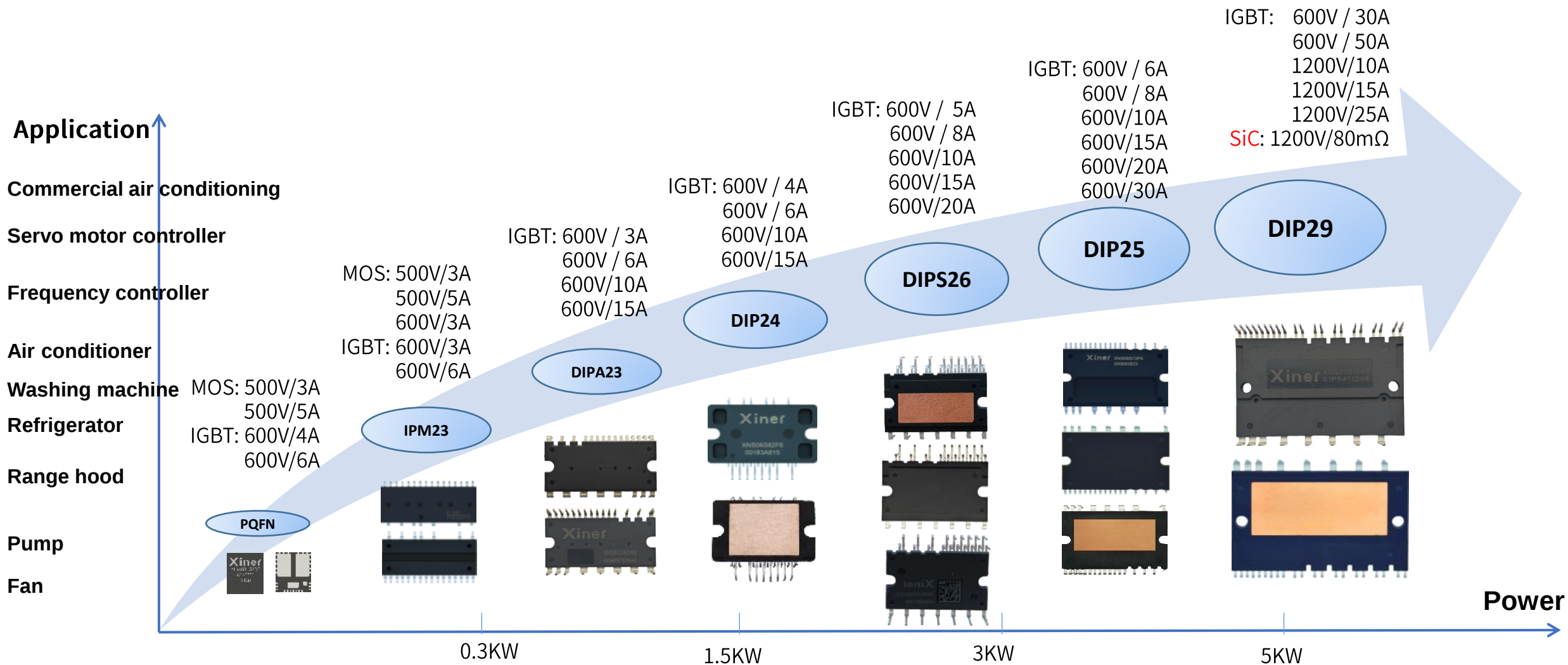
Driver IC

Drive and protect for IGBT

Driver IC









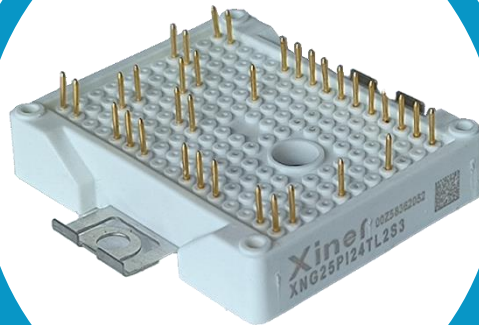
IGBT Module (Industrial frequency converter)

Xiner INVSEMI



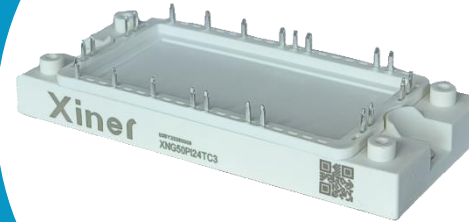
L1

VCES(V)	IC(A)
600V	20A, 30A
1200V	15A, 25A



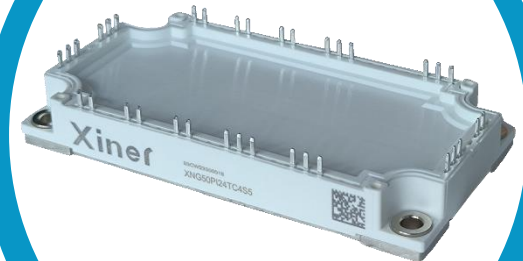
L2

VCES(V)	IC(A)
600V	50A
650V	100A, 150A
1200V	25A, 40A, 50A, 75A



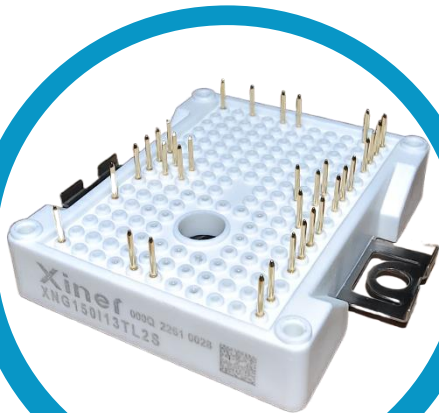
C3

VCES(V)	IC(A)
650V	100A
1200V	15A, 25A, 35A, 40A, 50A, 75A, 100A, 150A



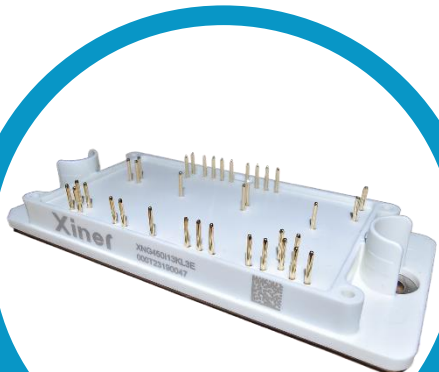
C4

VCES(V)	IC(A)
650V	100A
1200V	50A, 75A, 100A, 150A, 200A



L2

VCES(V)	IC(A)
650V	100A, 150A



L3

VCES(V)	IC(A)
650V	450A



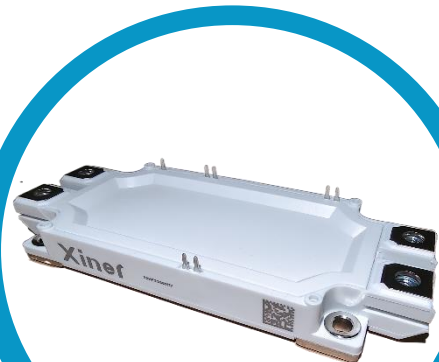
C1

VCES(V)	IC(A)
650V	100A, 150A
1200V	50A, 75A, 100A, 150A



C2

VCES(V)	IC(A)
1200V	150A, 200A, 300A, 450A
1700V	300A



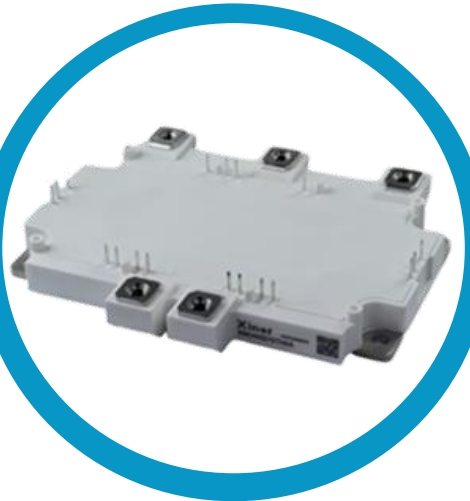
C5

VCES(V)	IC(A)
1200V	300A, 450A, 600A
1700V	300A, 450A, 600A



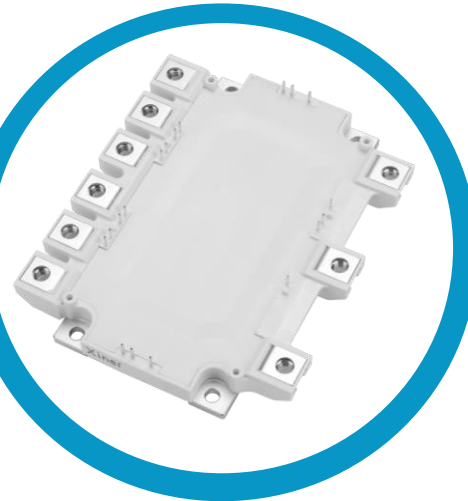
C5

VCES(V)	IC(A)
1200V	450A, 600A, 1000A(SiC)
1700V	450A, 600A



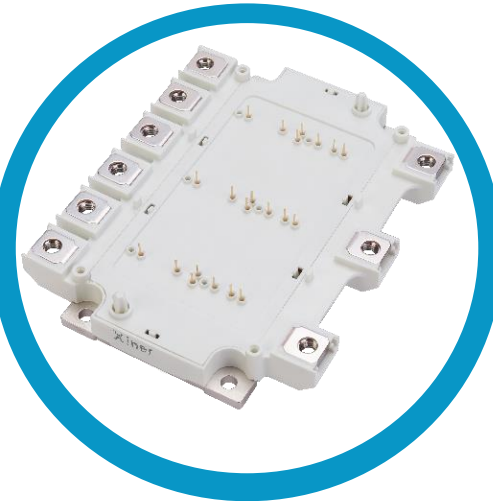
H4

VCES(V)	IC(A)
750V	400A, 500A
1200V	250A



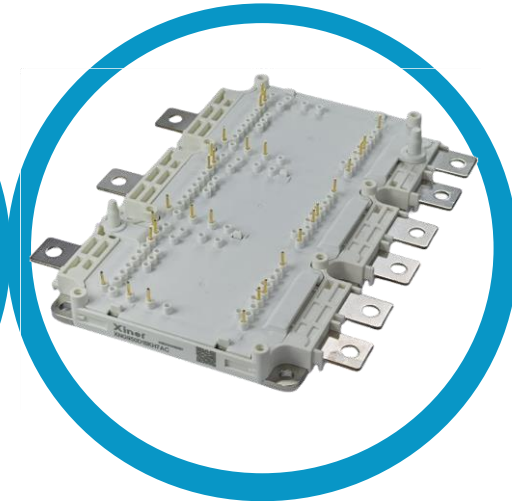
H6

VCES(V)	IC(A)
750V	550A, 600A



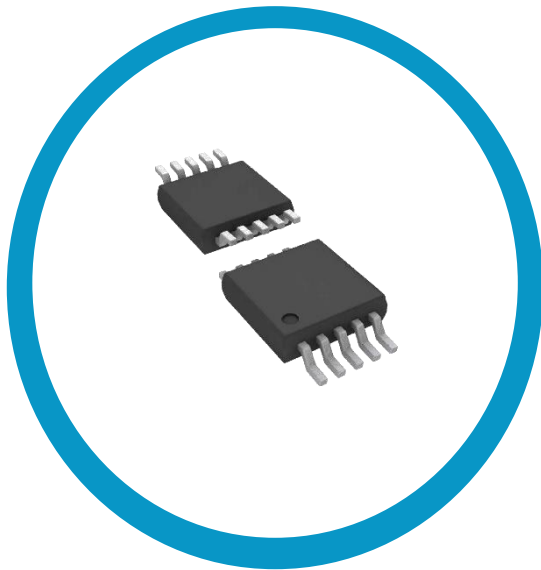
X

VCES(V)	IC(A)
750V	400A, 500A, 550A, 600A
1200V	250A



W

VCES(V)	IC(A)
750V	400A, 600A, 820A, 950A

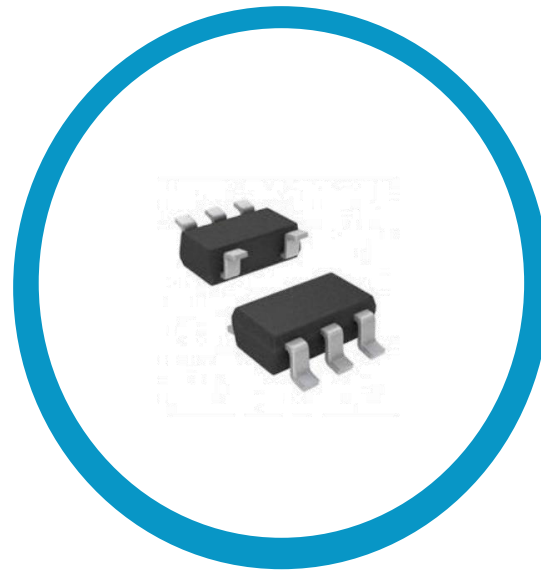


Motor driver

Products

25V, 1/1A, Dual-H Bridge

XN8549S

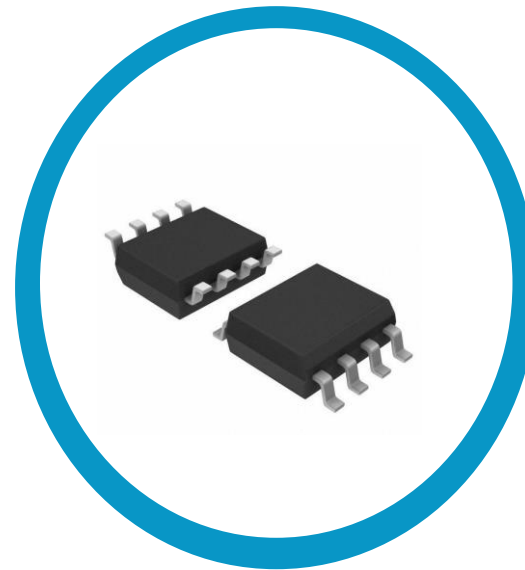


Low side

Products

25V, 1.5/1.5A, Single-Channel
25V, 5/5A, Single-Channel
25V, 0.8/1.75A, Single with OCP
25V, 5/5A, Dual-Channel
25V, 5/5A, Dual-Channel

XN44272L
XN7517L
XN44176S
XN7524S
XN7525S

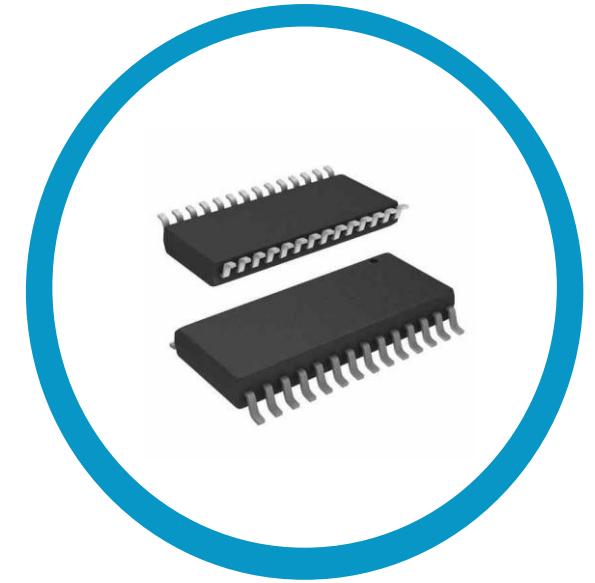


Half bridge

Products

600V, 290/600mA
600V, 290/600mA
600V, 10/20mA
600V, 50/100mA
200V, 3/3A

XN2304S
XN2101S
XN21011S
XN21012S
XN2001S



Three phases

Products

600V, 200/350mA
600V, 200/350mA
200V, 350/700mA
60V, 1/1A

XN2136S
XN21364S
XN7888
XN1134S



03



Applications and Services

- + Industrial motor driver
- + Frequency conversion household appliances
- + Fan motor driver
- + New Energy
- + Induction heating
- + Service and support



Field of application



Industrial motor drive

Frequency controller

Industrial Servo moto controller

Commercial air conditioning

Motor control



New Energy

Charging pile

Electric car

Photovoltaic new energy

Wind power



Frequency conversion household appliances

Refrigerator

Air conditioner

Washing machine

Range hood



Induction heating

Induction cooker

Welding machine

Commercial cooker

Induction heating



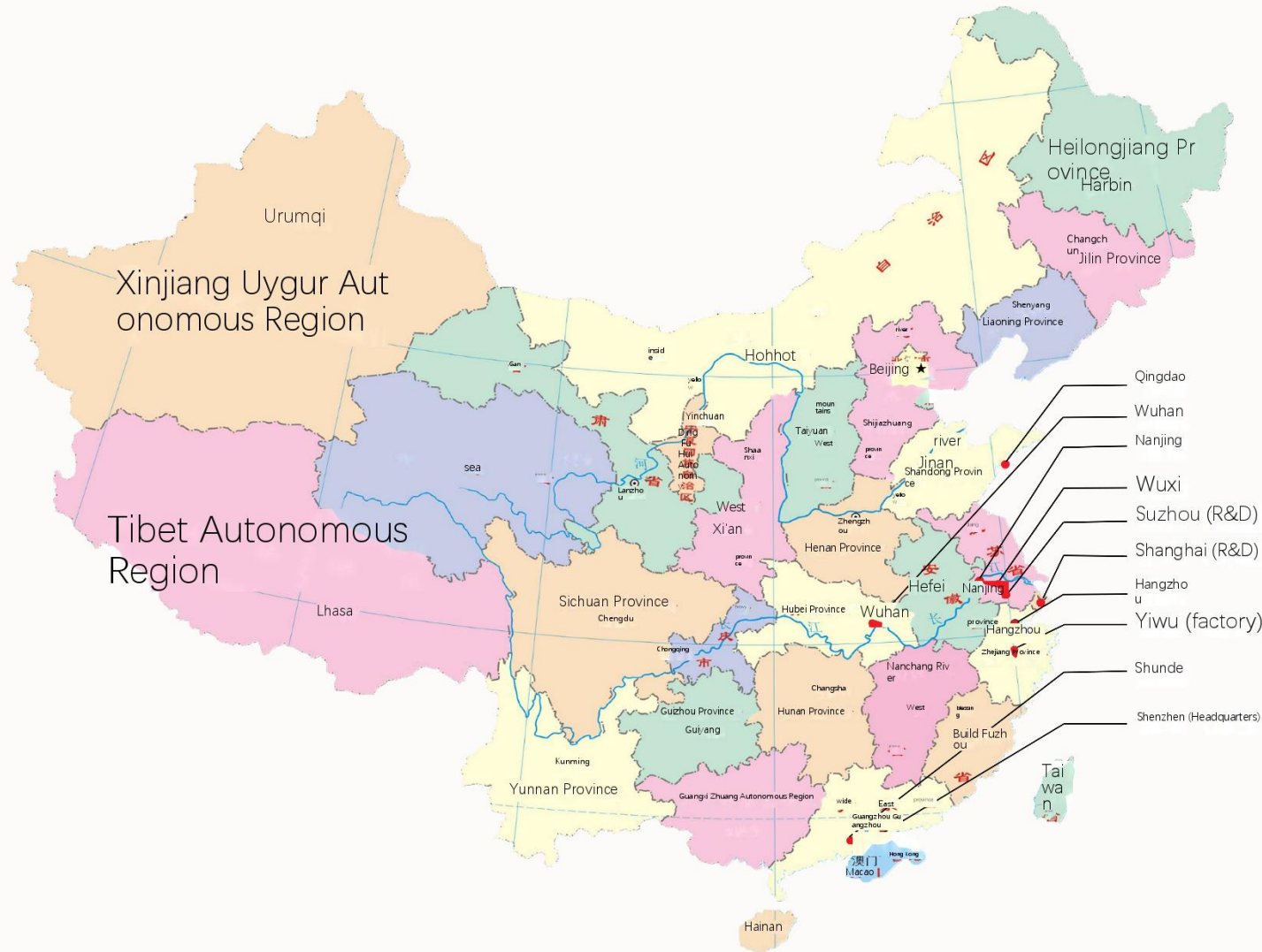
Fan motor driver

Hair dryer

Vacuum cleaner

Exhaust Fan

Ceiling fan

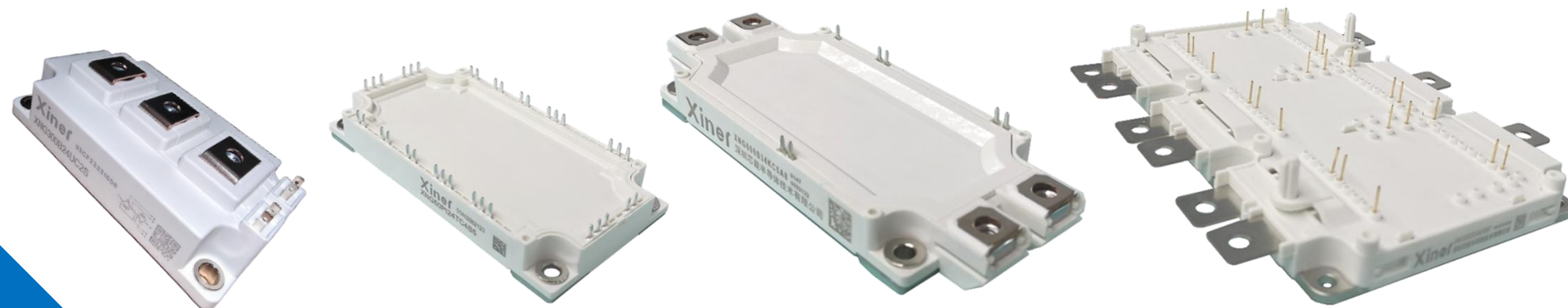


Service and Support

- **Headquarters**
Shenzhen (R & D, sales and operation)
- **R&D**
Shanghai
Suzhou
- **Sales**
Qingdao
Hangzhou
Shunde
Wuhan
Wuxi
Nanjing
- **Manufacturing Factory**
Yiwu



04



Packaging manufacturing base

+ About Factory

+ Development and Planning



60

employees

4000

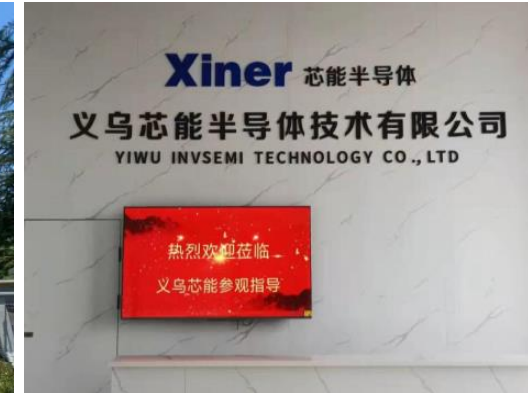
Factory Area
(M²)

80K⁺

Monthly production
capacity

8

average output
value 800
million CNY



Wholly-owned subsidiary

Product focus

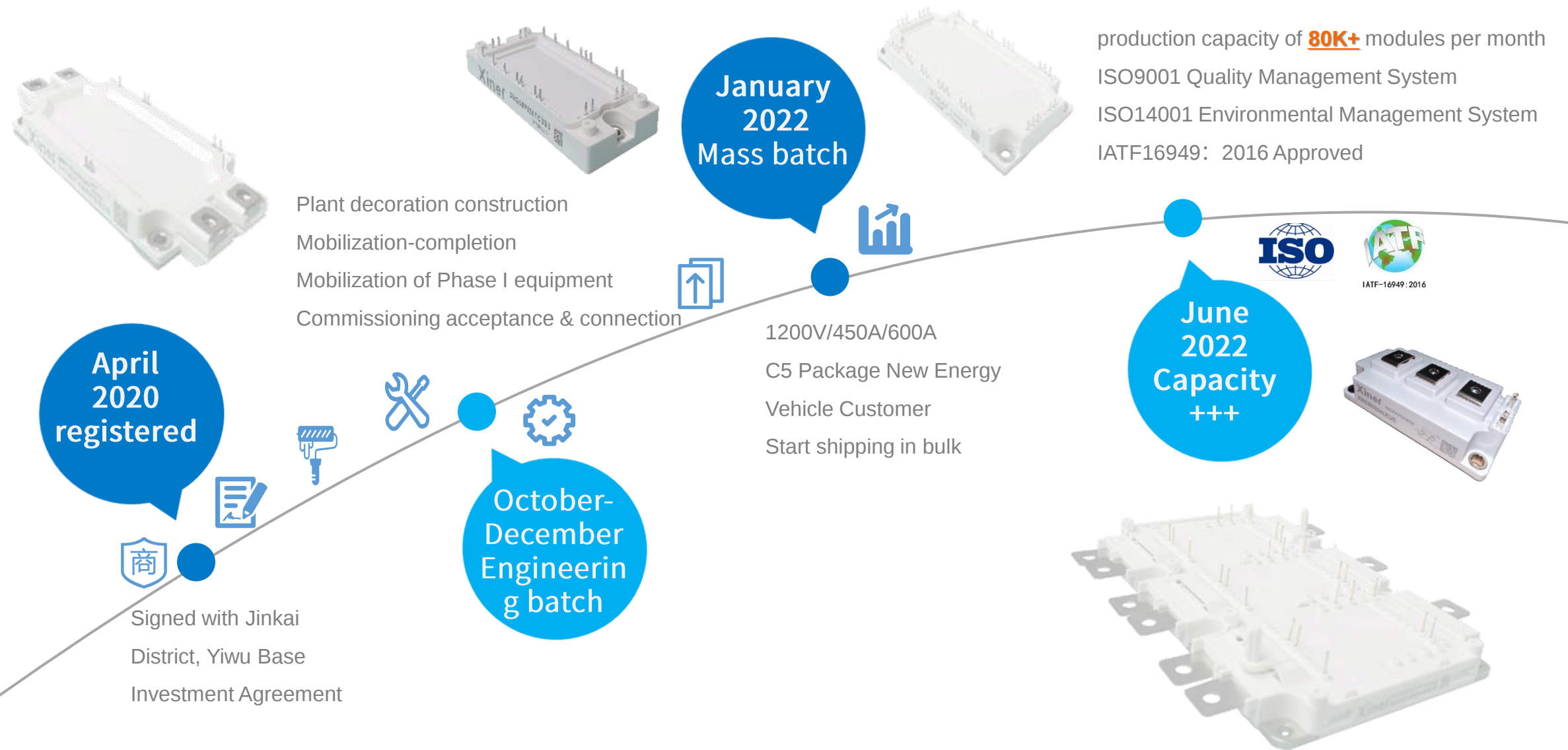
mainly focus on new energy vehicles, wind energy and solar energy inverter, manufacturing high-power and high-reliability modules in relevant application markets.



Development and Planning

Xiner INVSEMI

production capacity of **80K+** modules per month
ISO9001 Quality Management System
ISO14001 Environmental Management System
IATF16949: 2016 Approved





Thanks

Shenzhen headquarters

Address: Floor 13, Block B, Building 2, Wisdom Home, No.76, Baohe Avenue, Longgang District, Shenzhen

Tel: 0755-89890048

Zip code: 518172

Website: <http://www.invsemi.com>

Mail: service@invsemi.com

Yiwu factory

Address: Floor 3, No.2 Factory Building, No.648 Qijiguang Road, Yiwu City, Jinhua City, Zhejiang Province

Tel: 0579-85966616

Zip code: 322000

Shanghai R & D Center

Address: Room 505, Building 1, No.26, Qiuyue Road, Pudong New Area, Shanghai

Tel: 021-616 39692.

Zip code: 201203



Follow us-WeChat Sweep

Suzhou R & D Center

Address: 4-A406, Creative Industry Park, No.328, Xinghu Street, Suzhou Industrial Park

Tel: 0512-62764160

Zip code: 215000

