



Ticker Symbol: 02577.HK

Innoscience Introduction

World's Largest 8-in GaN-on-Si Supplier

Innoscence Overview

World's Leading GaN Manufacturer



Founded

Dec. 2015



Employees

1300+



Global Patents

700+



Products

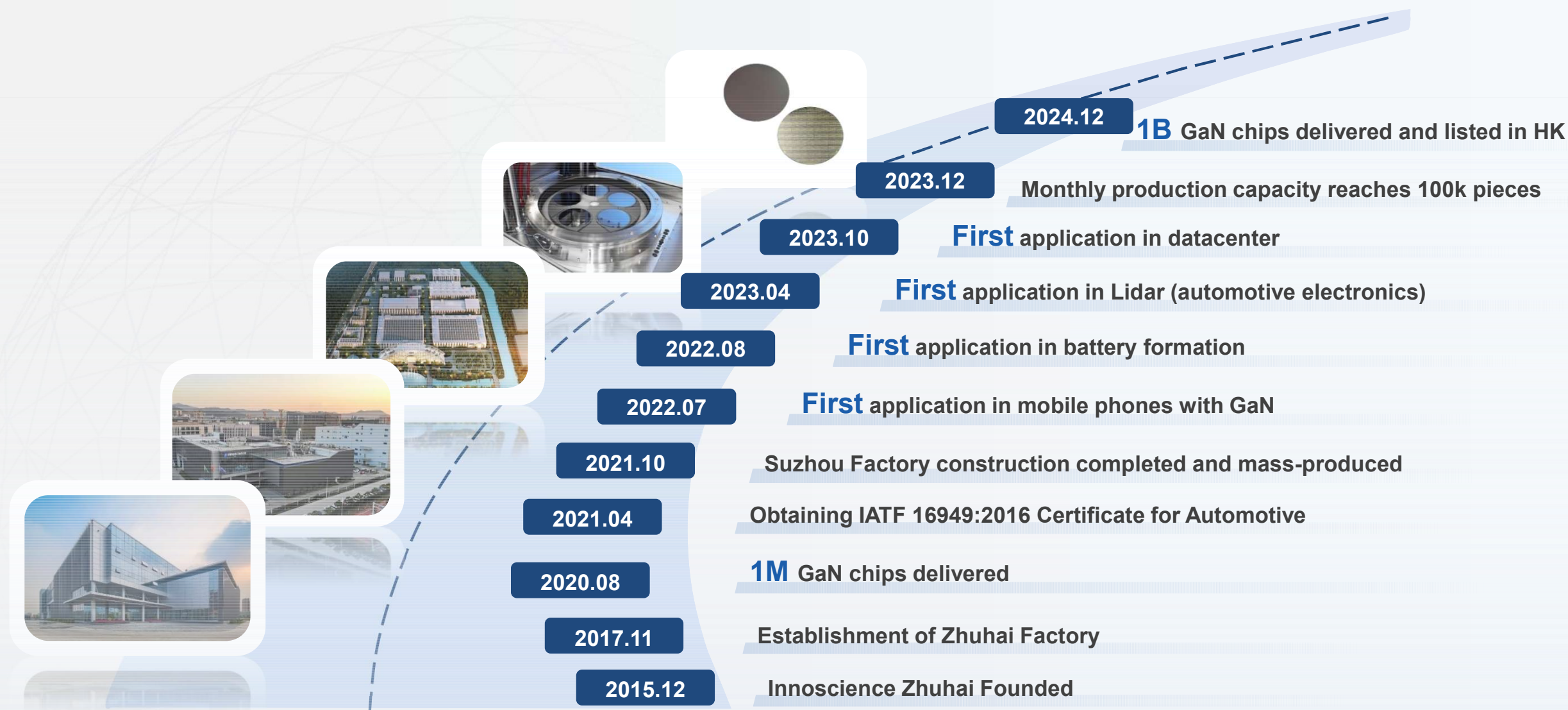
30V-1200V GaN Devices

GaN Wafer

GaN with Driver



Key Milestone



Innoscience: the Leading GaN Supplier

Leader

*in Global Power
Semiconductor
Revolution*

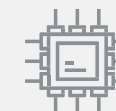
No.1

*in Global GaN Power
Semiconductor
Market*



FIRST

mass production of
8-inch GaN-on-Si wafers



33.7%

global market share of GaN chips¹
(accumulated shipments > 500mn)



ONLY

IDM company with mass-production
capabilities for full voltage
GaN-on-Si semiconductor



ONLY

8-inch GaN wafer
manufacturing base



LEAD

8-inch GaN-on-Si process
technology and epitaxial
development (c.700 patents)

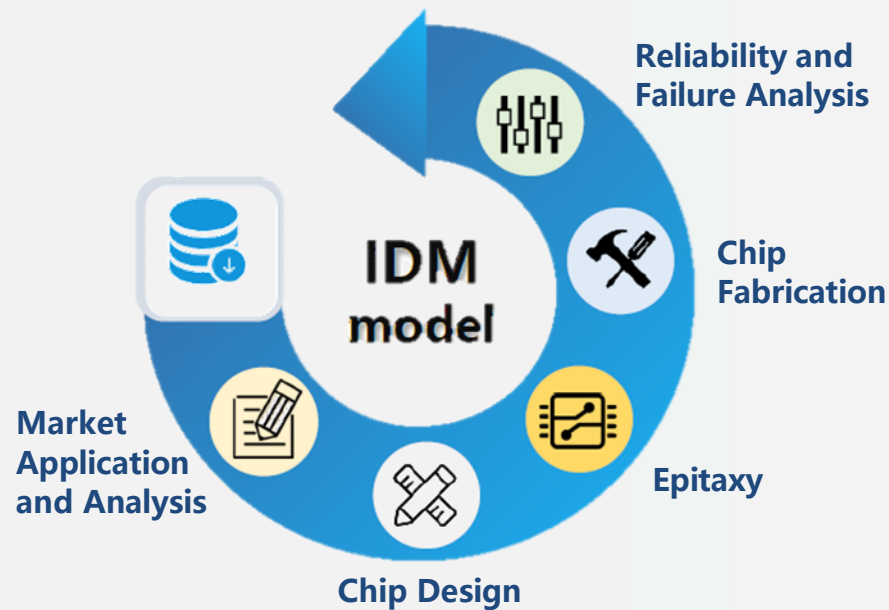


ONLY

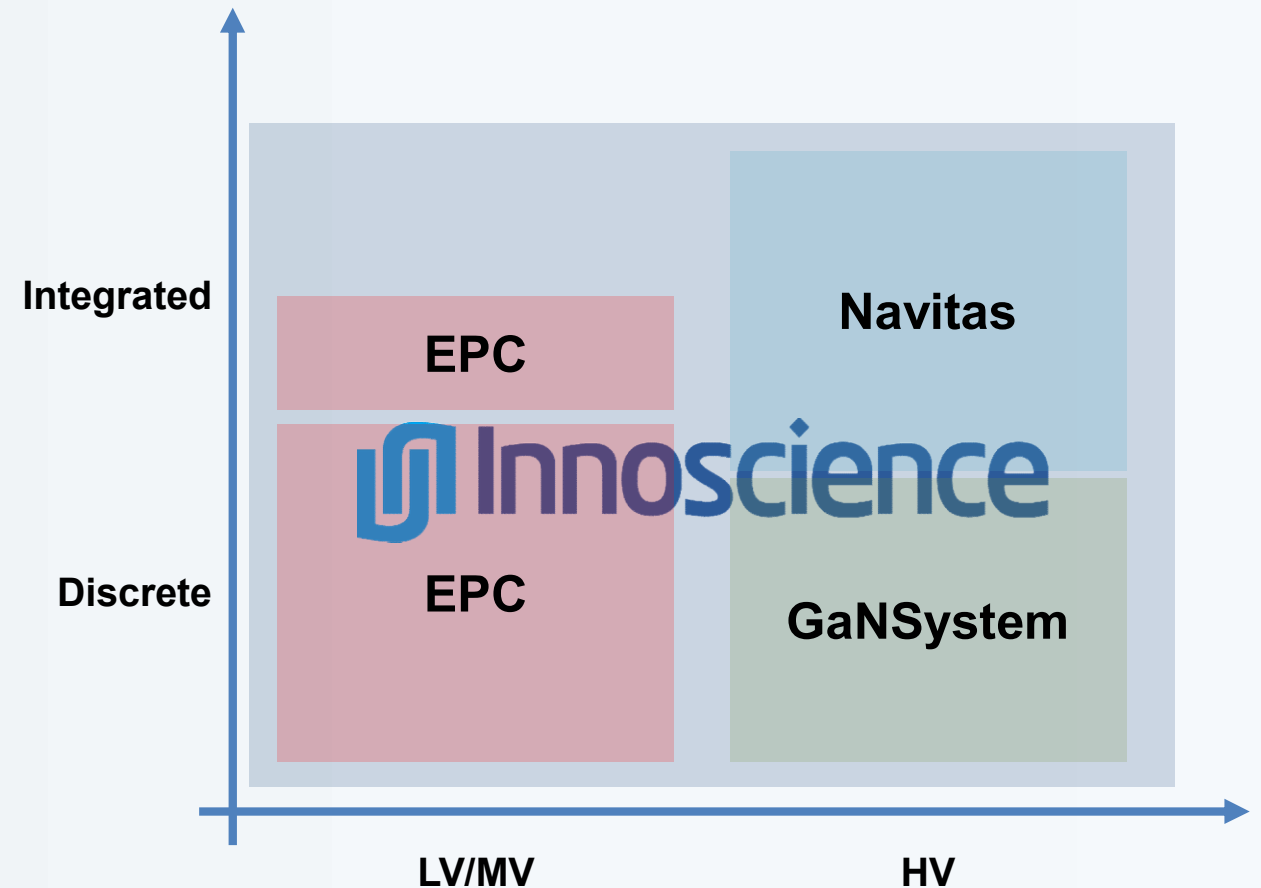
Chinese semiconductor chip Co.
have supply collaborations
with major companies worldwide

Unique GaN Chip Production and Innovation Platform

8-inch GaN-on-Si Chip Production

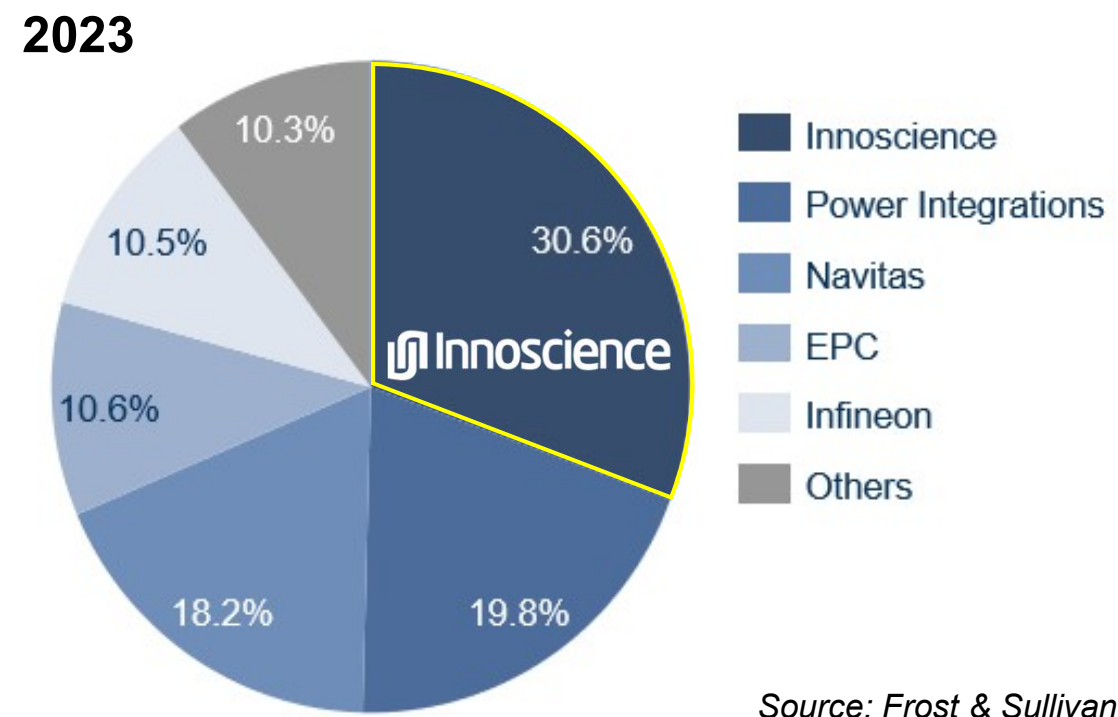
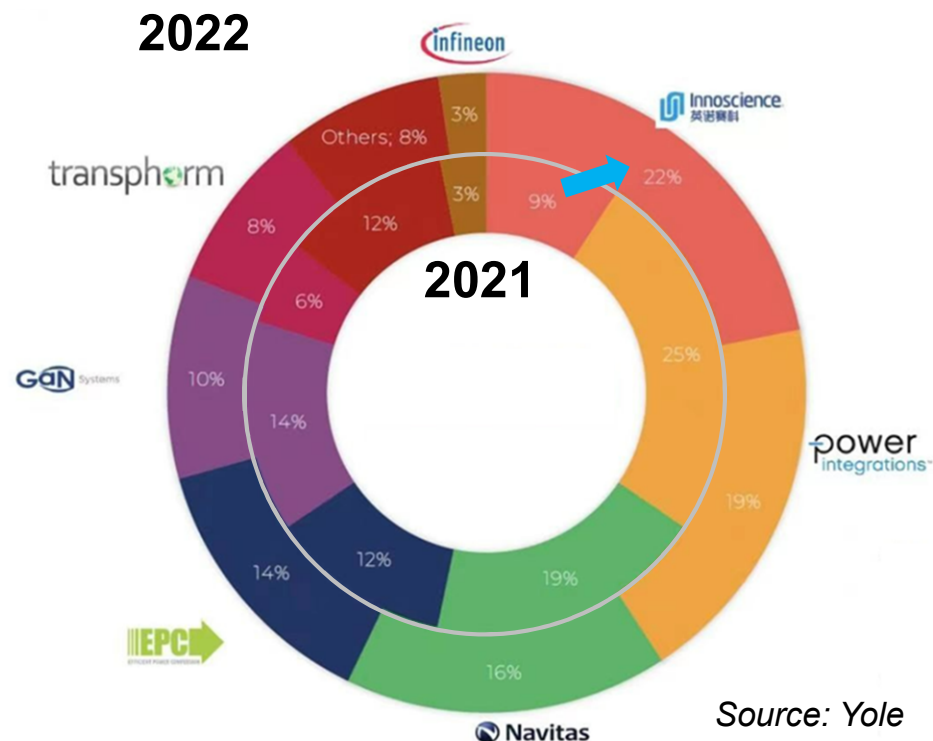


Collaborative Innovation across Production and Research + Core Technology and Strong Innovation + Stable Capacity across Full Production Sessions + Scalability and Cost Advantage



Innoscence is GaN Market Leader

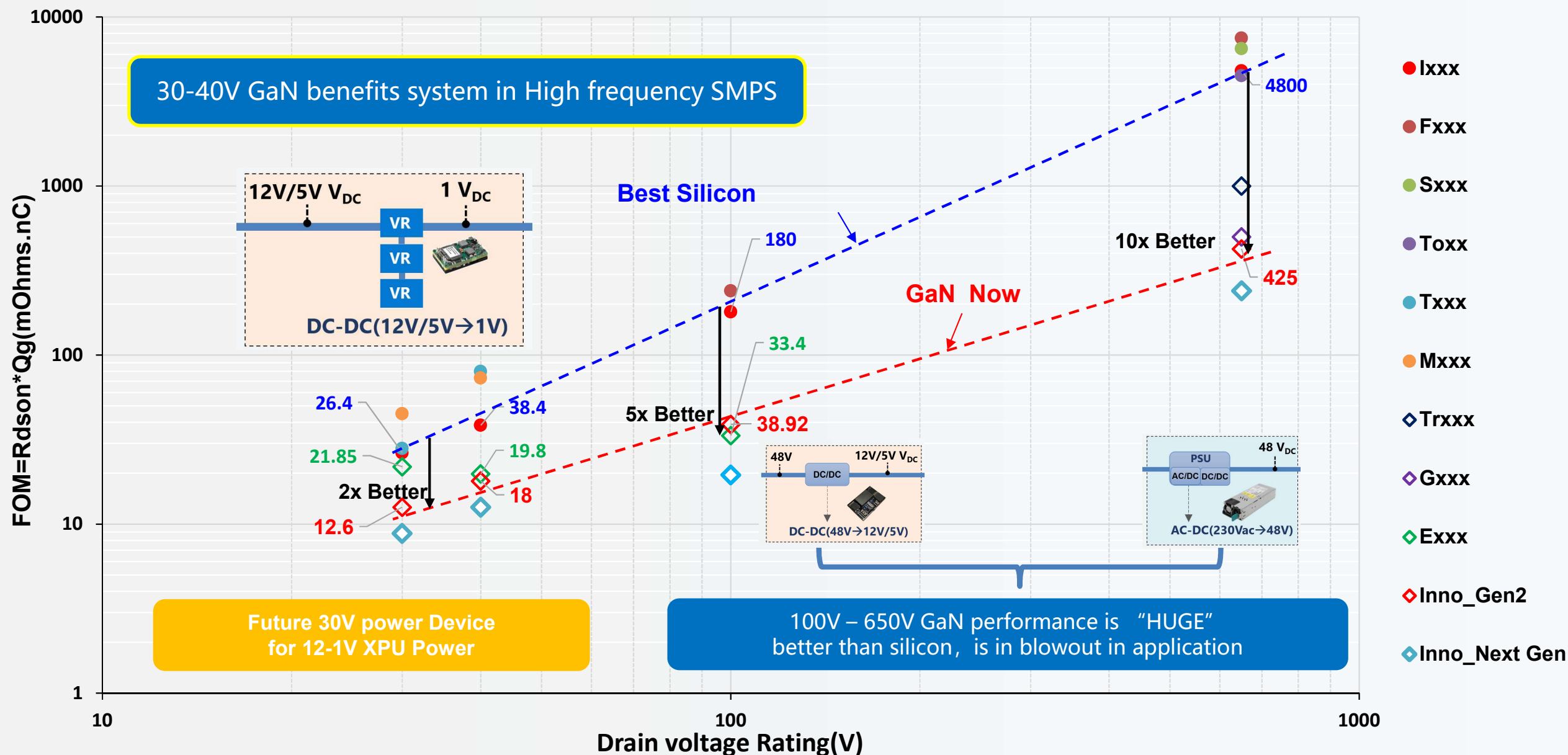
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2021 (9%) → 2022 (22%) → 2023 (30.6%)

GaN Technology Performance in full voltage rating

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GaN HEMT

Full voltage range with package options

- **High Voltage (650V/700V/900V/1200V)**
 - RON range: 2.2Ω - 20mΩ
 - Power range: 10W - 11kW and above
 - DFN, TO-220/F, TO252, TOLL, TOLT packages
 - Applications: AC/DC Charger, Power Supply
 - AECQ qualified
- **Medium Voltage (100V/150V/200V)**
 - RON range: 1.6mΩ-50mΩ
 - QFN, WLCSP packages
 - Applications: 48V DC/DC, E-fuse, SR
 - Automotive grade ready
- **Low Voltage (30V/40V)**
 - RON range: 1.2mΩ-7mΩ
 - QFN, WLCSP packages
 - Applications: XPU Power, Buck-Boost Charger
 - Automotive grade in Q2, 2024
- **Bi-directional V-GaN™ Series**
 - Voltage range: 40V, 100V, 650V
 - RON range: 3.6mΩ-12mΩ
 - QFN, WLCSP packages
 - Applications: Cell phone, Battery BMS
 - Automotive grade in Q2 2024

Solid GaN

GaN with driver, protection and more

- **High Voltage (700V) Low Power SolidGaN**
 - ISG610X with Current Sense, QFN 6x8mm
 - ISG613X with Gate Clamp, TO-220F/TO252
 - Power Range: 45W-140W
 - Applications: PD Charger, Adaptor, TV Power
- **High Voltage (700V) High Power SolidGaN**
 - ISG612X with Gate Clamp, TO-247/TOLL/TOLT
 - Power Range: 500W-5KW
 - Applications: Server PSU, Air Conditioner, Industrial, Automotive
- **High Voltage (700V) Half-Bridge SolidGaN**
 - ISG624X with HB Driver, QFN 9x9mm
 - Power Range: 140W-500W
 - Applications: Motor Drive, Power Adaptor
- **Low Voltage (40V-100V) Half-Bridge SolidGaN**
 - ISG320X (100V), LGA 5x6.5mm
 - ISG121X (40V), LGA 4x5mm
 - Power Range: 50W-1KW
 - Applications: Motor Drive, Data Center, DC/DC

GaN Driver

- **Single-Channel GaN Driver**
 - Drive 30V-700V GaN HEMT
- **100V Half-Bridge GaN Driver**
 - Drive 30V-100V GaN HEMT
- **700V Half-Bridge GaN Driver**
 - Drive 700V GaN HEMT
- **100V Bi-Directional GaN Driver**
 - Drive 30V-100V GaN
 - High-Side and Low-Side

High Voltage(650V-900V) GaN HEMT Discrete

650-900V GaN Discrete in DFN5x6

Gen 2.5

140mΩ-600mΩ

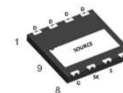


Part #	R _{DS(on)} (TYP/Max)	ID _(max)	Status
INN700DA140C/DC140C	106/140mΩ	17A	MP
INN700DA190B/DC190C	138/190mΩ	11.5A	MP
INN700DA240B/DC240C	165/240mΩ	10A	MP
INN700DA350B/DC350A	270/350mΩ	6A	MP
INN700DA480B/DC480A	365/480mΩ	5A	MP
INN700DA600B/DC600A	470/600mΩ	3.3A	MP
INN900DA240B	165/240mΩ	12A	MP
INN900DA350B	270/350mΩ	7A	MP
INN900DA600B	470/600mΩ	4A	MP

650V-900V GaN Discrete in DFN8x8

Gen 2.5

70mΩ-240mΩ



Part #	R _{DS(on)} (TYP/Max)	ID _(max)	Status
INN650D070AH	53/70mΩ	26A	MP
INN650D080BS	60/80mΩ	29A	MP
INN700D140C	106/140mΩ	17A	MP
INN700D190C	138/190mΩ	11.5A	MP
INN700D240C	165/240mΩ	10A	MP
INN900D240B	165/240mΩ	12A	MP
INN900D350B	270/350mΩ	7A	MP
INN900D600B	470/600mΩ	4A	MP

650-900V GaN Discrete in TO-252

Gen 2.5

140mΩ-480mΩ



Part #	R _{DS(on)} (TYP/Max)	ID _(max)	Status
INN700TK140C	106/140mΩ	17A	MP
INN700TK190C	138/190mΩ	11.5A	MP
INN700TK240C	165/240mΩ	10A	MP
INN700TK350B	270/350mΩ	6A	MP
INN700TK480B	365/480mΩ	5A	MP
INN900TK240B	165/240mΩ	12A	MP
INN900TK350B	270/350mΩ	7A	MP
INN900TK600B	470/600mΩ	4A	MP

650-700V GaN Discrete in SOT223

Gen 2.5

140mΩ-480mΩ



Part #	R _{DS(on)} (TYP/Max)	ID _(max)	Status
INN700SC200B	150/200mΩ	4.8A	Sample
INN700SC350B	270/350mΩ	3.5A	Sample
INN700SC480B	365/480mΩ	2.8A	Sample
INN700SC600B	470/600mΩ	2.4A	Sample

650-700V GaN Discrete in TOLL

Gen 2.5

30mΩ-80mΩ



Part #	R _{DS(on)} (TYP/Max)	ID _(max)	Status
INN650TA080BS	60/80mΩ	29A	MP
INN650TA070AH	53/70mΩ	26A	MP
INN650TA050C	38.5/50mΩ	38.5A	MP
INN700TA030C	27/35mΩ	64A	MP

650-700V GaN Discrete in TOLT

Gen 2.5

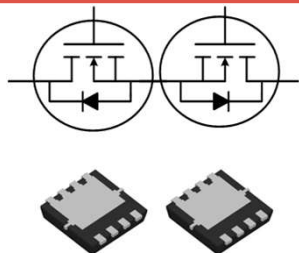
30mΩ-80mΩ



Part #	R _{DS(on)} (TYP/Max)	ID _(max)	Status
INN650TP080BS	60/80mΩ	29A	Sample
INN650TP070AH	53/70mΩ	26A	Sample
INN650TP060CS	41/60mΩ	38A	Sample
INN650TP050C	38.5/50mΩ	38.5A	Sample
INN700TP030C	27/35mΩ	64A	Sample

Bi-Directional GaN (VGaN®) Products

Back-Back MOSFET Solutions



- Inherent Body Diode
- 2-Discrete Devices
- Larger Area

VGaN for SmartPhone OVP

Gen 2.0

WCSP



Part #	R _{DS(on)(Max)} , ID	Package	Status
INN040W048A	4.8mΩ, 20A	WLCSP2.1x2.1mm	MP
INN040W080A	8mΩ, 14A	WLCSP1.7x1.7mm	MP
INN040W120A	12mΩ, 10A	WLCSP1.2x1.7mm	MP

30V/40V V-GaN for Battery Formation

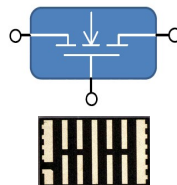
Gen 2.0

FCQFN

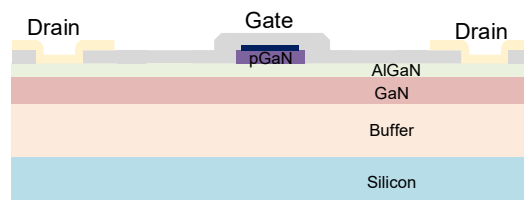


Part #	R _{DS(on)(Max)} , ID	Package	Status
INV030FQ012A	1.2mΩ, 100A	FCQFN 6x4mm	MP
INN040FQ012A	1.2mΩ, 100A	FCQFN 6x4mm	MP

Single VGaN Solution



- 1 GaN Replace 2xMOSFET
- Ultra low Resistace
- Smaller Area



60V-150V VGaN for 32/48/72V BMS

Gen 2.0

FCQFN,
enFCQFN



Part #	R _{DS(on)(Max)} , ID	Package	Status
INV100FQ030A	3.2mΩ, 100A	FCQFN 4x6mm	MP
INV100FQ030C	3.2mΩ, 100A	FCQFN 4x6mm	MP
INV120EQ035A	3.5mΩ, 100A	En-FCQFN 4x6mm	MP
INV100EQ030C	3.2mΩ, 100A	En-FCQFN 4x6mm	MP

650V VGaN for High Power/AEC-Q

In dev, announce in Q3 2024

Mid/Low Voltage GaN HEMT Discrete

30V GaN Discrete in CSP & QFN

Gen 2.0

Vcore, 12V Rail



Part #	R _{DS(on)(Max)} , ID	Package	Status
INN030W010A	1.0mΩ, 182A	CSP 2.9x4.2mm	Sample
INN030W036A	3.6mΩ, 37A	CSP 2.9x4.2mm	Sample
INN030FQ015A	1.5mΩ, 60A	QFN 4x5mm	MP

40V/60V GaN Discrete in QFN

Gen 2.0

Notebook, SR, Buck-Boost Charger

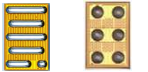


Part #	R _{DS(on)(Max)} , ID	Package	Status
INN040FQ015A	1.5mΩ, 50A	QFN 4x5mm	MP
INN040FQ043A	4.3mΩ, 24A	QFN 3x4mm	MP
INN060FQ043A	4.3mΩ, 24A	QFN 3x4mm	MP
INN040FQ045A-Q	4.5mΩ, 24A	QFN 3x4mm	MP

80-100V GaN Discrete in CSP

Gen 2.0

48V Power, Lidar



Part #	R _{DS(on)(Max)} , ID	Package	Status
INN100W032A	3.2mΩ, 60A	CSP 2.1x3.5mm	MP
INN100W070A	7.0mΩ, 29A	CSP 1.5x2.5mm	MP
INN100W135A-Q	13.5mΩ, 75A	CSP 1.6x2.1mm	MP
INN100W800A-Q	80mΩ, 17A	CSP 0.9x0.9mm	MP
INN100W027A	2.7mΩ, 64A	CSP 4.45x2.3mm	MP

80V/100V GaN in QFN & LGA

Gen 2.0

48V, Solar Inverter, Optimizer, Lidar



Part #	R _{DS(on)(Max)} , ID	Package	Status
INN080LA01	8mΩ, 13A	LGA 2.3x3.3mm	MP
INN100FQ016A	1.8mΩ, 100A	QFN 4x6mm	MP
INN100FQ025A	2.8mΩ, 80A	QFN 3x5mm	MP
INN100EA035A	3.5mΩ, 60A	LGA 3.3x3.3mm	MP

150V/200V GaN Discrete

Gen 2.0

Brick Power, Micro Inverter, Motor Drive



Part #	R _{DS(on)(Max)} , ID	Package	Status
INN150FQ032A	3.9mΩ, 100A	QFN 4x6mm	MP
INN150FQ070A	7.0mΩ, 60A	QFN 3x5mm	MP
INN150W080A	9mΩ	CSP 1.8x2.8mm	Sample
INN150LA070A	7mΩ, 28A	LGA2.2x3.2mm	MP

MV/LV GaN w/ Top Side Cooling

Gen 2.0

Solar, Motor Drive,



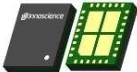
Part #	R _{DS(on)(Max)} , ID	Package	Status
INN100EQ016A	1.8mΩ, 100A	enQFN 4x6mm	MP
INN100EQ025A	2.8mΩ, 80A	enQFN 3x5mm	MP
INN150EQ032A	3.9mΩ, 100A	enQFN 4x6mm	MP
INN150EQ070A	7.0mΩ, 60A	enQFN 3x5mm	MP
INN080EQ018A-Q	1.8mΩ, 100A	enQFN 4x6mm	Sample
INN200EQ080A	8mΩ, 50A	enQFN 3x5mm	Sample

SolidGaN – GaN IC Products

40V Half-Bridge SolidGaN

ISG121X Series

Integrated HB Gate Driver; OTP, UVLO;
Dual Inputs and Single Tri-State Input



Part #	R _{DS(on)(Max)} , I _D (Max)	Package	Status
ISG1211LA	2x 4.3mΩ, 24A	LGA 4x5mm	Sample
ISG1212LA	2x 4.3mΩ, 24A	LGA 4x5mm	Sample

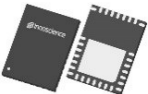
50W-200W

DC/DC, SR

700V SolidGaN with Current Sense

ISG610X Series

Integrated Gate Driver; Current Sense,
Slew Rate Control, OCP, OTP, UVLO



Part #	R _{DS(on)(Max)} , I _D (Max)	Package	Status
ISG6106QA	140mΩ, 12A	QFN 6x8mm	MP
ISG6107QA	210mΩ, 8A	QFN 6x8mm	MP
ISG6108QA	320mΩ, 5A	QFN 6x8mm	MP
ISG6109QA	450mΩ, 4A	QFN 6x8mm	MP

45W-140W

PD Charger, Power Adaptor

700V Half-Bridge SolidGaN

ISG624X Series

Integrated HB Gate Driver, LDOs, Diode;
Interlocking, UVLO, OTP

Part #	R _{DS(on)(Max)} , I _D (Max)	Package	Status
ISG6243QD	2x 140mΩ, 11.4A	QFN 9x9mm	Development
ISG6244QD	2x 190mΩ, 8.3A	QFN 9x9mm	Development
ISG6245QD	2x 240mΩ, 7.4A	QFN 9x9mm	Development
ISG6246QD	2x 350mΩ, 4.8A	QFN 9x9mm	Development

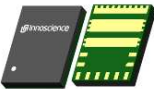
140W-500W

Motor Drive, Power Adaptor

100V Half-Bridge SolidGaN

ISG320X Series

Integrated HB Gate Driver; OTP, UVLO;
Dual Inputs and Single Tri-State Input



Part #	R _{DS(on)(Max)} , I _D (Max)	Package	Status
ISG3202LA	2x 3.2mΩ, 60A	LGA 5x6.5mm	MP
ISG3204LA	2x 3.2mΩ, 60A	LGA 5x6.5mm	MP
ISG3206LA	2x 7mΩ, 29A	LGA 5x6.5mm	Sample

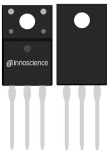
200W-1KW

Motor Drive, Data Center

700V SolidGaN with Gate Clamp

ISG613X Series

Integrated Gate Clamp; DESAT;
Drop-in for MOSFET



Part #	R _{DS(on)(Max)} , I _D (Max)	Package	Status
ISG6133TJ	140mΩ, 10A	TO-220F	MP
ISG6134TJ	190mΩ, 7A	TO-220F	MP
ISG6136TJ/TK	350mΩ, 4A	TO-220F/TO-252	MP
ISG6137TJ/TK	480mΩ, 3A	TO-220F/TO-252	MP

45W-140W

Power Adaptor, TV Power

700V High Power SolidGaN

ISG612X Series

Integrated Gate Clamp; DESAT,
OTP; Drop-in for MOS, IGBT, SiC

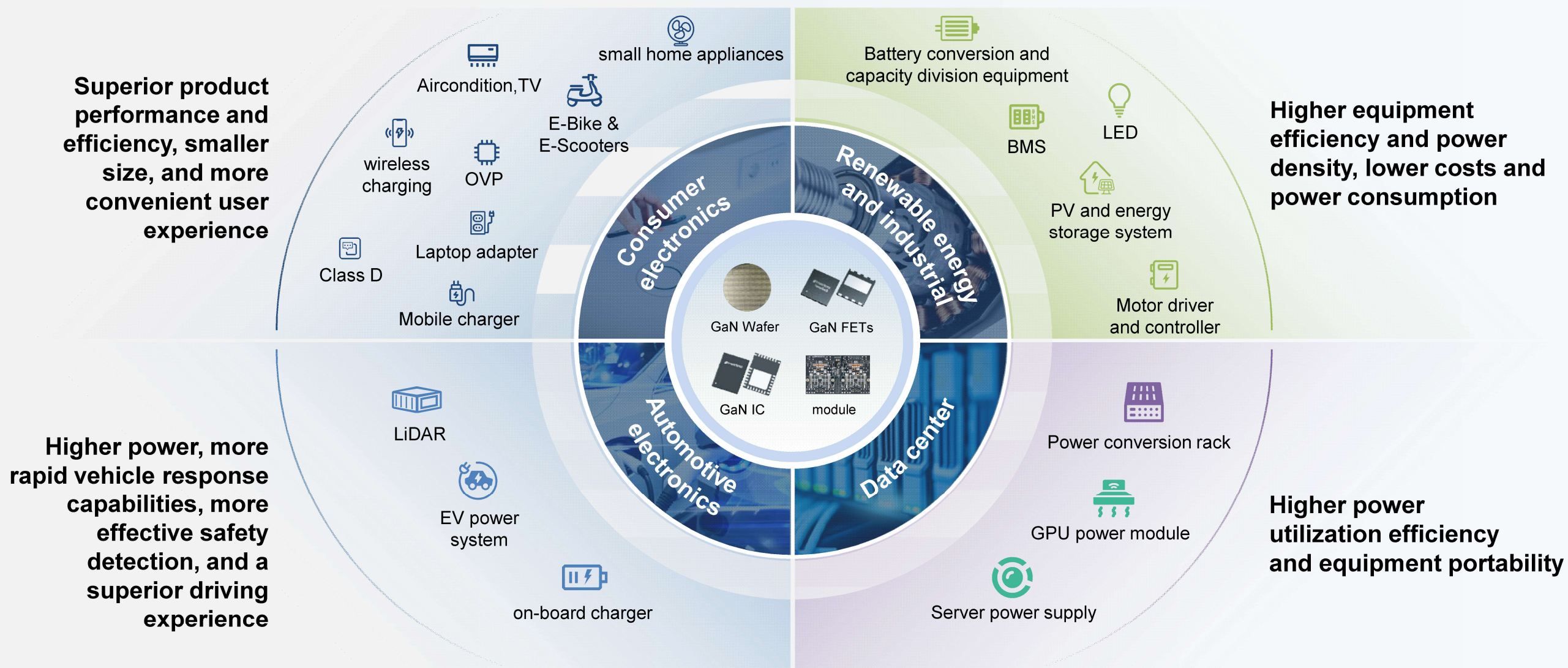


Part #	R _{DS(on)(Max)} , I _D (Max)	Package	Status
ISG6121TD	25mΩ, 60A	TO-247	MP
ISG6122TD	35mΩ, 40A	TO-247	MP
ISG6123TD/A/P	50mΩ, 30A	TO-247, TOLL/T	MP
ISG6124TD/A/P	70mΩ, 20A	TO-227, TOLL/T	MP

500W-5KW

Server PSU, Air Conditioner

GaN Applications and Markets



GaN, Yes We CaN