

## 05. Wide Bandgap Power Devices

**650V GaN HEMT and 1200V SiC MOSFET for new energy, automotive and high-efficiency power systems.**

This category suits power designs requiring higher switching frequency, higher conversion efficiency and higher power density.

### Product Positioning

#### 650V GaN HEMT

- For high-frequency, high-efficiency and high-power-density conversion.
- Targets fast chargers, adapters, server auxiliary supplies and selected PV/storage topologies.

#### 1200V SiC MOSFET

- For high-voltage, high-efficiency and high-reliability power systems.
- Suitable for EV, PV inverter, energy storage, smart grid and industrial power supplies.

### Representative Models / Product Lines

Category	Model	VDS	ID	RDS(on)	Package
GaN HEMT	ICWH06506501	650V	45A	65mohm @VGS=6V	DFN8*8
GaN HEMT	ICWH06513501	650V	21A	135mohm @VGS=6V	DFN5*6
GaN HEMT	ICWH06530001	650V	9.5A	300mohm @VGS=6V	DFN5*6
SiC MOSFET	ICWM12001103	1200V	135A	11mohm @VGS=18V	Bare Die
SiC MOSFET	ICWM12002501	1200V	100A	25mohm @VGS=18V	TO247-3/4
SiC MOSFET	ICWM12004001	1200V	60A	40mohm @VGS=18V	TO247-3/4
SiC MOSFET	ICWM12008001	1200V	30A	80mohm @VGS=18V	TO247-3/4

# 05. Wide Bandgap Power Devices

## Applications and Promotion Notes

### Typical Applications

- PV inverters, energy storage converters and charging-pile power modules.
- EV OBC, DC/DC converters and traction-related auxiliary power.
- High-efficiency AC/DC, PFC, LLC, server and industrial power supplies.

### Promotion Focus

- Wide-bandgap devices can improve switching frequency, efficiency and power density.
- SiC is better for high-voltage/high-power systems; GaN is strong in high-frequency medium/small power.
- Can be promoted together with gate drivers and power controller ICs.

## Sales Entry Points

Customer Type	Possible Entry Point
EV power-system customers	OBC, DC/DC, BMS auxiliary supply, thermal management and high-voltage power modules.
PV and energy-storage customers	Inverters, storage PCS, high-voltage DC/DC and auxiliary supplies.
Adapter / industrial power customers	High-frequency PFC, LLC, QR flyback and high-power-density designs.
Power module manufacturers	1200V SiC MOSFET bare die / TO247 and future module packaging cooperation.

Note: Before design-in, verify temperature grade, package, certification status, PPAP support and availability with the latest datasheet.