

# Power Components

# Power & Discrete Linecard



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### Power & Discrete:

- Discrete Mosfets, IGBTs, Diodes, Rectifiers, Thyristors, Triacs
- SiC-Mosfet Modules
- IGBT-Modules

### Integrated Circuits:

- Power Management ICs & Special ICs
- Power Supplies:
- AC-DC & DC-DC Converters & LED Drivers
- Passive Components:
- Transformers & Inductors, Filters, Ceramic- & HV-Capacitors

	Mosfets	IGBTs	Silicon Carbide Solutions, Mosfets, Diodes, Modules	Diodes, Rectifiers, Thyristors, Triacs	Power Management/ Special ICs	AC-DC/ DC-DC Converters, LED Drivers	Transformers, Inductors, Filters	Passive Components
	Discrete/ Modules	Discrete/ Modules						HV-Capacitors, MLCC, E-Caps, Thermistors, Varistors
> UTC / Unisonic Technology	■	■		■	■			
> Wayon	■		■	■	■			■
> EIC Semi				■				
> Ansas Semiconductors	■		■	■				
> Trinno Technology	■	■		■				
> TAIXIN Technology		■		■				
> ASTSIC Technology			■	■				
> ACAP								■
> Magic Power						■		
> YDS / Yuan Dean Scientific						■	■	





# ASTSIC Technology Co. Ltd.



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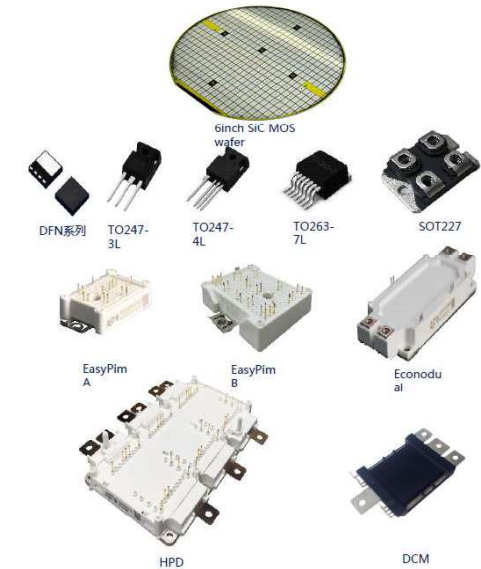
## ASTSIC Technology

ASTSIC Technology was founded in 2016 as a high-tech company for the research, development and production of discrete SiC power Mosfet and SiC power modules in Shenzhen. ASTSIC is one of the first companies for the commercial series production of SiC Power Semiconductors in China.

Within two years the production of 1.2kV and 3.3kV SiC technologies based on 6" SiC wafers was realized in ASTSIC's own module plant and partnerships with important major American and European partners for technical cooperation in industrial and automotive area could be set up. These partners including such as Wolfspeed, General Motors, BYD, Geely, Cissoid and Semikron. In 2023, the productin capacity was expanded with an additional module factory locatedin Shenzhen.

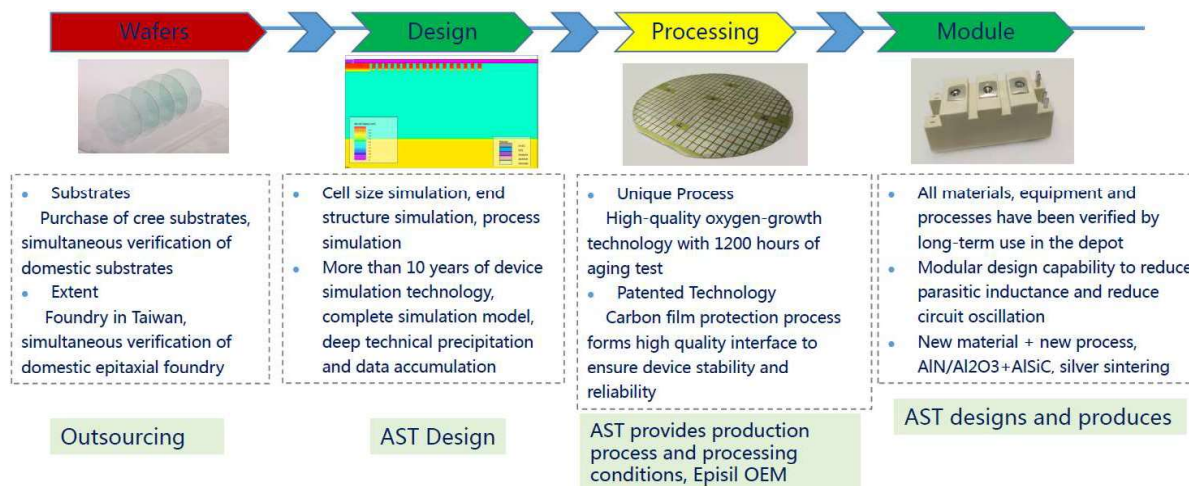
ASTSIC is certified according to ISO9001, ISO45001 and ISO14001 and is manufacturing according to IATF 16949 quality standards.

The products passing the reliability tests of the automotive industry and are certified according to the AEC-Q101.





- AST Product Development Process  
Chip design & Module development by ASTSIC, wafer material outsourced and wafer processing entrusted to Taiwan Episil





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## ASTSIC Discrete SiC Mosfet

- Industrial Standard Packages
- Low RDS(on)
- Very high switching speed
- High temperature operation
- Low switching losses, high efficiency
- Low capacitance / fast reverse recovery
- Easy paralleling due to positive temperature coefficient

## Target Application

- SMPS
- DC-DC Converter
- Drives, Generators
- Induction Heating
- Solar Inverters

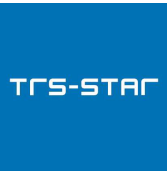


Voltage	Current	TO-247-3	TO-247-4*	TO-263-7	TO-220F	TOLL	DFN8x8	DFN5x6	SOT-227
650V	8A						ASR320N650MD88	ASR320N650MD56	
	30A	ASC30N650MT3	ASC30N650MT4 ASC30N650MT4PB		ASC30N650MF3				
	60A	ASC60N650MT3	ASC60N650MT4	ASC60N650MT7		ASR35N650MD02	ASR35N650MD88		
	100A	ASC100N650MT3	ASC100N650MT4			ASR12N650MD02			
1200V	20A	ASC20N1200MT3PB ASC30N1200MT3	ASC20N1200MT4PB ASC30N1200MT4	ASC20N1200MT7PB ASC30N1200MT7		ASR160N120MD02PB ASR80N1200MD02	ASR160N1200MD88PB		
	30A		ASC30N1200MT4PB						
	60A	ASC60N1200MT3	ASC60N1200MT4 ASC60N1200MT4PB	ASC60N1200MT7		ASR45N1200MD02	ASR50N1200MD88		
	100A	ASC100N1200MT3 ASC100N1200MT3PB	ASC100N1200MT4 ASC100N1200MT4PB			ASR20N1200MD02PB ASR16N1200MD02			ASC100N1200MDS ASC100N1200MDSK*
	200A		ASC200N1200MT4						
1700V	1A				ASC1N1700MF3PB				
	5A	ASC5N1700MT3PB		ASC5N1700MT7PB					
	40A	ASC40N1700MT3							
	100A	ASC100N1700MT3 ASC100N1700MT3BP	ASC100N1700MT4PB						
3300V	20A		ASC20N3300MT4						
	50A		ASC50N3300MT4						

\* with separate Source Pin



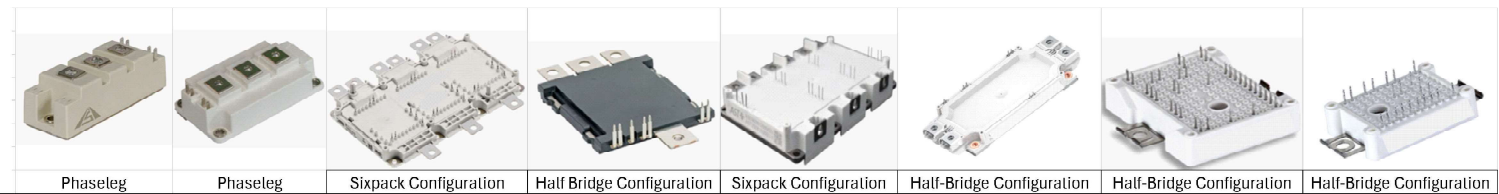
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## ASTSIC SiC Mosfet Modules

- Single/Phaseleg/H-Bridge/Sixpack Configuration available
- Low RDS(on)
- Very high switching speed
- High temperature operation
- Low switching losses, high efficiency
- Low capacitance / fast reverse recovery



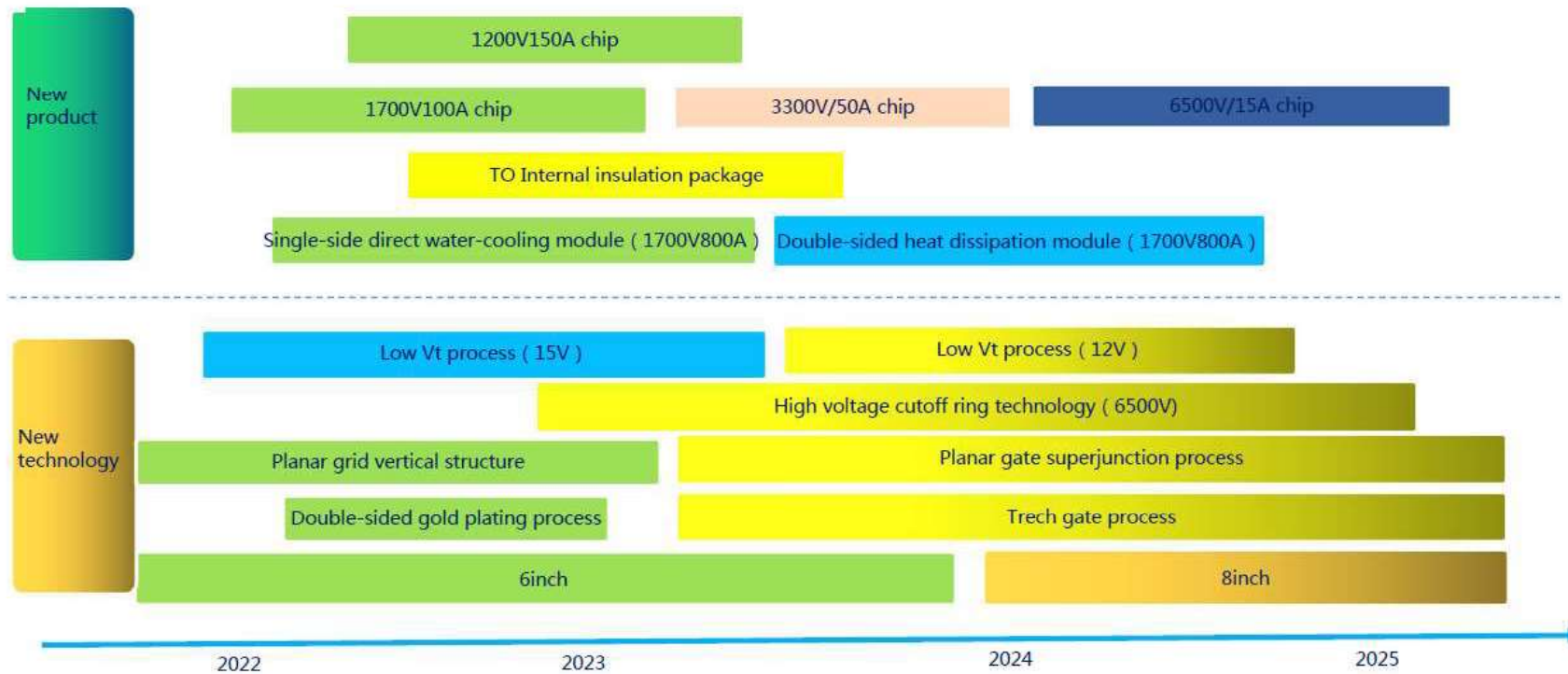
## Target Application

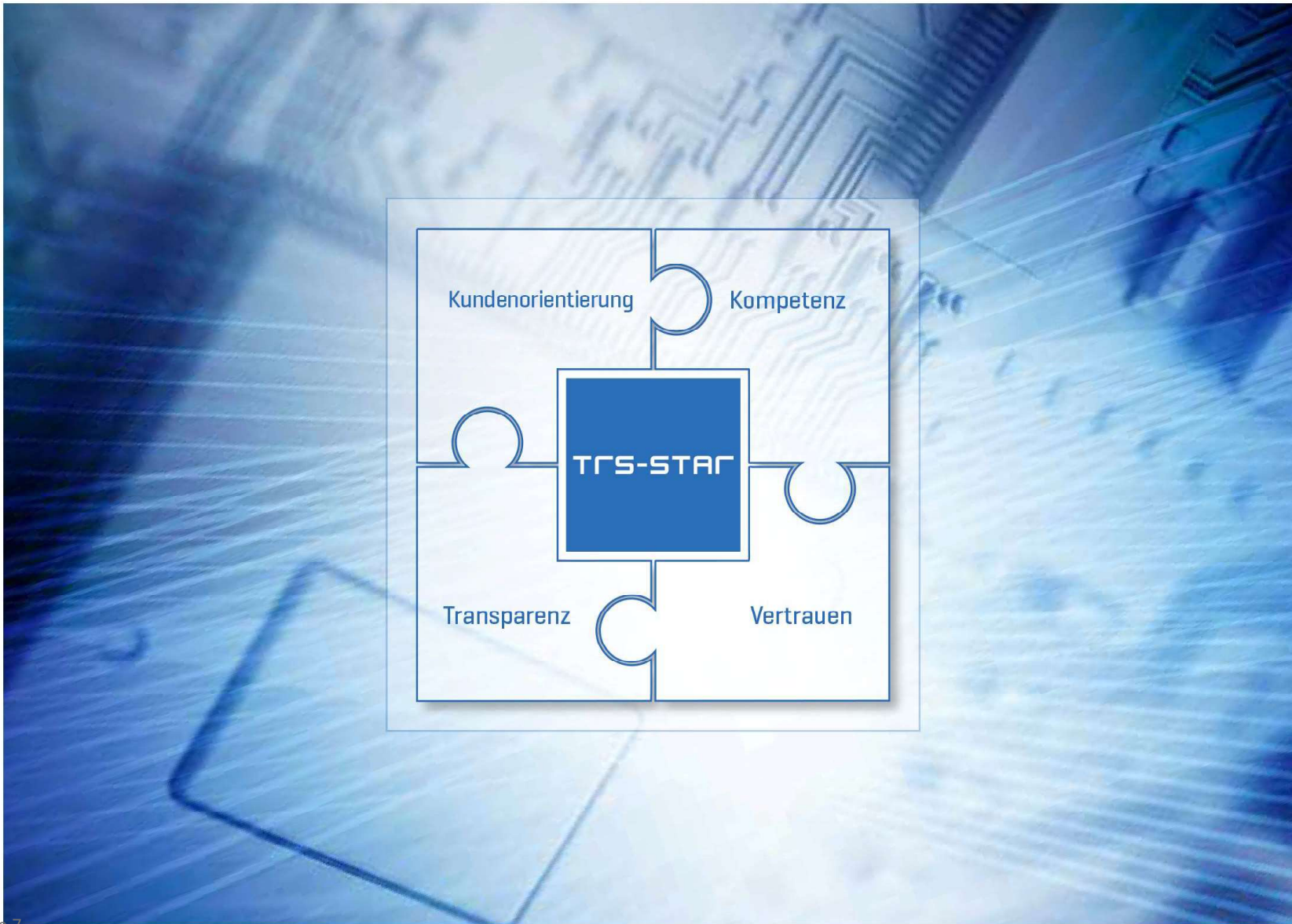
- SMPS; DC-DC Converter
- Drive Inverters, Generators
- Onboard Chargers
- Energy Storage Systems
- Power Grid / Renewable Energy
- Induction Heating
- Solar Inverters

Voltage	Current	Phaseleg	Phaseleg	Sixpack Configuration	Half Bridge Configuration	Sixpack Configuration	Half-Bridge Configuration	Half-Bridge Configuration	Half-Bridge Configuration
		34mm	62mm	HPD	DCS12 / DCM	DWC3	Econodual	EasyPack	EasyPIM
650V	300A					ASC300N650MD3			
	600A			ASC600N650HPD		ASC600N650MD3			
	800A			ASC800N650HPD			ASC800N650MED		
1200V	30A		ASC30N1200ME3						
	100A	ASC100N1200ME3D							ASC100N1200EP
	300A					ASC300N1200MD3		ASC300N1200MEP2B	
	400A		ASC400N1200MF3F	ASC400N1200HPD		ASC400N1200MD3F			
	600A			ASC800N1200HPD	ASC600N1200DCS12	ASC400N1200MD3F	ASC600N1200MD3	ASC600N1200MED	
	700A			ASC700N1200HPD	ASC700N1200DCS12	ASC700N1200MD3	ASC700N1200MED		
1700V	800A			ASC800N1200HPD	ASC800N1200DCS12		ASC800N1200MED		
	200A		ASC200N1700ME3F						
	600A			ASC600N1700HPD	ASC600N1700DCS12	ASC600N1700MD3	ASC600N1700MED		
	800A			ASC800N1700HPD	ASC800N1700DCS12		ASC800N1700MED		
	1000A			ASC1000N1700HPD	ASC1000N1700DCS12		ASC1000N1700MED		



- ASTSIC Technology Roadmap





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