

Main inverter

Highest scalability & flexibility for inverters



인피니언 전력반도체 솔루션
가상부스에 오신 걸 환영합니다!

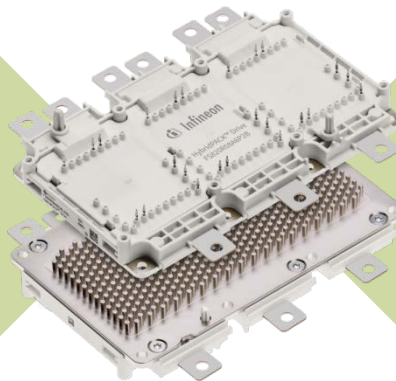


Infinion's HybridPACK™ Drive family of power modules enabling scalable inverter designs in the range of 100 kW to 180 kW*



HybridPACK™ Drive product family:

- › IGBT power modules for battery or hybrid electric vehicles
- › Success story with close to 1 million parts shipped
- › HybridPACK™ Drive has defined an industry-standard footprint
- › Complete module family with 5 variants available



Highest flexibility and scalability:

- › Blocking voltages of 750 V and 1200 V
- › Performance variations for inverter designs between 100 kW and 180 kW* through material stacks with different base plates

Key product benefits:



Scalability

→ Lower development costs through reuse of mechanical and electrical inverter design



Quality excellence

→ State-of-the-art Infineon quality, proven in volume ramps



EDT2 chipset offering best-in-class performance and efficiency

→ Higher efficiency increases the driving range of battery electric vehicles



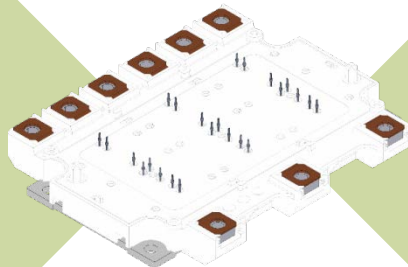
Press-fit for reduced mounting time of signal pins

→ Reduced total costs

* Inverter power depends on individual system design of our customers

Infineon's EDT2 IGBT technology:

- › Benchmark efficiency and ruggedness
- › Blocking voltage 750 V
- › $I_{C\ nom}$: 650 A
- › $T_{vj\ op} = 150^{\circ}C$
- › Short-time extended operation temperature
 $T_{vj\ op} = 175^{\circ}C$



HybridPACK™ DC6i:

- › Combines latest technologies available, offering an upgrade path to the HP1 and DC6 families
- › For inverters up to 100 kW

Key product benefits:



Direct cooling

➔ Improved heat dissipation through ribbon bond structure



25% smaller size than HybridPACK™ Drive

➔ Enables very compact & light inverters



Benchmark current density combined with short circuit ruggedness and increased blocking voltage

➔ Highest reliability



Press-fit for reduced mounting time of signal pins

➔ Reduced total costs

Infiniteon's HybridPACK™ DSC S2 - FF450R08A03P2

Benchmark IGBT technology meets compact package



Infineon's EDT2 IGBT technology:

- › Excellent light load power losses for superior efficiency
- › 750 V blocking voltage



Infineon's double-sided cooling package:

- › Very compact & lightweight mold package
- › 175°C short-term chip junction temperature capable of increased power density

- › Full qualification acc. to AQC324 guideline
- › SOP Q3/2020 (plan)
- › Engineering samples available

Key product benefits:



Flexible half-bridge module

→ Enables different inverter geometries and further motor integration



High power density

→ Enables very compact & light inverters



Built-in current and temperature sensors

→ Efficient and safe inverter



Low parasitic stray inductance and 750 V blocking voltage

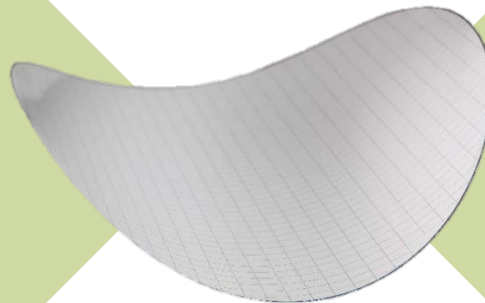
→ Improved system efficiency

EDT 1200 V 12 inch wafer

Benchmark IGBT technology goes 1200 V

Infineon's EDT 1200 V IGBT technology:

- › Excellent power losses for superior efficiency
- › 1200 V blocking voltage



Infineon's bare die offering for highest flexibility

- › Individual product customization
- › Variety in technical performance, features, metallization, etc.

› Engineering samples available

Key product benefits:



High-performance and efficient IGBT bare die technology

➔ Enables efficient and high-performance module builds



Flexible product layout and feature set adjustment

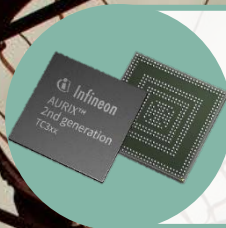
➔ Optimized product offering for individual customer needs



Continuous investments in manufacturing capacity

➔ Supply security in fast-growing markets

Complete product offering for main inverter systems of hybrid and fully electric vehicles



Scalable platform for use across xEV architectures

Superior performance for complex controlling

DS ADC: resolver signal acquisition replacing IC

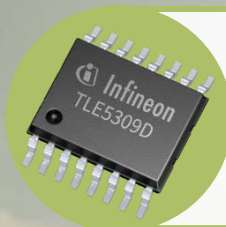
Reduce system costs

Enable PCB space savings

Support active short circuit strategies



Main Inverter



Supports ASIL D on system level

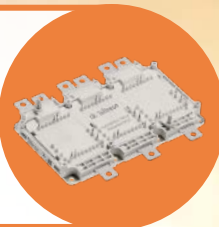
Fast analog Sin/Cos output

Short propagation delay

Broad product portfolio

Leading IGBT technologies

High-volume experience IGBT modules & discretes





Part of your life. Part of tomorrow.