

# HybridPACK™ DC6 Module

FS400R07A3E3\_H6

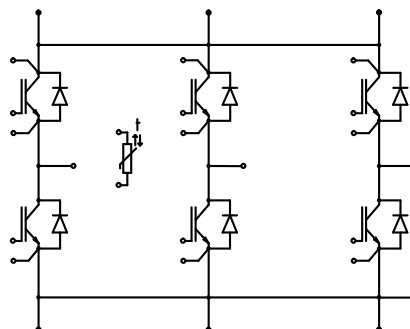
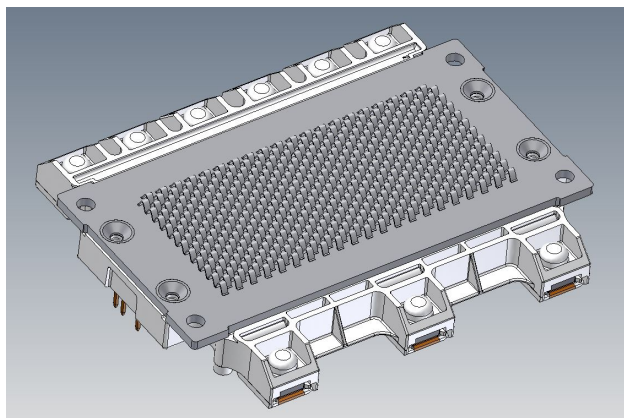
Final Data Sheet

V3.1, 2019-12-19

Automotive High Power

## 1 Features / Description

HybridPACK™ DC6 module with Trench/Fieldstop IGBT3 and Emitter Controlled 3 diode and NTC



$V_{CES} = 700 \text{ V}$

$I_c = 400 \text{ A}$

### Typical Applications

- Automotive Applications
- Hybrid Electrical Vehicles (H)EV
- Commercial Agriculture Vehicles
- Motor Drives

### Electrical Features

- Low Switching Losses
- LOW  $V_{CESat}$
- $T_{vj \text{ op}} = 150^\circ\text{C}$
- $V_{CESat}$  with positive Temperature Coefficient
- Increased blocking voltage capability to 705V

### Mechanical Features

- 2.5kV AC 1min Insulation
- $\text{Al}_2\text{O}_3$  Substrate with Low Thermal Resistance
- Direct Cooled Base Plate with Ribbon Bonds
- High mechanical robustness
- Integrated NTC temperature sensor
- Copper Base Plate
- RoHS compliant

### Description

Infineon's HybridPACK™ DC6 with ribbon bonded cooling structures is a variant of the HybridPACK™ 1 power module family with increased continuous current capability and a reduced stray inductance. Like all HybridPACK™ 1 products the HybridPACK™ DC6 with ribbon bonds is an automotive qualified power module designed for electric vehicle applications. Designed for a  $150^\circ\text{C}$  junction operation temperature, with a 30 hour limited  $175^\circ\text{C}$  capacity the module accommodates a 3-phase Six-Pack configuration of Trench-Field-Stop IGBT3 and matching emitter controlled diodes. The HybridPACK™ DC6 power module family is built on Infineon's long time experience in the development of IGBT power modules, intense research efforts of new material combinations and assembly technologies. HybridPACK™ DC6 with ribbon bonds is suitable for direct liquid cooling. The copper base plate combined with high-performance ceramic substrate and Infineon's enhanced wire-bonding process provides unparalleled thermal and power cycling capability and highest reliability for mild hybrid inverter or generator applications. For a compact design the driver stage PCB can easily be soldered on top of the module. All power connections are realized with screw terminals.

Product Name	Ordering Code
FS400R07A3E3_H6	SP001632430