

HybridPACK™ Drive Module

FS380R12A6T4B

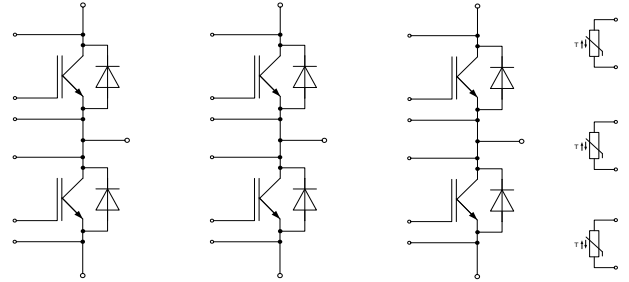
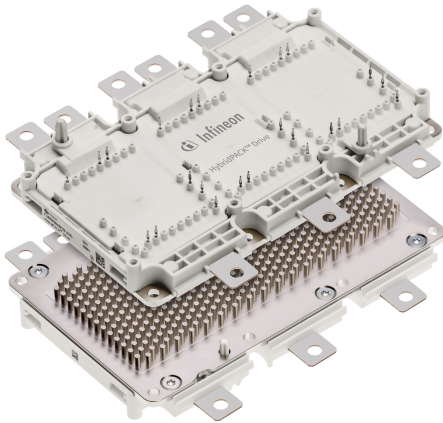
Final Data Sheet

V3.1, 2019-09-10

Automotive High Power

1 Features / Description

HybridPACK™ Drive module with Trench/Fieldstop IGBT4 and Emitter Controlled 4 diode



$V_{CES} = 1200\text{ V}$
 $I_C = 380\text{ A}$

Typical Applications

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

Electrical Features

- Blocking voltage 1200V
- Low V_{CESat}
- Low Switching Losses
- Low Q_g and Cr_{ss}
- Low Inductive Design
- $T_{vj\ op} = 150^\circ\text{C}$

Mechanical Features

- 4.2kV DC 1sec Insulation
- High Creepage and Clearance Distances
- High Power Density
- High Performance Si3N4 Ceramic
- Direct Cooled PinFin Base Plate
- Guiding elements for PCB and cooler assembly
- Integrated NTC temperature sensor
- PressFIT Contact Technology
- RoHS compliant
- UL 94 V0 module frame

Description

The HybridPACK™ Drive is a very compact six-pack module (1200V/380A) optimized for hybrid and electric vehicles. The power module implements the IGBT4 generation. The chipset has high short circuit ruggedness and come with a matching efficient and soft switching Emcon4 diode.

The new HybridPACK™ Drive power module family comes with mechanical guiding elements supporting easy assembly processes for customers. Furthermore, the press-fit pins for the signal terminals avoid additional time consuming selective solder processes, which provides cost savings on system level and increases system reliability. The direct cooled baseplate with PinFin structure and optimized ceramic material in the FS380R12A6T4B product best utilizes the implemented chipset and shows superior thermal characteristics. Due to the high clearance & creepage distances, the module well suited for increased system working voltages and supports modular inverter approaches.

Product Name	Ordering Code
FS380R12A6T4B	SP001632438