

Double Side Cooled Module

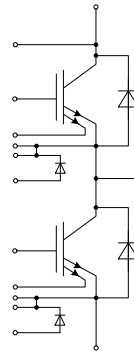
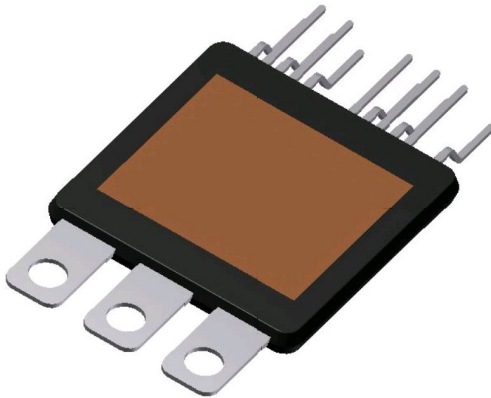
FF450R08A03P2

Final Data Sheet

V3.0, 2020-05-11

Automotive High Power

1 Features / Description



$V_{CES} = 750 \text{ V}$
 $I_C = 450 \text{ A}$

Typical Applications

- Automotive Applications
- Hybrid Electrical Vehicles (H)EV
- Optimized for automotive applications with DC link voltages up to 450 V and gate driver voltage level of -8 V / +15 V

Electrical Features

- Integrated Current Sensor
- Integrated Temperature Sensor
- Low Inductive Design
- Blocking voltage 750V
- Low Switching Losses
- Short-time extended Operation Temperature
 $T_{vj\ op} = 175^\circ\text{C}$

Mechanical Features

- 2.5kV AC 1min Insulation
- Double sided cooling
- Compact design
- RoHS compliant

Description

The HybridPACK™ DSC S2 is a very compact half-bridge module targeting hybrid and electric vehicles. The module is based on Infineon's long-term experience developing IGBT power modules and implements the EDT2 IGBT generation, which is an automotive Micro-Pattern Trench-Field-Stop cell design optimized for electric drive train applications. The chipset has benchmark current density combined with short circuit ruggedness and increased blocking voltage for reliable inverter operation under harsh environmental conditions. The EDT2 IGBTs also show excellent light load power losses, which helps to improve System efficiency over a real driving cycle. The EDT2 IGBT was optimized for applications with switching frequencies in the range of 10 kHz. Additionally, on-die integrated current sensor and temperature sensor allow precise monitoring of IGBT state. These features enable enhanced protection and intelligent control of the system.

The innovative and small package is designed for Double Sided Cooling (DSC) with superior thermal performance. The low stray inductance and increased blocking voltage support the design of systems with a very high efficiency. Furthermore, new material combinations and assembly technologies enable best thermal and electrical performance at highest reliability and mechanical robustness.

Product Name	Ordering Code
FF450R08A03P2	SP001630036