



Product Brief

HybridPACK™ DSC (Double Sided Cooling)

FF400R07A01E3_S6

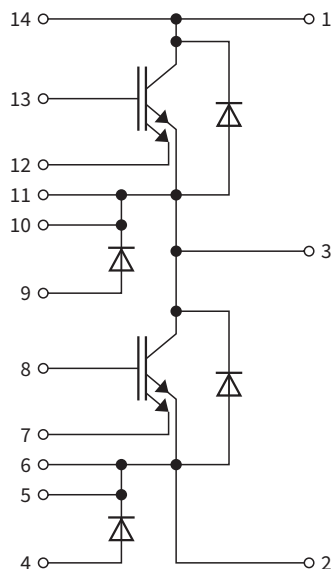
The FF400R07A01E3_S6 is a very compact half-bridge module ($V_{CES} = 700\text{ V}$, $I_{Cnom} = 400\text{ A}$) targeting hybrid and electric vehicles. The dual in-line package is designed for double sided cooling enabling high power density inverters. The low stray inductance and increased blocking voltage supports the design of systems with a very high efficiency. Thanks to the integrated isolation the modules can be directly attached to a cooler without external isolation. The module has an on die integrated current sense (IGBT mirror) and temperature (diode) sense. These features can be used to continuously monitor the IGBT state as input for decisions and settings of system parameters during operation.

The module is based on Infineon's long-term experience developing IGBT power modules and trench-field-stop IGBTs including matching diodes with enhanced softness. Intense research efforts of new material combinations and assembly technologies enable leading thermal and electrical performance at highest reliability and mechanical robustness.

Applications

- > Main inverter and generator for hybrid and electric vehicles
- > Generator inverter for range extenders

Circuit diagram



Key features

- > Superior thermal performance due to double sided cooling
- > Low inductance design with module cooling surfaces electrically isolated
- > Integrated temperature and current sense

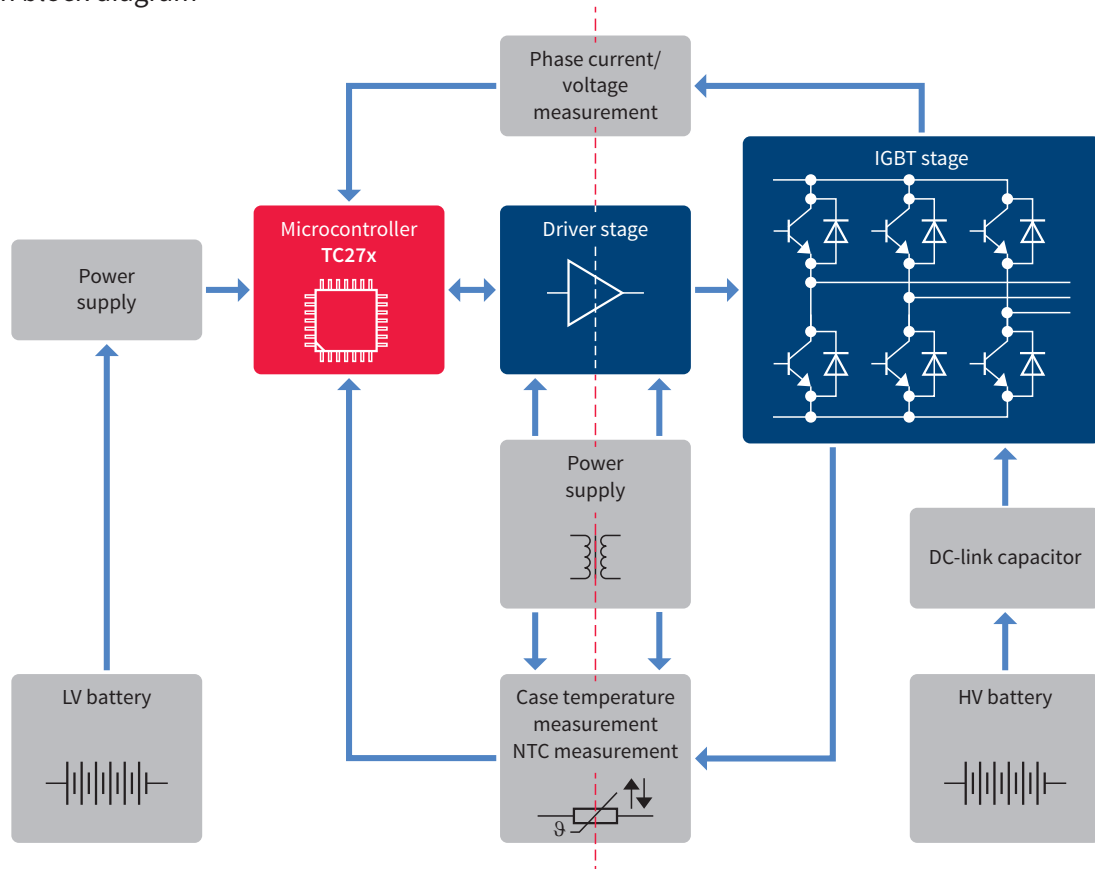
Key benefits

- > Enables inverter designs with very high power density
- > Reduces system losses, improved efficiency and facilitates inverter design
- > Improved system monitor capabilities

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Application block diagram



Application example for a main inverter application

Product summary

Type	Description	Ordering code
FF400R07A01E3_S6	IGBT module with double sided cooling	In development

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