

## Product brief

# HybridPACK™ DSC S2

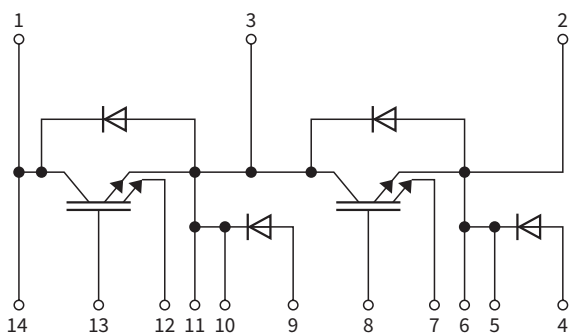
FF450R08A03P2

The HybridPACK™ DSC S2 (FF450R08A03P2) is a very compact half-bridge power module targeting the main inverter of hybrid and electric vehicles up to 70 kW. It uses Infineon's EDT2 IGBT technology which is specially developed for the automotive electric drivetrain delivering highest efficiency and increased ruggedness. This IGBT technology is integrated into the DSC (Double Sided Cooling) package with dual path heat dissipation and 175°C chip junction temperature operating capability. The HybridPACK™ DSC S2 enables highest power density of main inverters and flexible inverter design. Scalability to higher inverter power can be reached by placing several HybridPACK™ DSC S2 modules in parallel.

The low stray inductance and increased blocking voltage ( $V_{(CES)} = 750\text{ V}$ ) supports the design of inverter 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 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.

Intense research efforts of new material combinations and assembly technologies enable leading thermal and electrical performance of the package at highest reliability and mechanical robustness.

### Block diagram



### Key benefits

- > DSC half-bridge package enables very high power density inverters & flexible inverter designs
- > Improved system efficiency through low stray inductance and increased blocking voltage
- > Efficient and safe inverter operation through integrated sensors

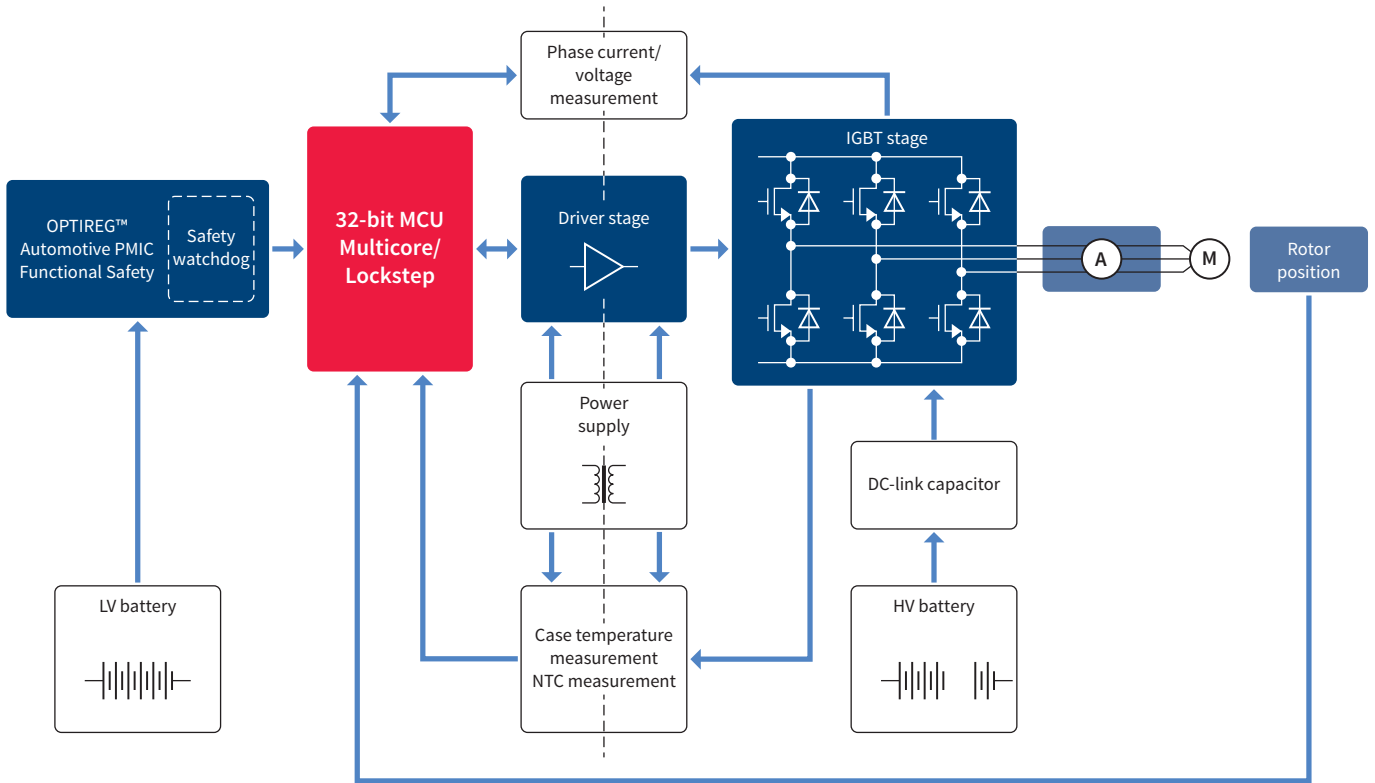
### Key features

- > Superior thermal performance due to double sided cooling package
- > Benchmark IGBT technology: highest efficiency and increased ruggedness
- > Integrated temperature and current sense
- > Low parasitic stray inductance and 750 V blocking voltage

# HybridPACK™ DSC S2

FF450R08A03P2

## Application block diagram



## Product table

Type	Ordering code	Description	Production status
FF450R08A03P2	FF450R08A03P2XKSA1	HybridPACK™ DSC S2 (EDT2)	SOP Q2/2019
FF400R07A01E3_S6	FF400R07A01E3S6XKSA2	HybridPACK™ DSC S1 (IGBT3)	In production
FS200R07A02E3_S6	FS200R07A02E3S6BKSA2	HybridPACK™ DSC L (IGBT3)	In production

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