

Product brief

HybridPACK™ Drive 1200 V

FS380R12A6T4x

The HybridPACK™ Drive is a very compact power module optimized for hybrid and electric vehicle main inverter applications (xEV). The FS380R12A6T4x (1200 V/380 A) is a six-pack module, which is mechanically compatible to the 750 V HybridPACK Drive product family. The module includes the well-known IGBT4 chip generation for 1200 V blocking voltage, which offers best R_{th} performance compared to the EDT2 HybridPACK™ Drive variants in the same configuration.

The chipset has high short circuit ruggedness and comes with a matching efficient and soft switching Emcon4 diode. It was optimized for switching frequencies in the range of 8 kHz.

The power module family HybridPACK™ Drive comes with mechanical guiding elements supporting easy assembly processes for customers. Furthermore, the press-fit pins for the signal terminals avoid time consuming selective solder processes, which provide cost savings on system level and increase system reliability.

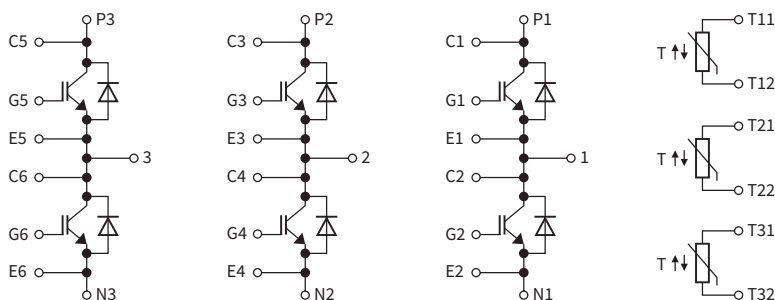
The FS380R12A6T4x has a PinFin baseplate for an optimized direct fluid cooling and thus highest current density. An improved Silicon Nitride ceramic complements the thermal dissipation resulting in higher performance capabilities.

The HybridPACK™ Drive power module comes with high clearance and creepage distances and makes the module suited for increased system working voltages. Furthermore, the flexible signal pin and power tab concept allows further product variants in the future and thus support best modular inverter approaches.

Key features

- > Reliable 1200 V IGBT4 and diode chipset
- > Improved thermal resistance due to Silicon Nitride ceramic
- > Single digit stray inductance and smooth, efficient switching behavior
- > High short circuit ruggedness for reliable inverter operation under extreme conditions
- > Press-fit signal pins
- > Mechanical guiding elements for efficient and cost-saving inverter assembly
- > PinFin baseplate for direct fluid cooling

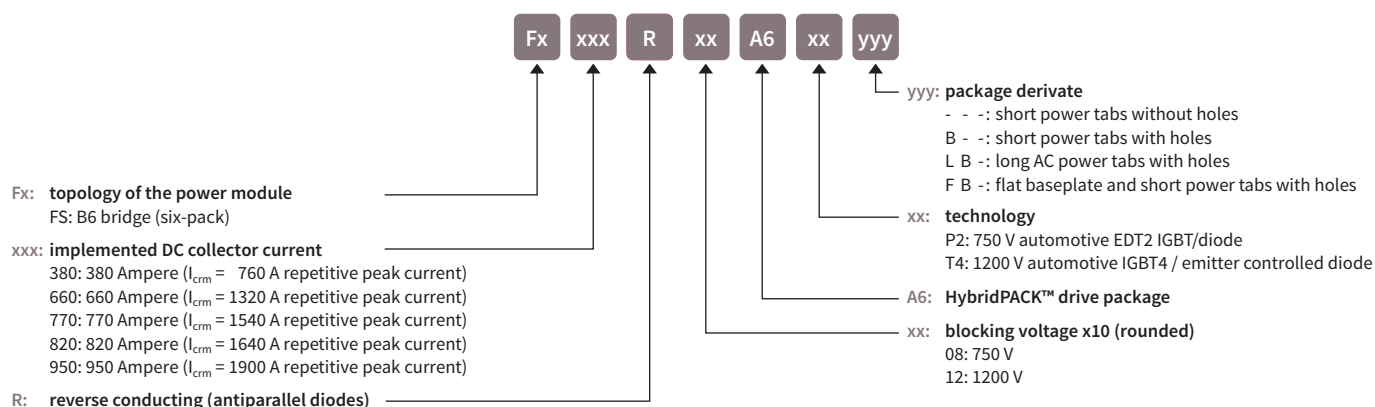
Block diagram



HybridPACK™ Drive 1200 V

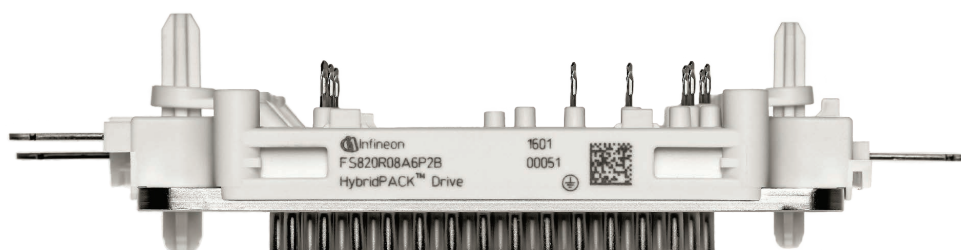
FS380R12A6T4x

Sales code nomenclature



Typical appearance of HybridPACK™ Drive 1200 V module

PinFin



Best direct fluid cooling performance

Product table

Type	Description	Electrical characteristics	Ordering code	Product status
FS380R12A6T4B	HybridPACK™ Drive Performance	1200 V/380 A	SP001632438	Active and preferred
FS380R12A6T4LB	HybridPACK™ Drive Performance	1200 V/380 A	SP002516834	Active and preferred

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