General Description

- BC020DA120DCA1 integrates various power and control components to achieve high reliability, compact PCB size, and low system costs. It is designed to operate as a high-performance inverter for demanding motor drive applications and active power factor correction. The product concept is specifically tailored for power applications that require excellent thermal performance, electrical isolation, EMI save control, and overload protection. A three-phase inverter with 1200V SiC MOSFETs is combined with an optimized HVIC gate driver to deliver superior electrical performance. The body diodes of the SiC MOSFETs can be utilized as free-wheeling diodes, and turning on the MOSFET during body-diode conduction (synchronous rectification) can further reduce losses.

Features

- Fully isolated Dual In-Line molded module
- 1200V BRIGHT SiC MOSFETs
- High Voltage, high speed gate driver
- Separated logic supply range from 3V to 5.5V
- Gate drive supply range from 13V to 20V
- Integrated bootstrap functionality
- Under-voltage lockout at all channels
- Fast response time of DESAT
- Over current shutdown
- Monitor status of device on FLT
- Built-in NTC thermistor for temperature monitor
- Seperated low side source pins accessible for phase current monitoring (open source)



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- All of 6 switches turn off during protection with MCU signal
- Low thermal resistance with DBC substrate
- Lead-free terminal plating; RoHS compliant

Applications

- Fan drives
- Active power factor correction.
- High-performance motor drives converters
- 3-Phase Charging Piles/OBC

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