

MIC45205

26V/6A DC/DC Power Module

General Information

MIC45205 is a synchronous step-down regulator module, featuring a unique adaptive ON-time control architecture. The module incorporates a DC-to-DC controller, power MOSFETs, bootstrap diode, bootstrap capacitor and an inductor in a single package; simplifying the design and layout process for you. The fully-optimized design can deliver up to 6A current under a wide input voltage range of 4.5V to 26V. The MIC45205-1 uses Microchip's HyperLight Load® (HLL) and the MIC45205-2 uses Microchip's Hyper Speed Control® architecture that enables ultra-fast load transient response, allowing for a reduction of output capacitance.

Features

- Up to 6A output current
- >93% peak efficiency
- Output voltage: 0.8V to 85% of V_{IN} with $\pm 1\%$ accuracy
- Adjustable switching frequency from 200 kHz to 600 kHz
- CISPR22, class B compliant
- -40°C to $+125^{\circ}\text{C}$ junction temperature range
- Thermal-shutdown protection
- Short-circuit protection with hiccup mode
- Adjustable current limit
- Available in 52-pin 8 mm × 8 mm × 3 mm QFN package

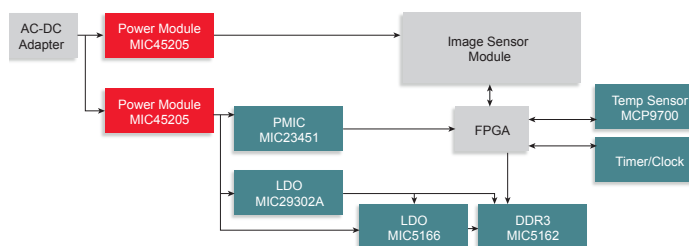
Applications

- High power density point-of-load conversion
- Servers, routers, networking and base stations
- FPGAs, DSP and low-voltage ASIC power supplies
- Industrial and medical equipment

Benefits

- Integrated solution simplifies the design and layout process for you
- Module expedites system design and improves product time-to-market
- Device is optimized to achieve high efficiency at low voltage without requiring additional cooling; which in turn saves costs in the overall design

Industrial Scanner



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