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MP8865

High-Efficiency, 6A, 21V, Synchronous Step-Down Converter with I2C Interface

DESCRIPTION

The MP8865 is a high-frequency, synchronous, rectified, step- • Wide 4.5V to 21V Operation Input Range down, switch-mode converter with a I2C control interface. It • 45mΩ/18mΩ Low RDS(ON) Internal Power MOSFETs offers a very compact solution to achieve a 6A continuous • 1% VOUT Accuracy output current with excellent load and line regulation over a • I2C Programmable Reference-Voltage Range from 0.6V to wide input-supply range. The MP8865 has synchronous-mode 1.87V in 10mV Steps with Slew-Rate Control operation for higher efficiency over the output-load range. • 12C Selectable Switching Frequency. Default 600kHz Switching

The reference voltage level can be controlled, on-the-fly Frequency. through a 3.4Mbps I2C serial interface. The voltage range can • Programmable Output Voltage be adjusted from 0.6V to 1.87V in 10mV steps. Also, the • Power-Saving Mode, OTP, and OCP via I2C voltage slew rate, switching frequency, enable, and power- · Power Good Indication saving mode are selectable through the I2C interface.

Current-mode operation provides fast transient response and · OCP Protection in Hiccup Mode eases loop stabilization. Full protection features include over- . External Soft-Start current protection (OCP), over-voltage protection (OVP), and · Available in a QFN3x3 Package thermal shut down (TSD)

The MP8865 requires a minimal number of readily available, standard, external components and is available in a 15-pin QFN15 (3x3mm) package.

FEATURES

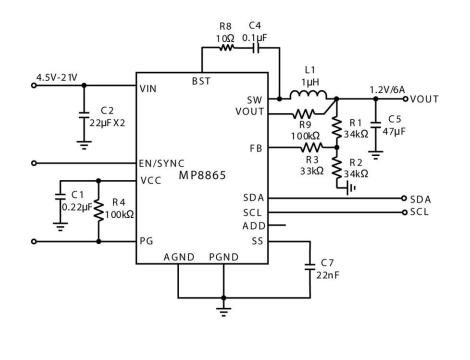
- 1-Bit I2C Address Set

APPLICATIONS

- · SoC and Media Processors
- · General Consumers
- · Distributed Power Systems

All MPS parts are lead-free and adhere to the RoHS directive. For MPS green status, please visit MPS website under Products, Quality Assurance page. "MPS" and "The Future of Analog IC Technology" are registered trademarks of Monolithic Power Systems, Inc.

TYPICAL APPLICATION



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