

DESCRIPTION

The MPQ4470/4470A is a fully-integrated, high-frequency, synchronous, rectified, step-down, switch-mode converter. It offers a very compact solution to achieve a 5A, continuous-output current over a wide input-supply range with excellent load and line regulation. It also provides fast transient response and good stability for wide input-supply and load range. The MPQ4470/4470A operates at high efficiency over a wide output current load range.

MPQ4470 has full protection features include SCP, OCP, OVP latch, UVP, and thermal shutdown. MPQ4470A has the same protection features to MPQ4470 except has no OVP latch function.

The MPQ4470/4470A requires a minimal number of readily-available, standard, external components, and is available in a space-saving 3mm×4mm, 20-pin, QFN package.

FEATURES

- Wide 4.5V-to-36V Operating Input Range
- Guaranteed 5A, Continuous Output Current
- Internal 40mΩ High-Side, 20mΩ Low-Side Power MOSFETs
- Proprietary Switching-Loss-Reduction Technology
- 1% Reference Voltage
- Programmable Soft-Start Time
- Low Drop-out Mode
- 100kHz-to-1MHz Switching Frequency
- SCP, OCP, OVP Latch (MPQ4470 only), UVP, and Thermal Shutdown
- Output Adjustable from 0.8V to $0.9 \times V_{IN}$
- Available in a 3mm×4mm 20-pin QFN Package
- Available in AEC-Q100 Grade 1

APPLICATIONS

- Notebook Systems and I/O Power
- Automotive Systems
- Networking Systems
- Industrial Supplies
- Optical Communications Systems
- Distributed Power and POL Systems

All MPS parts are lead-free, halogen-free, and adhere to the RoHS directive. For MPS green status, please visit the MPS website under Quality Assurance.

"MPS" and "The Future of Analog IC Technology" are registered trademarks of Monolithic Power Systems, Inc.

TYPICAL APPLICATION

