



MP4425M

High Efficiency 1.5A, 36V, 2.2MHz Synchronous Step Down LED Driver

DESCRIPTION

The MP4425M is a high-frequency, synchronous, rectified, step-down, switch-mode white LED driver with built-in power MOSFETs. It offers a very compact solution to achieve a 1.5A continuous output current with excellent load and line regulation over a wide input supply range. The MP4425M has synchronous mode operation to get high efficiency.

Current-mode operation provides fast transient response and eases loop stabilization.

Full protection features include over-current protection (OCP) and thermal shut down (TSD).

The MP4425M requires a minimal number of readily-available standard external components, and is available in a space-saving QFN-13 (2.5mmx3mm) package.

FEATURES

- EMI Reduction Technique
- Wide 4V-to-36V Operating Input Range
- 85m Ω /50m Ω Low RDS(ON) Internal Power MOSFETs
- High-Efficiency Synchronous Mode Operation
- Default 2.2MHz Switching Frequency
- PWM Dimming (Min 100Hz Dimming Frequency)
- Forced CCM Mode
- 0.2V Reference Voltage
- Internal Soft-Start
- Fault Indication for LED Short, Open and Thermal Shutdown
- Over-Current Protection (OCP) with Valley-Current Detection
- Thermal Shutdown
- Available in a QFN-13 (2.5mmx3mm) Package
- CISPR25 Class 5 Compliant

APPLICATIONS

- Automotive LED Lighting

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.