

## DESCRIPTION

The MPQ4488M integrates a monolithic step-down switch-mode converter with two USB current-limit switches and charging port identification circuitry for each port. It achieves 6A output current over a wide input-supply range with excellent load and line regulation.

The output of the USB switch is current limited. Both USB ports support DCP schemes for Battery Charging specification (BC1.2), the Divider Mode, 1.2V/1.2V Mode and USB Type-C 5V@3A DFP Mode eliminating outside user interaction.

Fault condition protection includes hiccup current limiting, output OVP, and thermal shutdown (TSD).

The MPQ4488M requires a minimum number of readily available, standard, external components. The MPQ4488M is available in a QFN26 (5mmx5mm) package.

Please email ["mpq4488Minfo@monolithicpower.com"](mailto:mpq4488Minfo@monolithicpower.com) for more information

## FEATURES

- EMI Reduction Technique
- Wide 6V to 36V Operating Input-Voltage Range
- Selectable Output Voltage: 5.1V, 5.17V and 5.3V
- 90mV Line Drop Compensation
- Accurate USB1/USB2 Output-Current Limit
- 18mΩ/15mΩ Low  $R_{DS(ON)}$  Internal Buck Power MOSFETs
- 13mΩ/13mΩ Low  $R_{DS(ON)}$  Internal USB1/USB2 Power MOSFETs
- Frequency Adjustable (200kHz to 2.2MHz)
- Forced CCM Operation
- Load Shedding versus Temperature
- Hiccup Current Limit for both Buck and USB
- Supports DCP schemes for BC1.2, Divider Mode, and 1.2V/1.2V Mode
- Supports USB TYPE-C 5V@3A DFP Mode
- ±8kV HBM ESD Rating for USB, DP and DM pins
- Available in a QFN26 (5mmx5mm) Package
- Available in AEC-Q100 Grade 1

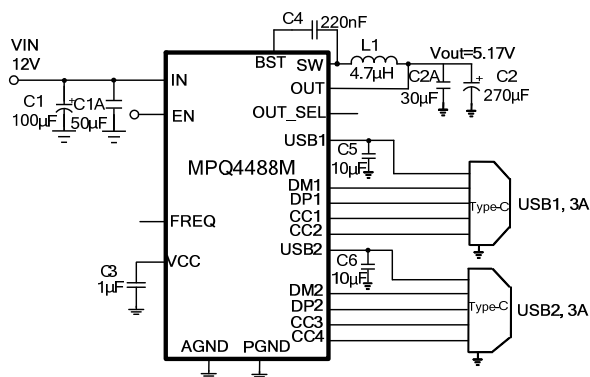
## APPLICATIONS

- USB Dedicated Charging Ports (DCP)
- Automotive Cigarette Lighter Adapters
- Power Supply for Linear Chargers

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

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

## TYPICAL APPLICATION



### Radiated EMI

$V_{IN}=12V$ ,  $V_{OUT}=5.17V$ ,  
 $USB1_{I_{OUT}}=USB2_{I_{OUT}}=3A$

