

33V 6A Synchronous Buck Converter with I²C Interface

DESCRIPTION

The MT3536 is a fully integrated high efficiency synchronous buck converter with I²C interface that can support USB PD 3.0 with Programmable Power Supply (PPS) or QC 4.0. The MT3536 works with an input supply from 4V to 33V and provides programmable output voltage from 3.0V to 28V in 20mV steps. MT3536 also supports 100% duty cycle operation to have extremely low dropout from the input to the output. With an external sense resistor, the MT3536 also supports accurate output constant-current regulation with typical step of 50mA. The I²C interface provides users with great flexibility to dynamically adjust the output voltage and current level, monitor real-time operation conditions, and set optimized over/under voltage, over temperature and current limit protections.

MT3536 is available in a very compact package: 18 lead 3mmx3mm QFN package.

FEATURES

- Wide Input Range: 4V to 33V
- Wide output range: 3V to 28V
- Support USB PD3.0/QC4.0 with PPS in 20mV steps
- Programmable output constant-current regulation
- 100% Duty Cycle Low Dropout Operation
- Integrated 15mΩ and 15mΩ HS/LS power switches
- 6A Continuous Output Current
- Programmable switching frequency: 100K, 200K, 400K, 700KHz, and 1MHz.
- Programmable output slew rate, cable compensation, PFM/FPWM mode
- Cycle-by-Cycle peak Current Limit
- Small QFN3mmX3mm_18L Package

APPLICATIONS

- USB Type C docking station
- TV monitor
- Wall charger
- PMBus-compatible point-of-load converters
- Car USB-C fast charging module

TYPICAL APPLICATIONS

