

**5V 3A 1MHz Synchronous Step-Down DC/DC Converter**

**DESCRIPTION**

The MT3058 is a 3A high frequency synchronous Step-Down converter using constant frequency, peak current mode architecture. The device integrates main switch and synchronous rectifier switch for high efficiency without an external schottky diode. To maximize light load efficiency, In shutdown, The MT3058 reduces supply current less than 1 $\mu$ A. The MT3058 can supply 3A of load current from 2.5V to 6.0V input voltage. The output voltage can be regulated as low as 0.6V. The switching frequency is internally set at 1MHz. The MT3058 has built-in internal Soft Start, Short Circuit Protection and Thermal shutdown functions, allowing the use of small surface mount inductors and capacitor. The MT3058 is available in a low profile 16 pins 3mm $\times$ 3mm WQFN package.

**FEATURES**

- Input Voltage Range from 2.5V to 6.0V
- +/- 2% 0.6V Feedback Voltage Accuracy
- 1MHz Switching Frequency
- Continuous Output Current up to 3A
- 0.1 $\mu$ A Shutdown Current
- 100% Duty Cycle Operation
- Built-in 110/80m $\Omega$  Power Switch
- Internal Soft-Start
- Cycle-by-Cycle Current Limit Protection
- Over-Load and Hiccup Mode Short Circuit
- Thermal Shutdown Protection
- MT3058P: Power Good Indication Option
- Available in a Small WQFN3x3mm\_16L Package
- Pb-Free RoHS Compliant

**APPLICATIONS**

- Solid-State and Hard Disk Drives
- Wireless and DSL Card
- Portable/Handheld Device
- STB, TV, Sound Bar, MP3 Player
- Microprocessor and DSP Core Supply

**Typical Applications**

