

**DESCRIPTION**

The MT3001/MT3002/MT3003 is a 1A/2A/3A high frequency synchronous Step Down DC/DC converter using constant frequency, 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, The MT3001/MT3002/MT3003 draws only 30µA quiescent current to improve light load efficiency. In shutdown, The MT3001/MT3002/MT3003 reduces supply current less than 1µA. The MT3001/MT3002/MT3003 can supply 1A/2A/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 2.25MHz, as for operation mode:

- MT3001/3002/3003 is auto PSM/PWM mode.
- MT3001A is Forced PWM mode.

The MT3001/MT3002/MT3003 has built-in internal Soft Start, Short Circuit Protection and OTP functions, allowing the use of small surface mount inductors and capacitor, and it is available in a Small DFN2x2\_6L Package

**FEATURES**

- Input Voltage Range from 2.5V to 6.0V
- +/- 2% 0.6V Feedback Voltage Accuracy
- 2.25MHz Switching Frequency
- Continuous Output Current up to 1A/2A/3A
- Low Quiescent Current of 30µA
- 0.1µA Shutdown Current
- 100% Duty Cycle Operation
- MT3001 Built-in 200mΩ/150mΩ Power Switch
- MT3002 Built-in 170mΩ/125mΩ Power Switch
- MT3003 Built-in 120mΩ/90mΩ Power Switch
- Internal Soft-Start
- Cycle-by-Cycle Current Limit Protection
- Over-Load and Hiccup Mode Short Circuit
- Thermal Shutdown Protection
- PWM with Power Saving Mode
- Available in a Small DFN2x2\_6L Package
- Pb-Free RoHS Compliant

**APPLICATIONS**

- Wireless and DSL Card
- Portable/Handheld Device
- STB, TV, Sound Bar, MP3 Player
- Slim DVD, SSD
- Microprocessor and DSP Core Supply

**Typical Applications**

