

DESCRIPTION

The MT3011/MT3012 is a 1A/2A 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 MT3011/MT3012 draws only 30µA quiescent current to improve light load efficiency. In shutdown, The MT3011/MT3012 reduces supply current less than 1µA. The MT3011/MT3012 can supply 1A/2A 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:

- MT3011/MT3012 is automatic PSM/PWM mode.
- MT3011A/MT3012A is Forced PWM mode.

The MT3011/3012 has built-in internal Soft Start, Short Circuit Protection and OTP functions, allowing the use of small surface mount inductors and capacitor. The MT3011/MT3012 is available in a low profile SOT23_5L 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
- Low Quiescent Current of 30µA
- 0.1µA Shutdown Current
- 100% Duty Cycle Operation
- MT3011 Built-in 170mΩ/150mΩ Power Switch
- MT3012 Built-in 130mΩ/100mΩ Power Switch
- Internal Soft-Start
- Cycle-by-Cycle Current Limit Protection
- Over-Load and Hiccup Mode Short Circuit
- Thermal Shutdown Protection
- Available in a Small SOT23_5L 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

