

5V Input 1A 2.3MHz Synchronous Step-Down Converter

DESCRIPTION

The MT8101 is a 2.3MHz, 1A constant on-time (COT) controlled synchronous step-down converter. It can operate with input voltage from 2.5V to 6V and provide Fixed Output Voltage 0.9V, 1.1V, 1.2V and 1.3V. The constant on-time control scheme simplifies loop compensation and offers excellent load transient response. MT8101 consumes extremely low 26µA quiescent current hence achieves superior light load efficiency. The high gain error amplifier in the control loop provides excellent load and line regulation. Proprietary adaptive on-time helps MT8101 to achieve nearly constant switching frequency across load range. MT8101 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions.

MT8101 is available in low profile DFN1.2x1.2_6L package.

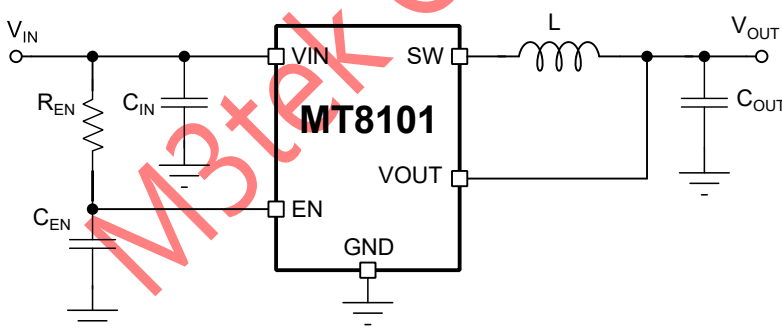
FEATURES

- Wide Input Range from 2.5V to 6V
- Proprietary Fast Transient Constant On Time Architecture Stable with low ESR Ceramic Output Capacitors
- +/- 2% VOUT accuracy
- 2.3MHz Switching Frequency
- 26µA Low Quiescent Current
- 1A Continuous Output Current, 1.5A Peak Current
- 100% Duty Cycle Operation
- Built-in 230mΩ/120mΩ Power Switches
- Internal 110µsec Soft-Start
- Cycle-by-cycle Current Limit Protection
- Over-Load and Short Circuit Hiccup Mode
- Input Under/Over Voltage Lockout
- Output Discharging Function in Shutdown
- Thermal Shutdown Protection
- Hiccup Mode for Short Circuit and Over-Load Protection
- Available in DFN1.2x1.2_6L Package
- Pb-Free RoHS Compliant

APPLICATIONS

- Solid-State and Hard Disk Drives
- WiFi RF Modules
- DC/DC Micro Modules
- Smart Phone and Tablets

TYPICAL APPLICATION



Efficiency vs. Iout

