

5V Input 2A (3A Peak) 1.5MHz Synchronous Step-Down DC/DC Converter

DESCRIPTION

The MT8183 is a 1.5MHz, 2A continued (3A Peak) constant on-time (COT) controlled synchronous step-down converter. It can operate with input voltage from 2.5V to 5.5V and provide output range from 0.6V to input level. The constant on-time control scheme simplifies loop compensation and offers excellent load transient response. The high gain error amplifier in the control loop provides excellent load and line regulation. Proprietary adaptive ontime helps MT8183 to achieve nearly constant switching frequency across load range. MT8183 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions.

MT8183 is available in low profile 6 leads DFN 1.5mm x 1.5mm.

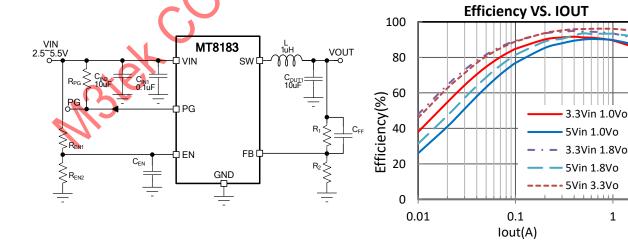
FEATURES

- Wide Input Range from 2.5V to 5.5V
- 2A Continuous Output Current (3A Peak)
- Proprietary Fast Transient Constant-On-Time Architecture Stable with low ESR Ceramic Output Capacitors
- +/- 0.5% 0.6V Feedback Voltage
- 1.5MHz Switching Frequency
- Up to 95% Efficiency
- 100% Duty Cycle Operation
- **Built-in Power Switches**
- HS/LS MOS: $60m\Omega/30m\Omega$
- Internal 0.8msec Soft-Start
- Cycle-by-cycle Current Limit Protection
- Over-Load and Short Circuit Hiccup Mode
- Open Drain Power Good Indication
- Output Discharge
- Thermal Shutdown Protection
- Available in Small DFN 1.5x1.5_6L
- Pb-Free RoHS Compliant

APPLICATIONS

- Solid-State and Hard Disk Drives
- Wireless/Networking Cards
- Portable and Mobile Devices
- WiFi RF Modules
- DC/DC Micro Modules

TYPICAL APPLICATION



1