

5V Input 5A 1.2MHz Synchronous Step-Down DC/DC Converter

DESCRIPTION

The MT8365 is a 1.2MHz, 5A continued 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 0.4V 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. A propriotor adaptive on-time helps MT8365 to achieve nearly constant switching frequency across load range. MT8365 has cycle-by-cycle current limit and hiccup mode to protect against over-load or short circuit fault conditions. MT8365 is available in low profile 8 leads SOT583

FEATURES

- Wide Input Range from 2.5V to 5.5V
- 5A Continuous Output Current
- Proprietary Fast Transient Constant On Time Architecture Stable with low ESR Ceramic Output Capacitors
- +/- 1% 0.4V Feedback Voltage
- 1.2MHz Switching Frequency
- Up to 95% Efficiency
- 100% Duty Cycle Operation
- Built-in Power Switches
HS/LS MOS:29mΩ/13mΩ @5V VIN
- 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 SOT583_8L
- Pb-Free RoHS Compliant

APPLICATIONS

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

TYPICAL APPLICATION

