

5V Input 3A 1.5MHz Synchronous Step-Down DC/DC Converter

DESCRIPTION

The MT8373 is a 1.5MHz, 3A 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 0.6V 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 on-time helps MT8373 to achieve nearly constant switching frequency across load range. MT8373 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions.

MT8373 is available in low profile 8 leads DFN 2x 2mm.

FEATURES

- Wide Input Range from 2.5V to 5.5V
- 3A Continuous Output Current
- 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: 85mΩ/52mΩ
- Internal 0.8msec Soft-Start
- Cycle-by-cycle Current Limit Protection
- Over-Load and Short Circuit Hiccup Mode
- Output Discharge when shutdown
- 18μA Low Quiescent Current for MT8373N
- MT8373A_FPWM/MT8373N_PFM mode operation
- Thermal Shutdown Protection
- Available in Small DFN 2x2_8L

APPLICATIONS

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

TYPICAL APPLICATION

