

5V Input 1A 6MHz Step-Down DC/DC Converter

DESCRIPTION

The MT8891 is a 6MHz, 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. The constant on-time control scheme simplifies loop compensation and offers excellent load transient response. MT8891 consumes extremely low 11 μ A 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 MT8891 to achieve nearly constant switching frequency across load range. MT8891 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions.

MT8891 is available in low profile WCSP_5L 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
- 6MHz Switching Frequency
- 11 μ A Low Quiescent Current
- 1A Continuous Output Current, 1.8A Peak Current
- 100% Duty Cycle Operation
- Built-in HS/LS Ron 115m Ω /50m Ω , Vin=5V Switches
- Internal 200 μ sec 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 WCSP_5L Package
- Pb-Free RoHS Compliant

APPLICATIONS

- Camera module
- DC/DC Micro Modules
- Smart Phone and Tablets
- Wireless Earphones / Headset
- Wearable devices
- Portable game consoles

TYPICAL APPLICATION

