

Dual 18V 3A 720KHz Fast-PWM Synchronous Step-Down Converter

DESCRIPTION

The MT8252 is a dual 18V synchronous step-down regulator which provides 3A per channel continuous output current over 4.5V to 18V wide input range.

The MT8252 employs proprietary Constant On-Time (COT) control scheme providing superior transient response and maintaining constant 720kHz switching frequency under the continuous conduction mode operation. The external ramp compensation network allows stable operation with ultra-low equivalent series resistance (ESR) output ceramic capacitors. An internal compensated error amplifier in the control loop provides excellent line and load regulation.

The MT8252 integrates extensive protection functions include: UVLO, OCP, UVP and thermal shutdown. The converter is available in a small 10 Lead thermal enhanced 3mmx3mm DFN package.

FEATURES

- Input Voltage Range: 4.5V to 18V
- Output Voltage range: 0.6V to 18V
- High Efficiency: Up to 96%
- 3A continuous output current per channel
- Support 100% duty cycle Low Dropout Operation
- Stable operation with low ESR ceramic output capacitors
- Fast PWM COT control with superior transient performance and stable switching frequency.
- 720kHz Constant Switching frequency
- Internal 1.2ms Soft-start
- Integrated 93mΩ/ 73mΩ HS/LS Power Switches
- Accurate EN UVLO threshold
- Thermal Shutdown with Auto recovery.
- Hiccup mode short circuit protection
- Available in a DFN10L 3mmx3mm Package

APPLICATIONS

- Networking Systems
- WLAN/Wi-Fi access point
- Modem (cable/DSL/Gfast)
- Distributed Power Systems
- Flat Panel Television and Monitors

TYPICAL APPLICATIONSG

