

**Input 18V 2.5A 500kHz Synchronous Step-Down DC/DC Converter**

**DESCRIPTION**

The MT3510 is a high efficiency, 2.5A current mode synchronous step-down DC/DC converter with a wide input voltage range from 4.7V to 18V. The device integrates high side and low side MOSFETs to achieve high efficiency conversion. The current mode architecture supports fast transient response and internal compensation. The MT3510 provides complete fault protection including input under-voltage lockout, output short circuit protection, over current protection, and thermal shutdown. The switching frequency is internally set at 500kHz. In order to improve the light load efficiency, MT3510 has proprietary light load power saving mode (PSM) to minimize the switching loss by reducing the switching frequency. The MT3510 is available in the small 6 leads SOT23 package.

**FEATURES**

- Input Voltage Range from 4.7V to 18V
- Support 100% Duty Cycle Operation
- 2.5A Continuous, 3A Peak Load Current Capability
- Adjustable Output Voltage from 0.6V to 12V
- 500kHz Switching Frequency
- Built-in 110mΩ/65mΩ Power Switch
- High Efficiency up to 95%
- Internal 1msec Soft-Start
- Peak Current Mode Operation
- Over-temperature Protection
- Input Under Voltage Lockout (UVLO)
- Cycle-by-Cycle Current Limit Protection
- Over-Load and Short Circuit Protection
- Thermal Shutdown Protection
- Available in a small SOT23\_6L Package
- Pb-Free RoHS Compliant

**APPLICATIONS**

- Wireless and DSL Card
- Portable/Handheld Device
- STB, TV, Sound Bar, MP3 Player
- Microprocessor and DSP Core Supply

**Typical Applications**

