

**1.5MHz 5V 2A (2.5A Peak) Fast PWM Synchronous Step-Down Converter**

**DESCRIPTION**

The MT8182 is a 1.5MHz, constant on-time (COT) controlled synchronous step-down converter. It can provide 2A continuous output current with input voltage from 2.7V to 5.5V. The MT8182 output range is from 0.6V to input level, thanks to its 100% duty cycle operation. 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 MT8182 to achieve nearly constant switching frequency across load range. MT8182 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions. MT8182 is available in low profile 6 leads DFN 1.5mm x 1.5mm packages.

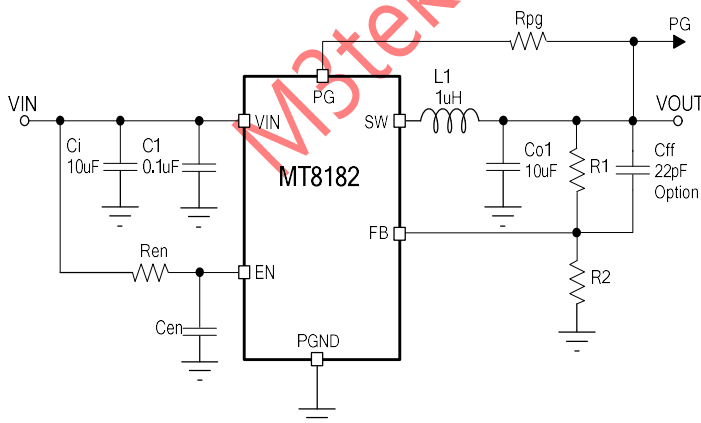
**FEATURES**

- Wide Input Range from 2.7V to 5.5V.
- Proprietary Fast Transient Constant On Time Architecture Stable with low ESR Ceramic Output Capacitors
- +/- 0.5% 0.6V Feedback Voltage
- 1.5MHz Switching Frequency
- 2A Continuous Output Current and 2.5A Peak Current
- 100% Duty Cycle Operation
- Built-in 108mΩ/78mΩ Power Switches
- Internal 0.8msec Soft-Start
- Cycle-by-cycle Current Limit Protection
- Input Under/Over Voltage Lockout
- Output Discharging Function in Shutdown
- Thermal Shutdown Protection
- Hiccup Mode for Short Circuit and Over-Load Protection
- Available in DFN1.5x1.5\_6L Package
- Pb-Free RoHS Compliant

**APPLICATIONS**

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

**TYPICAL APPLICATION**



**Efficiency VS. IOUT**

