

DESCRIPTION

The MT3812 is a high efficiency, 2A 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 MT3812 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 1MHz. In order to improve the light load efficiency, MT3812 has proprietary light load power saving mode (PSM) to minimize the switching loss by reducing the switching frequency. The MT3812 is available in the small 6 leads SOT23 package.

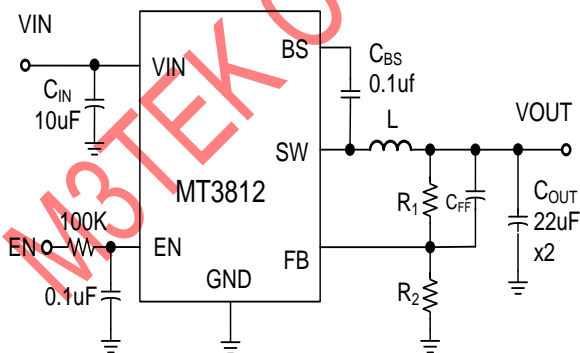
FEATURES

- Input Voltage Range from 4.7V to 18V
- Support 100% Duty Cycle Operation
- 2A Continuous
- Adjustable Output Voltage from 0.6V to 12V
- 1MHz Switching Frequency
- Built-in 110mΩ/65mΩ Power Switch
- High Efficiency up to 95%
- Internal 0.85msec 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

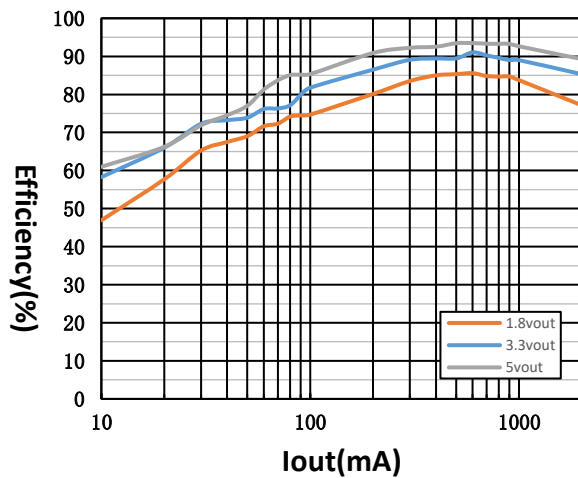
APPLICATIONS

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

TYPICAL APPLICATIONS



Vin=12V

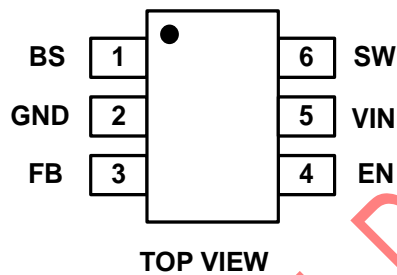


Ordering Information

Part No.	Marking	Temp. Range	Package	MOQ
MT3812NSCR	3812 YWWxx	-40°C ~+85°C	SOT23_6L	3000/Tape & Reel

Note: Y: Year, WW: Week, xx: Manufacture Control Code

Pin Configuration



Pin Description

Pin No.	Symbol	Description
1	BS	High Side Gate Drive Floating Bootstrap Supply Voltage Connect a 0.1uF ceramic capacitor between BS and SW pins.
2	GND	Ground This is the reference of the ground connection for all components in the power supply.
3	FB	Voltage Feedback
4	EN	Regulator Enable Control Input, Don't float this PIN <ul style="list-style-type: none"> • Drive EN High Level to turn on the converter • Drive EN Low Level to turn off the converter For automatic start-up, connect a 100kΩ resistor from EN to VIN.
5	VIN	Main Input Supply Voltage
6	SW	Power Switches Node