

1.5MHz, 800mA Synchronous Step-Down Converter

General Description

The TP3309 is a constant frequency, current mode, PWM step-down converter. The device integrates a main switch and a synchronous rectifier for high efficiency. The 2.0V to 6.5V input voltage range makes the TP3309 ideal for powering portable equipment that runs from a single cell Lithium-Ion (Li+) battery or 3-cell NiMH/ NiCd batteries. The output voltage can be regulated as low as 0.6V. The TP3309 supports up to 800mA load current and can also run at 100% duty cycle for low dropout applications, extending battery life in portable systems.

Switching frequency is internally set at 1.5MHz, allowing the use of small surface mount inductor and capacitors. The internal synchronous switch increases efficiency while eliminate the need for an external Schottky diode. The TP3309 is available in a low profile 5 lead SOT23-5 package.

Ordering Information

TP3309- □□□□□

- F : Pb Free
- Package Type
B5 : SOT-23-5
- Output Voltage
Default :Adjustable
12 : 1.2V
15 : 1.5V
18 : 1.8V
25 : 2.5V
28 : 2.8V
33 : 3.3V

Marking Information

For marking information, contact our sales representative directly or through a TPmicro distributor located in your area.

Features

- High Efficiency : 96%
- 1.5MHz Constant Switching Frequency
- 800mA Available Load Current, 1.2A peak current
- 130µA Typical Quiescent Current
- 2.0V to 6.5V Input Voltage Range
- Adjustable Output Voltage as Low as 0.6V
- 100% Duty Cycle Low Dropout Operation
- No Schottky Diode Required
- Short Circuit and Thermal Protection
- Over Voltage Protection
- < 1µA Shutdown Current
- <10mV ripple with 2.2uH inductor and 10uF capacity
- RoHS Compliant and 100% Lead(Pb)-Free

Applications

- Portable Media Players/ MP3 Players
- DVR
- Portable Instruments
- FPGA Core Power Supply

Pin Configurations

