



The Future of Analog IC Technology®

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MP2612

2A, 24V Input, 600kHz Switching Li-Ion Battery Charger

DESCRIPTION

The MP2612 is a monolithic switching charger for 2-, 3- series Li-Ion cells battery with a built in internal power MOSFET. It achieves up to 2A charge current with current mode control for fast loop response and easy compensation. The charge current can be programmed by sensing the current through an accurate sense resistor.

MP2612 regulates the battery voltage and charge current using two control loops to realize high accuracy CC charge and CV charge.

Fault condition protection includes cycle-by-cycle current limiting and thermal shutdown. Other safety features include battery temperature monitoring, charge status indication and programmable timer to finish the charging cycle.

The MP2612 requires a minimum number of readily available standard external components.

The MP2612 is available in 16-pin QFN package.

FEATURES

- Charges 2-, 3- Series Li-Ion Cells
- Wide Operating Input Range
- Up to 2 A Programmable Charging Current
- $\pm 0.75\%$ V_{BATT} Accuracy
- 0.25Ω Internal Power MOSFET Switch
- Up to 90% Efficiency
- Fixed 600kHz Frequency
- Preconditioning for fully depleted batteries
- Charging Operation Indicator
- Input Supply and battery fault indicator
- Thermal Shutdown
- Cycle-by-Cycle Over Current Protection
- Battery Temperature Monitor and Protection

APPLICATIONS

- Distributed Power Systems
- Chargers for 2-Cell or 3-Cell Li-Ion Batteries
- Pre-Regulator for Linear Regulators
- Smart Phones
- Net-book

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TYPICAL APPLICATION

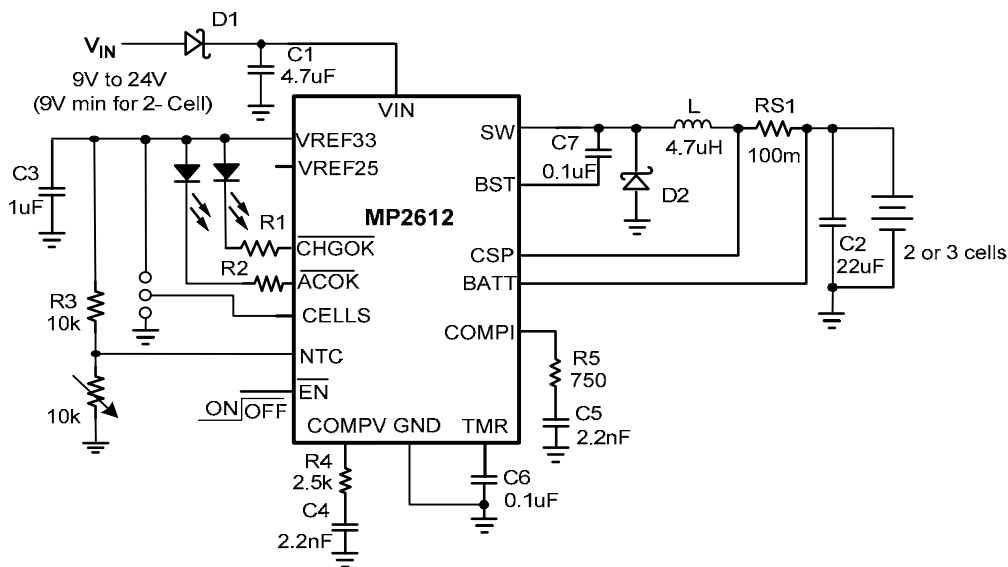


Figure 1—Standalone Switching Charger