



MP2759

36V Switching Charger with Power Path Management for 1-6 Cell Batteries

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

The MP2759 is a highly integrated switching charger designed for applications with 1-6 cell series Li-ion or Li-polymer batteries pack. The device supports several battery chemistry types with different battery regulation voltage.

The MP2759 can operate under maximum 36V DC input voltage. When input power supply is present, the MP2759 charges the battery with four phases: trickle-charge, pre-charge, constant-current charge and constant-voltage charge.

The MP2759 has input current limit and minimum input voltage limit function. When the input current reaches the input current limit or the input voltage decreases to the minimum input voltage limit, the MP2759 automatically reduces the charge current to limit the input power.

To guarantee safe operation, the MP2759 has robust protection functions including: battery over-voltage protection, battery temperature sensing and protection, thermal shutdown, and charging safety timer.

The MP2759 is available in a QFN-19 (3mmx3mm) package.

FEATURES

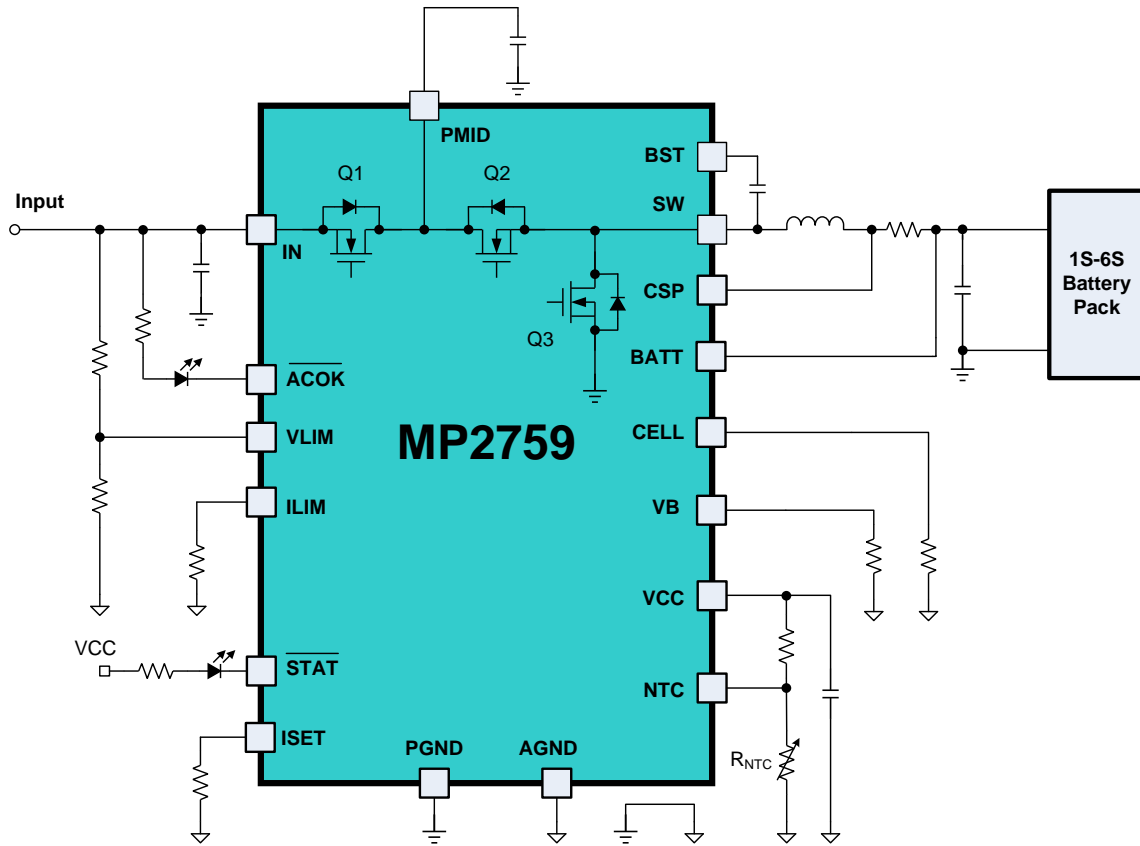
- Up to 36V Operation Input Voltage
- Up to 3A Charge Current
- 1 to 6 Cell Series with 3.6V/4.0V/4.1V/4.15V/4.2V/4.35V/4.4V Battery Regulation Voltage for Each Cell
- Input Current Limit Regulation
- Input Minimum Voltage Regulation
- Support OR Selection Power Path Management
- 0.5% Battery Regulation Voltage Accuracy
- Integrated Reverse Blocking FET
- Internal Loop Compensation
- Charge Operation Indicator
- Input Status Indicator
- Battery Over Voltage Protection
- Charging Safety Timer
- Battery Thermal Monitor and Protection with JEITA Profile
- Small QFN-19 (3mmx3mm) Package

APPLICATIONS

- Industrial Medical Equipment
- Power Tools
- Robot and Portable Vacuum Cleaners
- Wireless Speakers

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TYPICAL APPLICATION



CELL Pin Connection	Battery Cell Numbers
AGND	1 Cell Series
30kΩ-40kΩ	2 Cell Series
60kΩ-70kΩ	3 Cell Series
100kΩ-110kΩ	4 Cell Series
160kΩ-170kΩ	5 Cell Series
Pull up to VCC	6 Cell Series

VB Pin Connection	Battery Regulation Voltage
AGND	3.6V
30kΩ-40kΩ	4.0V
60kΩ-70kΩ	4.15V/4.1V (OTP)
100kΩ-110kΩ	4.2V
160kΩ-170kΩ	4.35V
Pull up to VCC	4.4V

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