SC8906 High Efficiency, Synchronous, Buck-Boost Charger Converter with Four Integrated MOSFET

1 Descriptions

SC8906 is a synchronous buck-boost charger converter. Four switches are integrated to simplify the system design. SC8906 employs current-mode control and can support very wide input and output voltage range. It can support applications from 2.7V to 22V VBUS range. It is able to effectively manage charging for 2~4 cell batteries no matter input/output voltage is higher, lower or equal to battery voltage.

SC8906 supports input current limit, DPM (dynamic power management) function, and fast charging detecting. Charging voltage and current limit can be adjusted by external resistor.

SC8906 supports internal current limit, under voltage protection, over voltage protection, output short protection and over temperature protections to ensure safety under abnormal conditions.

The IC is in a 21 pin 4x4 QFN package.

2 Features

- Buck-Boost Battery Charger for 2 to 4 Cell Batteries 4.2V/4.35V/4.4V for 2 and 3 cells, 4.2V/4.35V for 4 cells
- Charging Management: Trickle Charging, CC Charging, CV Charging, Charging Termination, Auto Recharge
- Integrated Switches, 10 mΩ for Q1/4, 20 mΩ for Q2/3
- Wide VBAT Range: 2.7 V to 22 V, 25V sustainable
- Wide VBUS Range: 2.7 V to 22 V, 25V sustainable
- DP / DM Handshaking for Fast Charging Mode
- Safety Timer
- Programmable Current Limit
- NTC Battery Temperature Protection
- Charging Status Indication
- Current Monitor
- Under Voltage Protection, Over Voltage Protection, Over Current Protection
- Short Protection and Thermal Shutdown Protection
- QFN-21 4 x 4 Package

3 Applications

- Power Bank with Fast Charge Function
- USB Power Delivery
- Battery Chargers

4 Device Information

Part Number	Package	Dimension
SC8906QFER	21 pin QFN	4.0mm x 4.0mm x 0.75mm