



SC8802 High Efficiency, Synchronous, Bi-directional Buck-Boost Charger

1 Description

SC8802 is a synchronous 4-switch buck-boost charger controller. It is able to effectively manage charging no matter input/output voltage is higher, lower or equal to battery voltage. When system needs to discharge from battery, SC8802 will deliver desired output from the battery without extra efforts.

SC8802 supports very wide input and output voltage range. It can support applications from 2.7V to 30V input range and 2V to 30V output range. SC8802 hence is suitable for applications of 1 to 6 series battery modules. The driver voltage is set to 10V to fully utilize external MOSFETs for maximum efficiency.

SC8802 supports bi-directional outputs by controlling DIR pin. It supports input current limit, output current limit, dynamic output voltage regulation, internal current limit, output short protection and over temperature protections to ensure safety under different abnormal conditions.

SC8802 adopts 32 pin QFN 4x4 package.

3 Applications

Power Bank
USB HUB
Smart USB Sockets
USB PD
Car Charger
Industrial applications

4 Device Information

| ORDER NUMBER | PACKAGE | BODY SIZE |
|--------------|------------|--------------------|
| SC8802QDER | 32 pin QFN | 4mm x 4mm x 0.75mm |

2 Features

- Buck-Boost battery charging management supports 1 to 6 battery in series, including trickle charging, CC charging, CV charging and charging termination function
- Reverse buck-boost operation output (discharging mode)
- Wide input voltage range: 2.7 V to 30 V
- Wide reverse operation output range : 2V to 30V
- Dynamic adjustable output voltage in discharging mode
- Dynamic adjustable input and output current limit
- High efficient buck-boost operation
- Integrated 10V, 2A gate driver
- Bi-directional output short protection
- Adjustable frequency from 200KHz to 600KHz
- Internal current limit
- Under voltage protection
- QFN-32 package

