

# SC8724 High Efficiency, Synchronous, 3.5A Buck-Boost Converter with Four Integrated MOSFET

## 1 Descriptions

SC8724 is a synchronous 4-switch buck-boost converter with four integrated switches. It provides excellent power efficiency and voltage regulation no matter the output voltage is higher, lower, or equal to the input voltage. SC8724 supports a very wide input and output voltage range. It can support applications from 2.7V to 22V input range and 3V to 22V output range and provides up to 3.5A output current.

SC8724 employs average current-mode control. The output voltage is adjusted by FB pin with resistors. The switching mode (PSM /FPWM) and the switching frequency can be adjusted by the external setting. The device also provides a programmable output current limit which supports flexible design for different applications.

SC8724 supports internal current limit, input under-voltage protection, output over-voltage protection, output short protection, FB short circuit protection, and over-temperature protection to ensure safety under different abnormal conditions.

The IC is in a 25 pin 4x4 QFN package.

## 3 Applications

- Power Bank with Quick Charge
- USB Type C Hub
- Wireless Charger
- Wall Adapter
- Industry Power Supplies

## 2 Features

- High-Efficiency Buck-Boost Conversion
- Few External Components
- Integrated Low  $R_{DS(ON)}$  Switches
- Wide VIN Range: 2.7 V to 22 V
- Wide VOUT Range: 3V to 22V
- Fixed 5.1V VOUT with FB tied to GND
- Up to 3.5A Output Current
- 250K/500K/750K/1MHz Adjustable Switching Frequency
- Adjustable Output Current Limit
- Forced PWM Mode/ PSM Mode Selectable
- EN control and Programmable UVLO
- Internal Soft Start
- Absolute Input and Output Over Voltage Protection
- Output Short Protection with Hiccup Mode
- Thermal Shutdown Protection
- Under Voltage Protection
- Over Voltage Protection
- QFN-25 FC 4 x 4 Package

## 4 Device Information

Part Number	Package	Dimension
SC8724QFER	25 pin QFN	4.0mm x 4.0mm x 0.75mm