

## 2-Cell High Efficiency 8-A Switched Capacitor Direct Charger

### 1 Descriptions

SC8571 is a 98.65% peak efficiency, 8-A battery charging solution using a switched cap architecture. The switched cap architecture and the integrated FETs are optimized for 50% duty cycle operation, allowing the cable current to be half the current delivered to the battery, reducing the losses over the charging cable as well as limiting the temperature rise in the application.

SC8571 adopts 80pin CSP 3.425mm X 4.151mm package

### 2 Applications

- Smartphones
- Tablet PCs

### 3 Device Information

Part Number	Package	Dimension
SC8571CFFR	CSP (80)	3.425mm x 4.151mm

### 4 Features

- Dual-phase charger pump
  - ✓ 8-A output current capability
  - ✓ Up to 98.65% efficiency
  - ✓ Up to 12-A charging current for parallel charging with dual synchronized SC8571
- 5-way switched cap switch protection
  - ✓ VBUS2OUT\_ERRORHI protection before switching
  - ✓ VBUS2OUT\_ERRORLO protection before switching
  - ✓ CFLY short protection before switching
  - ✓ VPMID2OUT\_OVP during switching
  - ✓ VPMID2OUT\_UVP during switching
- 11-way system protection
  - ✓ VAC1\_OVP
  - ✓ VAC2\_OVP
  - ✓ VBUS\_OVP
  - ✓ IBUS\_OCP
  - ✓ IBUS\_UCP
  - ✓ VOUT\_OVP
  - ✓ VBAT\_OVP
  - ✓ IBAT\_OCP
  - ✓ TSBUS\_FLT
  - ✓ TSBAT\_FLT
  - ✓ TSHUT
- 5-way system alarm
  - ✓ VBUS\_OVP\_ALM
  - ✓ VBAT\_OVP\_ALM
  - ✓ IBAT\_OCP\_ALM
  - ✓ TSBUS\_TSBAT\_ALM
  - ✓ TDIE\_ALM
- 10-channel 12-bit ADC
  - ✓ VAC1, VAC2, VBUS, IBUS, VOUT, VBAT, IBAT, TSBUS, TSBAT, TDIE