



Dual-Outputs 6-A Buck Converter with Integrated DCP Scheme

1 Descriptions

The SC8111 is a synchronous dual-output ports buck converter with a wide input voltage from 4.6V to 36V. It integrates two USB type-A port dedicated charging port controllers to detect the type of the attached device and automatically support charging protocols.

The device regulates the output voltage at a fixed 5V or customized voltage by setting the divider resistor. It also provides high accurate output current limit. The converter enters Constant Current (CC) Mode in case any of the two output channels reaches the setting current limit. The total output power can be programmed by a resistor, which makes it easy for constant power (CP) control.

The SC8111 adopts programmable line drop compensation, programmable frequency setting and operating modes selection for PWM and PFM with minimum external components, maximum functions can be achieved for user's different applications.

The SC8111 also supports full protections including under voltage protection, over voltage protection, short current protection and auto-restart, over temperature protection.

The SC8111 adopts 32 pin QFN 5x5 package

3 Applications

- Car Charger
- Multi-Ports Wall Charger
- Hub
- Industrial applications

2 Features

- Wide input operating voltage from 4.6V to 36V
- 11mΩ/27mΩ Low Rdson Internal Power MOSFETs
- Max output capacity with 5V/6A
- Almost 100% duty cycle operation
- Low quiescent current
- Programmable output power limit
- Programmable line drop compensation
- High side output current sense
- ±5% output current limit accuracy
- Supports 1.4ms output over-current debounce to meet Apple over-current requirement
- Build-in DP/DM for BC 1.2 DCP scheme:
 - BC1.2 DCP Mode
 - Divider Mode
 - 1.2V/1.2V Mode
- PFM/PWM mode selection
- Adjustable frequency 80kHz to 600kHz
- Hiccup and auto-restart
- Full protection of UVLO, OVP, OCP, OTP

4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC8111QDJR	32 pin QFN	5mm x 5mm x 0.75mm