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

1 Description

The SC8112 is a synchronous dual-output ports buck converter with a wide input voltage from 4.6V to 36V. The SC8112 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 SC8112 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 SC8112 also supports full protections including under voltage protection, over voltage protection, short current protection and auto-restart, over temperature protection.

The SC8112 adopts 32 pin QFN 5x5 package

2 Features

- Wide input operating voltage from 4.6V to 36V
- 11mΩ/27mΩ Low Rdson Internal Power MOSFETs
- Max output capacity with 5V/6A
- 100% duty cycle operation
- Low quiescent current
- High side output current sense
- ±5% output current limit accuracy
- Programmable output power limit
- Programmable line drop compensation
- 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

3 Applications

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

4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC8112QDJR	32 pin QFN	5 mm x 5 mm x 0.75 mm