

High Efficiency Buck Controller with Constant Power Limit

1 Description

The SC8002 is a synchronous buck controller with a wide input voltage from 4.6V to 36V. It can be configured as dual-outputs or single output. The SC8002 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 SC8002 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 control.

The SC8002 adopts frequency setting and operating modes selection for PWM and PFM mode. With minimum external components, maximum functions can be achieved for user's different applications.

The SC8002 also supports full protections including under voltage protection, over voltage protection, short current protection and auto-restart, over temperature protection.

The SC8002 adopts 20 pin QFN 3 x 3 package.

3 Applications

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

2 Features

- Wide input operating voltage from 4.6V to 36V
- Almost 100% duty cycle operation
- EN for enable logic input
- Low quiescent current
- Programmable peak current limit
- Programmable output power limit
- PFM and PWM mode selection
- Build-in line drop compensation
- Adjustable frequency 80kHz to 600kHz
- Hiccup and auto-restart
- Full protection of UVLO, OVP, OCP, OTP
- Available in QFN-20 3 x 3 Package

4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC8002QDKR	QFN20L	3 mm x 3 mm x 0.55 mm