



**THE DATASHEET OF  
SKY87202-11-631LF**



**PRODUCT SUMMARY**

# SKY87202: 3.5 A Constant On-Time, Step-Down DC-DC Converter

**Applications**

- Portable devices
- Access points
- Set top boxes

**Features**

- Input voltage range: 2.7 V to 6.0 V
- Two output voltage options:
  - Adjustable output voltage: 0.6 V to 3.3 V (SKY87202-11)
  - Fixed output voltage: 1.2 V (SKY87202-12)
- Up to 3.5 A continuous output current
- Switching frequency: 1.2 MHz
- 95% peak efficiency
- Typical switch on resistance: 50 mΩ PMOS, 40 mΩ NMOS
- 80% light load efficiency
- Power sequencing
- Cycle-by-cycle over-current protection
- Over-temperature protection
- Control loop stabilization with low ESR ceramic capacitors
- Soft start
- Low profile, QFN (12-pin, 2 mm × 2 mm) package (MSL1, 260 °C per JEDEC J-STD-020)

**Description**

The SKY87202 is a 1.2 MHz, 3.5 A constant on-time, synchronous step-down DC-DC converter. The device provides an output voltage from 0.6 V to 3.3 V from input voltage ranging from 2.7 V to 6.0 V, while keeping excellent line and load regulation and maximizing input efficiency.

The constant on-time control allows easy loop stabilization with minimal external components while providing fast transient response.

Power sequencing is controlled by the EN and PG pins.

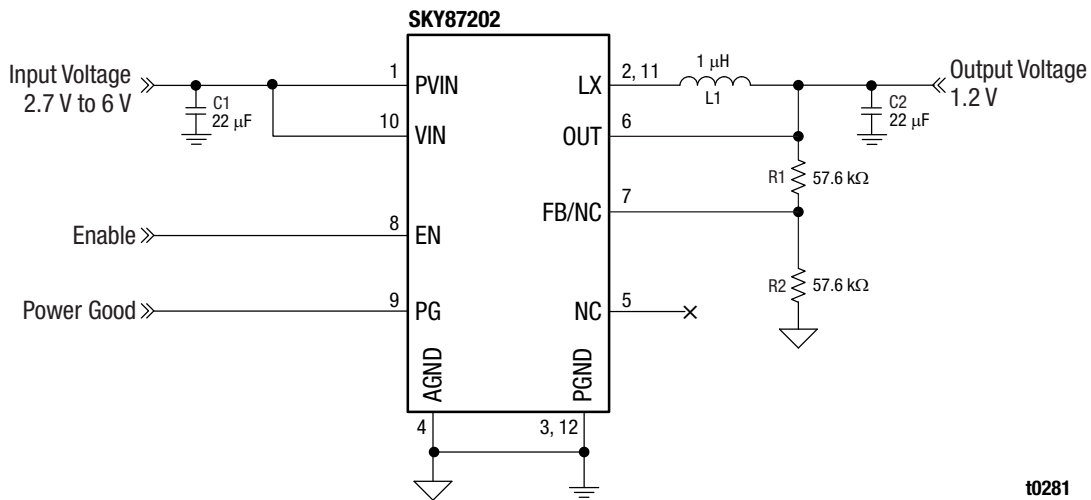
The SKY87202 has cycle-by-cycle current limits and thermal shutdown to protect against fault conditions.

The SKY87202 is available in a 12-pin, 2 mm × 2 mm Quad Flat No-Lead (QFN) package.

A typical application circuit is shown in Figure 1. The pin configuration and packages are shown in Figure 2. A functional block diagram of the SKY87202 is shown in Figure 3.

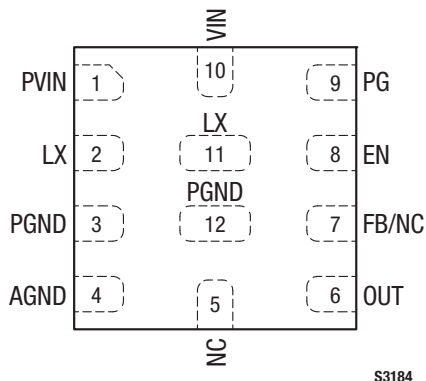


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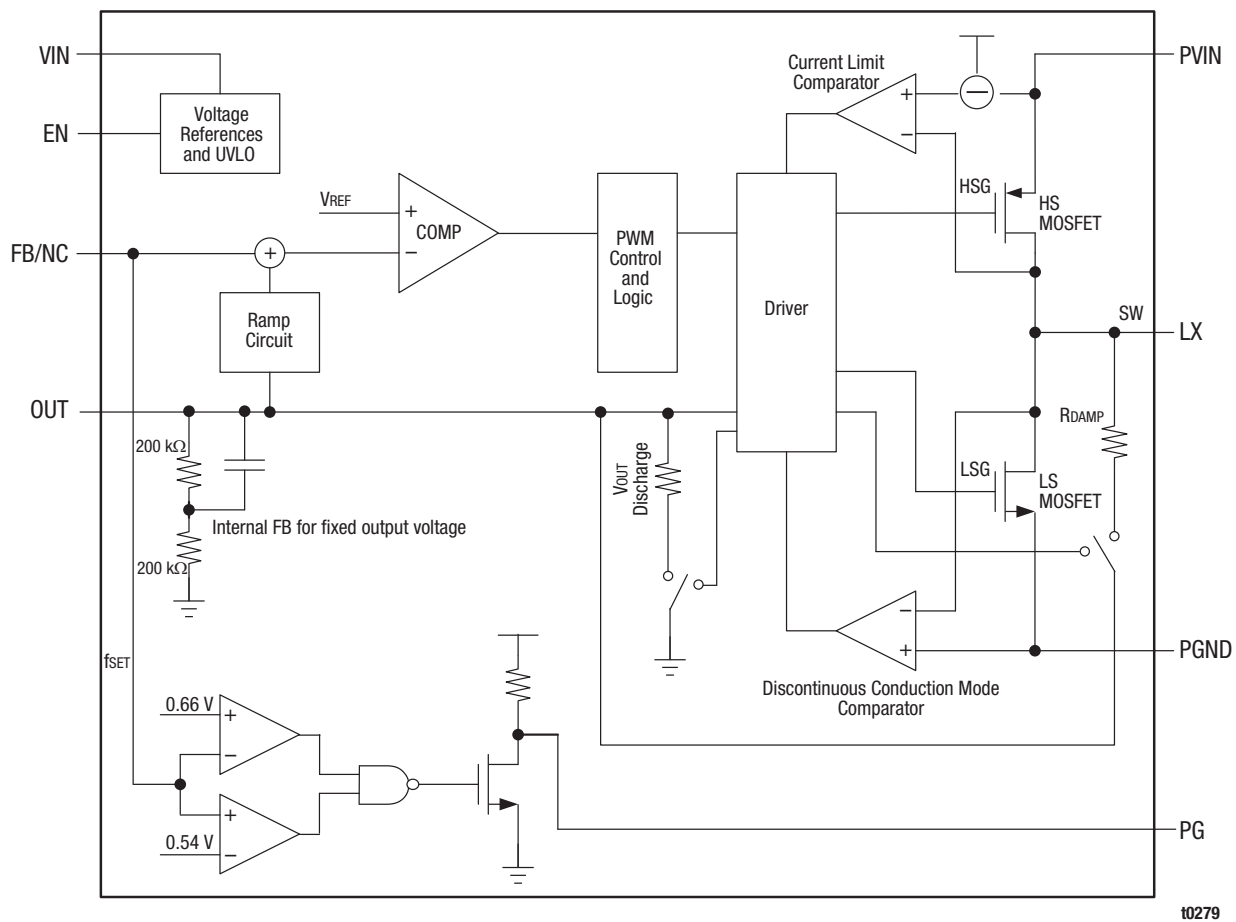
**Figure 1. Typical Application Circuit**

t0281



S3184

Figure 2. SKY87202-11/-12 Pinout – 12-Pin QFN Packages (Top View)



t0279

Figure 3. SKY87202 Functional Block Diagram

## Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKY87202 step-down DC-DC converter	SKY87202-11-631LF (variable output voltage)	SKY87202-11-631LF-EVB
	SKY87202-12-631LF (fixed 1.2 V output voltage)	SKY87202-12-631LF-EVB

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