

GENERAL DESCRIPTION

The SGM61606A is a non-synchronous Buck converter with a wide input range from 4V to 60V and 600mA output current capability. This device accommodates various industrial applications powered from unregulated sources.

The SGM61606A features 680kHz operating frequency, which is suitable for small solution size. It operates in pulse frequency modulation (PFM) mode at light load to boost light load efficiency. Moreover, the low 33 μ A (TYP) quiescent current and low shutdown current of only 1.2 μ A (TYP) make it a suitable choice for battery-powered applications.

The internal soft-start and loop compensation simplify the external components design and save users time and cost. Protection features include cycle-by-cycle current limit, thermal shutdown with auto recovery and output over-voltage protection.

The SGM61606A is available in a Green TSOT-23-6 package.

FEATURES

- Wide 4V to 60V Input Voltage Range
- Up to 600mA Output Current
- Ultra-Low Quiescent Current: 33 μ A (TYP)
- Low Shutdown Current: 1.2 μ A (TYP)
- 97% Maximum Duty Cycle
- 680kHz Fixed Switching Frequency
- Internal Compensation
- Precision Enable
- Cycle-by-Cycle Current Limit Protection
- Thermal Shutdown with Auto Recovery
- Output Over-Voltage Protection
- -40°C to +125°C Operating Temperature Range
- Available in a Green TSOT-23-6 Package

APPLICATIONS

- Industrial Distributed Power Systems
- Battery-Powered Equipment
- Portable Handheld Instruments
- Portable Media Players

SIMPLIFIED SCHEMATIC

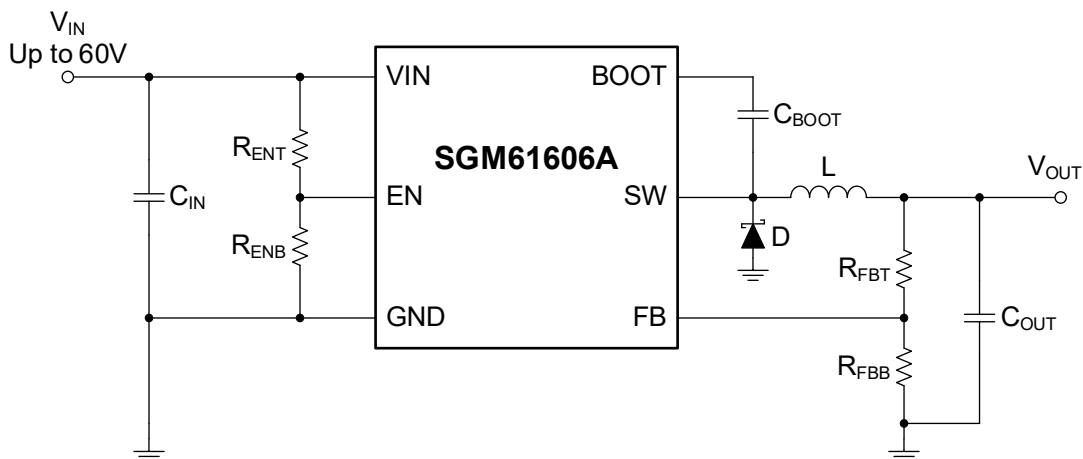


Figure 1. SGM61606A Simplified Schematic