

100V Input, Ultra-Low I_Q, Synchronous Buck Converter

1 DESCRIPTION

The MK9019 operates over a wide input voltage range from 4.5V to 100V. With integrated the main MOSFET and a synchronous MOSFET, the MK9019 delivers up to 1A output current. With the 3A current limit, MK9019 can deliver 3A peak current for some special applications.

The MK9019 adopts a constant on-time (COT) control architecture to achieve excellent transient response.

With patented standby circuits, the device can achieve ultra-low I_Q, and exit the standby mode fast.

2 APPLICATIONS

- GPS tracker
- Automotive and Industry Systems
- Motor Drives, Telecom

3 FEATURES

- Wide Input Voltage 4.5V-100V
- 3A Current limit
- Low R_{DS(ON)} for Internal MOSFETS 500mΩ/240mΩ
- <200μA Supply Current under I_{LOAD}=100μA
- MK9019 Adjustable F_{sw} up to 1MHz
- Internal 3ms Soft-start
- Smart power saving and ultra-Fast Transient Response
- Precision ±1% Feedback Reference
- Open-Drain Power Good Indicator
- OC, OT Protection with Hiccup Mode
- No Loop Compensation Components
- ESOP8 Package with Thermal PAD

4 TYPICAL APPLICATION

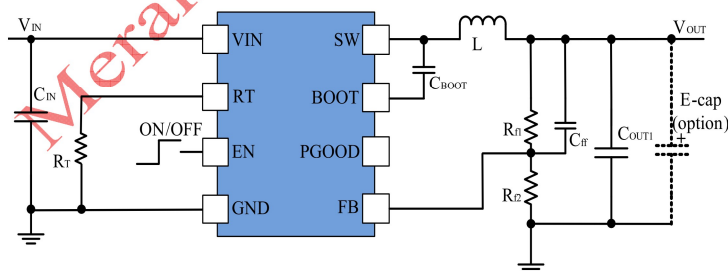


Figure 1. Typical Application Diagram

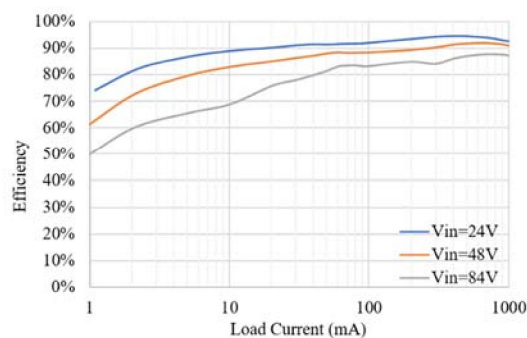


Figure 2. Efficiency at 12Vout