

# 100V Synchronous Buck DC/DC Controller

## 1 DESCRIPTION

The MK9218 operates over a wide input voltage range from 6V to 100V. With appropriate high-side and low-side MOSFET and Inductance, the MK9218 delivers up to 30A output current.

The MK9218 adopts a voltage mode control architecture to achieve excellent accurate voltage output. The switching frequency is adjustable up to 1 MHz, which also can be synchronized to an external clock source to eliminate beat frequencies in noise-sensitive applications.

MK9218 support Forced-PWM (FPWM) and Diode Emulation Mode; FPWM operation eliminates switching frequency variation to minimize EMI, while user selectable diode emulation lowers current consumption at light-load condition.

MK9218 is offered with wide duty cycle from 1% to 99% under appropriate switching frequency, so input and output voltage can easy to be choose.

The MK9218 provides a power good (PG) flag pin to indicate output voltage.

## 2 APPLICATIONS

- POL modules
- High-Power Density DC – DC
- Datacom, Telecom
- Non-isolated PoE and IP cameras

## 3 FEATURES

- Wide Input Voltage 6V-100V
- Adjustable output from 0.8V to 60V
- 40ns  $t_{on(min)}$  for low duty ratio
- 140ns  $t_{off(min)}$  for high duty ratio
- Precision  $\pm 1\%$  Feedback Reference
- Adjustable  $F_{SW}$  from 100kHz to 1MHz
- Configuration diode emulation or FPWM
- 2.5A source and 3.5A sink driver ability
- Prebias start-up
- SYNCI and SYNCO capability
- Open-Drain Power Good Indicator
- Adjustable output voltage soft start
- Input UVLO with hysteresis
- VCC and BOOT UVLO protection
- OC, OT Protection with Hiccup Mode
- QFN20L 4.5mm x 3.5mm Package with Thermal PAD

## 4 TYPICAL APPLICATION

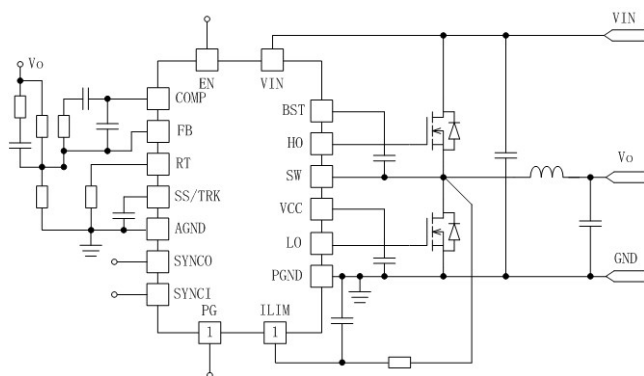


Figure 1. Typical Application Diagram

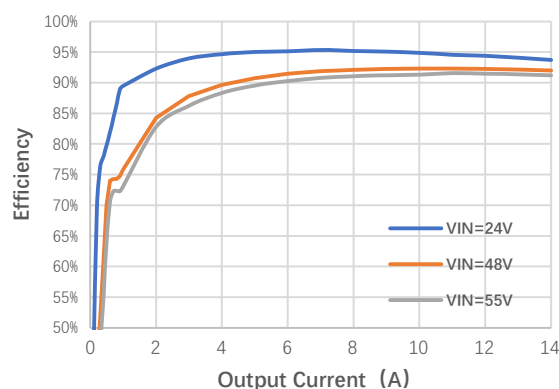


Figure 2. Efficiency at Vout=12V