MSP

Monolithic Silicon Power

MSP3630

36V, 3A, 1MHz, High-Performance, Integrated Buck Regulator in Tiny 3mm X 3mm QFN

General Description

MSP3630 is a constant-frequency, current-mode PWM buck regulator with integrated switchers. The MSP3630 is targeted for cost-sensitive and high-performance applications.

The MSP3630 operates over a supply range of 4.5V to 36V at a fixed 1MHz switching frequency and can be used to provide up to 3A of output current. The output voltage is adjustable down to 0.9V.

The MSP3630 provides the features of low standby current at 10μA, device enable, input under-voltage lockout, and output voltage monitoring. The part also provides fault protections of over-current and over-temperature.

The MIC3630 is available in a 16-pin 3mm × 3mm QFN package with a junction operating range from –40°C to +125°C.

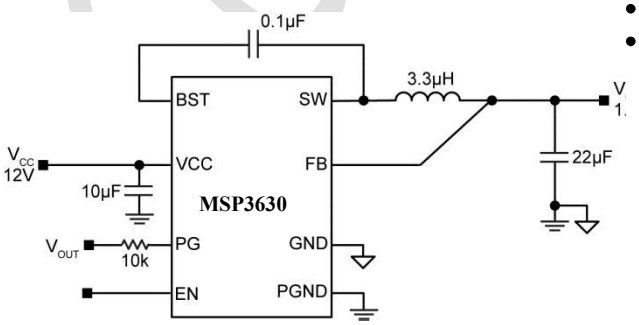
Features

Input voltage range 4.5V to 36V
3A output current
1MHz switching frequency
0.9V reference voltage with ±2% accuracy
Fixed output voltages are available at:
1.5V/1.8V/2.5V/3.3V/5V/12V/24V
Peak current-mode PWM with internal compensation
PFM mode for light load efficiency modulation
10μA typical shutdown current
1ms internal soft start
Cycle-by-cycle current limit with frequency fold-back
Output overvoltage protection
Enable input/power-good (PG) output
Thermal-shutdown protection
–40°C to +125°C junction temperature range
Available in 16-pin 3mm × 3mm QFN package

Applications

- High Current DC/DC Power Supply
- Point-of-Load Regulator
- Appliance/ Power Tools
- High Input Voltage Switching Regulators
- Faster Transient Microprocessors
- Notebook Computers

Typical Applications



* The purpose of this Advance Information is to confirm features and specifications. It does not imply a product under development or any commitment to do so. All features, part numbers and specifications are subject to change.