

1.5MHz, 1A Synchronous Step-Down Converter with Soft Start

DESCRIPTION

The EUP3010/B is a constant frequency, current mode, PWM step-down converter. The device integrates a main switch and a synchronous rectifier for high efficiency. The 2.5V to 5.5V input voltage range makes the EUP3010/B ideal for powering portable equipment that runs from a single cell Lithium-Ion (Li+) battery or 3-cell NiMH/ NiCd batteries. The output voltage can be regulated as low as 0.6V. The EUP3010/B supports up to 1A load current and can also run at 100% duty cycle for low dropout applications, extending battery life in portable systems.

Switching frequency is internally set at 1.5MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increases efficiency while eliminates the need for an external Schottky diode. The EUP3010/B is available in an adjustable output or fixed output 1.2V, 1.8V and 3.3V.

FEATURES

- High Efficiency up to 96%
- 1.5MHz Constant Switching Frequency
- 1A Available Load Current
- 270µA Typical Quiescent Current
- 2.5V to 5.5V Input Voltage Range
- Adjustable Output Voltage as Low as 0.6V
- 100% Duty Cycle Low Dropout Operation
- No Schottky Diode Required
- Short Circuit and Thermal Protection
- Excellent Line and Load Transient Response
- < 1µA Shutdown Current
- Soft Start Function
- Over Voltage Protection
- Available in 1.2V, 1.8V, 3.3V Fixed Output or Adjustable Output Versions
- Available in 2mm × 2mm TDFN-6, SOT23-5 and TSOT23-5 Packages
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

APPLICATIONS

- Cellular and Smart Phones
- Portable Media Players/ MP3 Players
- Digital Still and Video Cameras
- Portable Instruments
- WLAN PC Cards

Typical Application Circuit

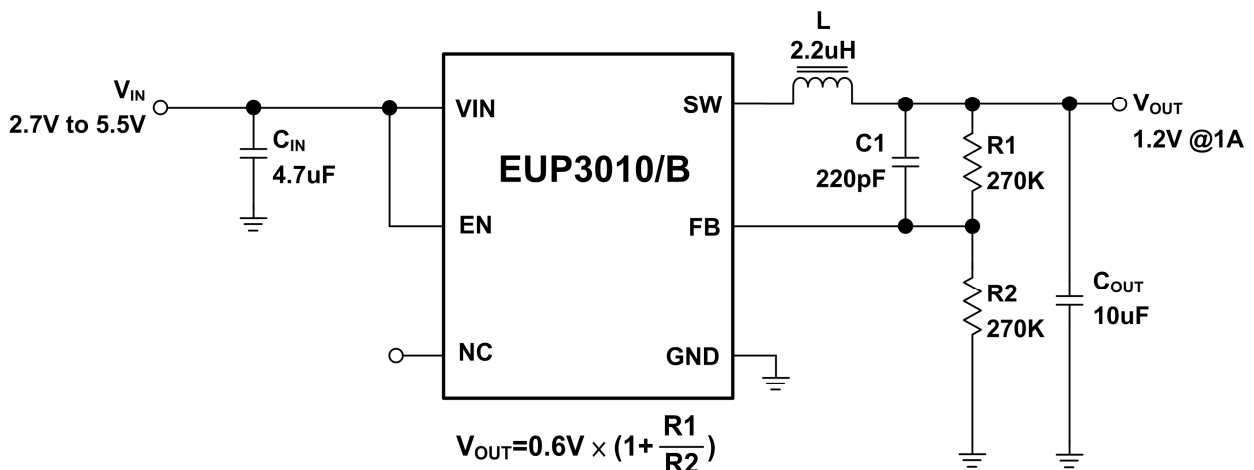


Figure 1. Adjustable Output Regulators