

5.5V 3A 1.2MHz Synchronous Step-Down Regulator

Features

- 2.7V to 5.5V Input Voltage Range
- 3A Continuous Output Current
- 1.2MHz Switching Frequency
- Built-in Short Protection
- Built-in Over Current Limit
- Built-in Over Voltage Protection
- PFM Mode for High Efficiency in Light Load
- High Efficiency: Up to 96%
- Internal Soft-Start
- Output Adjustable from 0.6V
- Over Temperature Protected
- Low Quiescent Current: 40 μ A
- Available in SOT23-5 package
- -40°C to +85°C Temperature Range

Applications

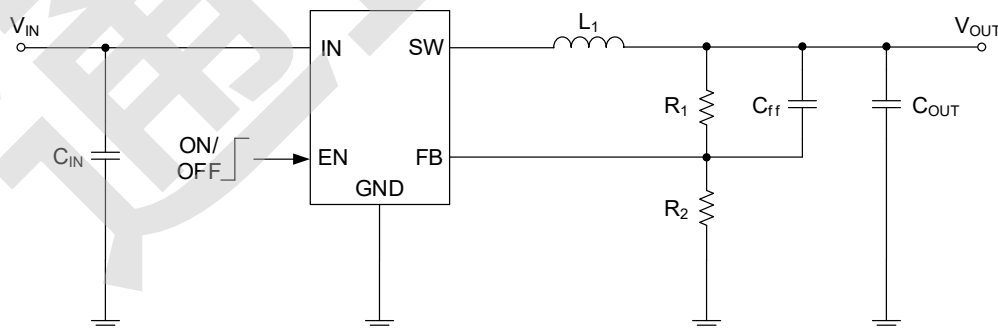
- Cellular and Smart Phones
- Wireless and DSL Modems
- PDAs
- Portable Instruments
- Digital Still and Video Cameras
- PC Cards

General Description

The RY3430 is a high-efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. The device is available in an adjustable version. The 2.7V to 5.5V input voltage range makes the RY3430 ideally suited for single Li-Ion battery powered applications. 100% duty cycle provides low dropout operation, extending battery life in portable systems. PWM/PFM mode operation provides very low output ripple voltage for noise sensitive applications. Switching frequency is internally set at 1.2MHz, allowing the use of small surface mount inductors and capacitors. Low output voltages are easily supported with the 0.6V feedback reference voltage.

The RY3430 requires a minimal number of readily available, external components and is available in a space saving SOT23-5 package.

Typical Application Circuit



Basic Application Circuit