5.5V 5A 1MHz ECOT Sync Step-Down Regulator

Features

- High Efficiency: Up to 96%
- 2.5V to 5.5V Input Voltage Range
- 1MHz Constant Frequency Operation
- Up to 5.0A Current Output
- No Schottky Diode Required
- Over temperature Protected
- Low Quiescent Current: 40μA
- Short Circuit Protection
- Inrush Current Limit and Soft Start
- DFN3*3-10 package

Applications

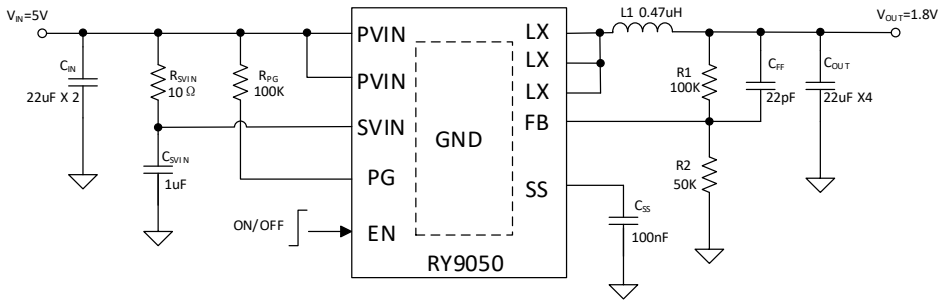
- Cellular and Smart Phones
- Wireless and DSL Modems
- PDAs
- Portable Instruments
- SSD
- PC Cards

General Description

The RY9050 is a high-efficiency ECOT Mode synchronous buck regulator using a constant frequency. The device is available in an adjustable version. Supply current with no load is 40uA and drops to <1uA in shutdown. The 2.5V to 5.5V input voltage range makes the RY9050 ideally suited for single Li-Ion battery powered applications. High 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 1MHz, allowing the use of small surface mount inductors and capacitors. Low output voltages are easily supported with the 0.6V feedback reference voltage.

The RY9050 is offered in a low profile 10-pin, thin DFN3*3-10 package, and is available in an adjustable version.

Typical Application Circuit



Basic Application Circuit