

## 1.5MHz, 1.2A Synchronous Step-Down Converter

### FEATURES

- High Efficiency: Up to 96%
- 1.5MHz Constance Frequency Operation
- 1.2A Output Current
- No Schottky Diode Required
- 2.5V to 6V Input Voltage Range
- Output Voltage as Low as 0.6V
- 100% Duty Cycle in Dropout
- Low Quiescent Current: 40 $\mu$ A
- Slope Compensated Current Mode Control for Excellent Line and Load Transient Response
- Short Circuit Protection
- Thermal Fault Protection
- Inrush Current Limit and Soft Start
- Input over voltage protection(OVP)
- <1 $\mu$ A Shutdown Current
- SOT23-5 Package

### GENERAL DESCRIPTION

The STI3408B is a constant frequency, current mode PWM step-down converter. The device integrates a main switch and a synchronous rectifier for high efficiency without an external Schottky diode. It is ideal for powering portable equipment that runs from a single cell Lithium-Ion (Li+) battery. The output voltage can be regulated as low as 0.6V. The STI3408B can also run at 100% duty cycle for low dropout operation, extending battery life in portable system. This device offers two operation modes, PWM control and PFM Mode switching control, which allows a high efficiency over the wider range of the load.

### APPLICATIONS

- Cellular and Smart Phones
- Wireless and DSL Modems
- PDA/MID/PAD
- Digital Still and Video Cameras

### TYPICAL APPLICATION

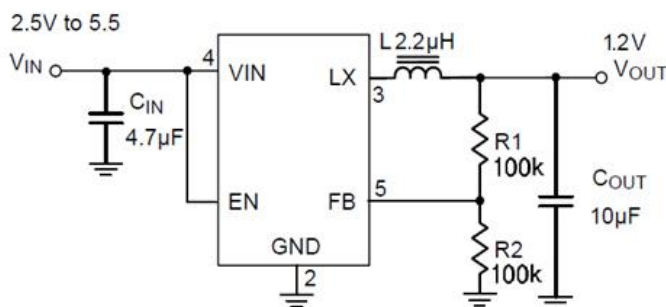


Figure 1. Basic Application Circuit  
Current(A)

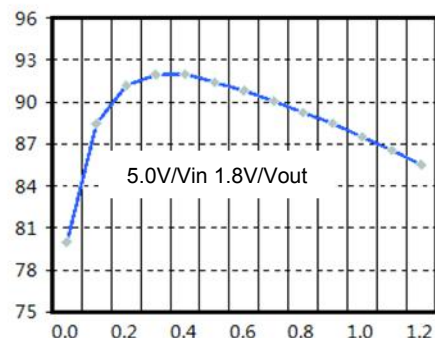


Figure 2. Efficiency(%) vs. Load