

## Description

The IT7831 is a high efficiency step-down DC/DC converter using a constant frequency, current mode architecture. The device integrates a main switch and a synchronous rectifier for high efficiency without an external schottky diode. The supply current during operation is only 190 $\mu$ A and drops to  $\leq 1\mu$ A after shutdown. The IT7831 can supply 1A of load current from 2.5V to 6.0V input voltage. The output voltage can be regulated as low as 0.6V. The switching frequency is internally set at 1.2MHz, allowing the use of small surface mount inductors and capacitor. The IT7831 is available in a low profile TSOT23\_5L and SOT23\_5L package.

## Features

- High Efficiency up to 95%
- 2.5V to 6.0V Input Voltage Range
- 1A Output Current
- 1.2MHz Oscillator Frequency Operation
- Allowable 0.6V Low Output Voltage
- Current Mode Operation
- Internal Soft-start
- Over-temperature Protection
- 0.1 $\mu$ A Shutdown Current
- SOT235 and TSOT235 Small Package
- Adjustable from 0.6V to  $V_{in}$
- RoHS Compliant (100% Green Available)
- Power Saving Mode

## Applications

- PDA and Smart Phone
- MP3 Player
- Microprocessor and DSP Core Supply
- Wireless and DSL Card
- Portable Device

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## Typical Applications

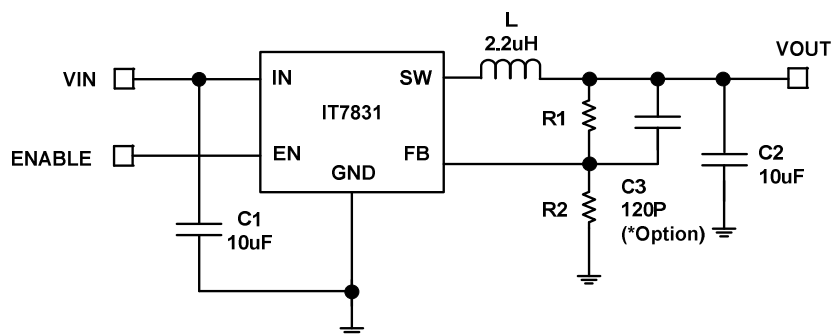


Figure 1. Typical Application Circuit