

## Description

The IT7801 is a high efficiency synchronous step-down DC-DC converter, optimized for battery powered portable applications. It can supply 1A of load current at input voltage ranging from 2.5V to 6.0V and enter the power saving mode operation at light load current to maintain high efficiency over the entire load current range. The IT7801 operates at a fixed switching frequency of 1.5MHz, allowing the use of small surface mount inductors and capacitor. The devices are ideal for portable applications powered by a single Li-Ion battery cell or by 3-cell NiMH / NiCd batteries. With an output voltage range from 6.0V down to 0.6V, it also can support low voltage DSPs and processors in PDAs, pocket PCs, as well as notebooks and sub notebook computers.

## Features

- High Efficiency up to 95%
- 2.5V to 6.0V Input Voltage Range
- 1A Output Current
- 1.5MHz Constant Frequency Operation
- Current Mode Operation
- Internal Soft-start
- Over-temperature/short Protection
- 100% Duty Cycle for Lowest Dropout
- 0.1 $\mu$ A Shutdown Current
- RoHS Compliant (100% Green Available)

## Applications

- PDA, PMP, Pocket PC, and Smartphone
- PDA and Smartphone
- USB Powered Modems
- Microprocessor and DSP Core Supply
- Wireless and DSL Card
- Portable Device

## Typical Applications

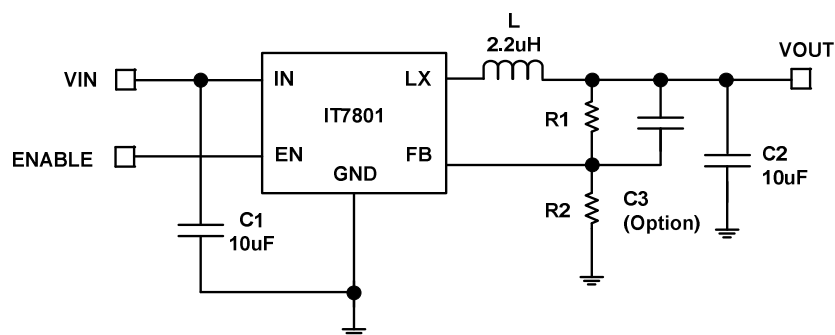


Figure 1. Typical Application Circuit