

Description

The YB1506 is a step-up(Boost) DC-DC converter; operate as current source to drive up to 5 white LEDs in series. Series connecting of the LEDs provides identical LED currents resulting in uniform brightness and eliminating the need for ballast resistors. The light intensity of these LEDs is proportional to the current passing through them. The low off-time permits the use of tiny, low profile inductors and capacitors to minimize footprint and cost in space consideration applications for cellular phone backlighting or other hand held equipment.

The YB1506 can drive up to 5 white LEDs from a single Li-Ion battery DC 2.2V to 6.5V; can be turn on by putting more than 1.2 volt at pin 4 (SHDN). To control LED brightness, the LED current can be pulsed by applying a PWM (pulse width modulated) signal with a frequency range of 100Hz to 50KHz to the SHDN pin. YB1506 has integrated Over Voltage Protection that prevents damage to the device in case of a high impedance output due to faulty LED.

Features

- Internal switch
- Adjustable output voltage up to 22V
- 2.2V to 6.5V input range
- 0.1uA shutdown current
- Small 5-Lead SOT-23 package
- High efficiency
- Drives 5 white LEDs
- Over voltage protection

Applications

- LCD Display Module
- White LED Backlighting
- PDAs
- Digital Cameras
- Portable Application
- Cellular Phone
- Electronic books

Typical Application Circuit (Li-Ion battery 2.5 volt to 6.5 volt is recommended.)

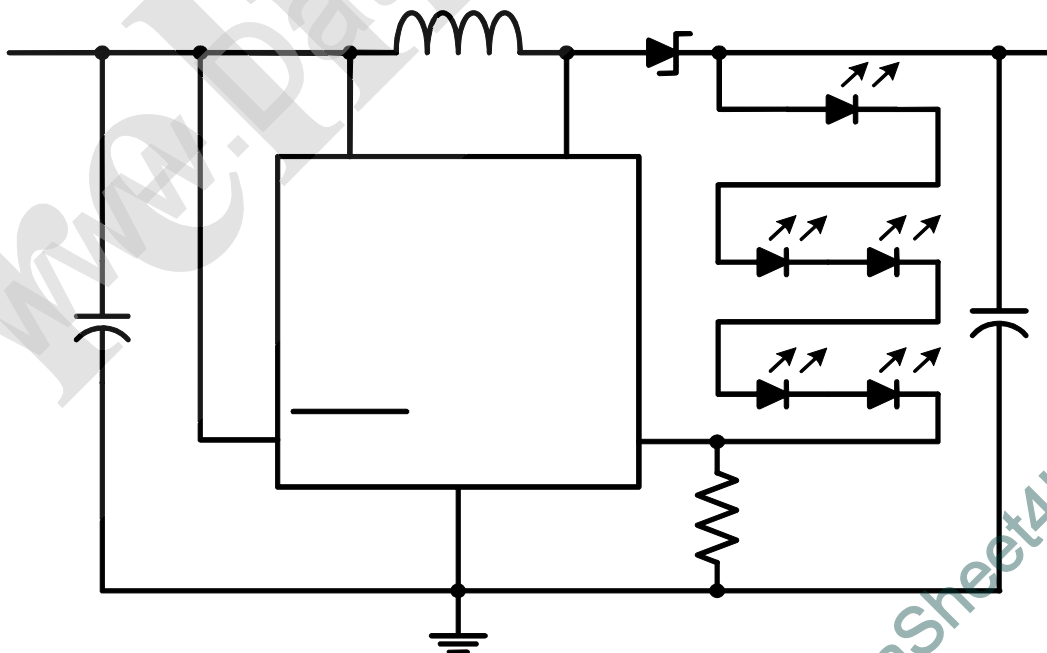


Figure 1 : Typical Application Circuit