

Step Up

White LED Converter

SP6699

Ideal for Space Constrained Backlighting Applications

The SP6699 is an inductor-based DC/DC converter designed to drive up to five white LEDs in series for LCD modules and keypad backlighting functions. Only one feedback resistor is needed to control the LED current and obtain the desired brightness. A 1.0MHz constant frequency PWM control scheme is used, enabling the usage of small external components. A typical application needs a 1mm tall inductor and a 0.22 μ F output capacitor. Additionally, the boost circuit Schottky diode is integrated, further reducing the overall foot print. A logic controlled enable pin allows this device to be placed in a low current consumption mode of a few microamps. Furthermore, the SP6699 is equipped with an over voltage output protection circuit which clamps the output voltage to 27 volts when any LED fails or in other abnormal conditions.



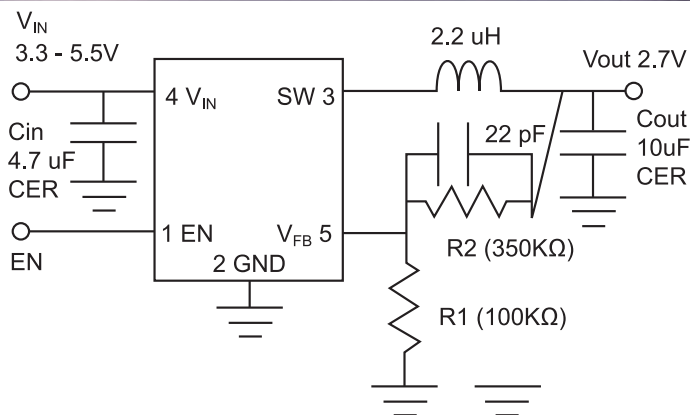
Major Features

- High Output Voltage: Up to 27V
- Drives 2 to 5 LEDs @ 20mA
- High Efficiency up to 84%
- Integrated Schottky Diode
- Fast 1.0MHz Switching Frequency
- 200mV Feedback Voltage
- PWM Dimming Capability up to 1KHz
- Over Output Voltage Protection
- Internal Soft Start Circuit
- Small SOT-23-6 Package

Ordering Information

| Product No. | Package | Operating Temp. Range |
|---------------|---------|-----------------------|
| SP6699EK-L/TR | SOT23-6 | -40°C to +85°C |

Typical Application Circuit



Applications

- Cellular Phones
- Wireless Networking
- Digital Cameras
- Portable Media Players
- Bluetooth Devices
- Portable Instruments

