

HIGH VOLTAGE DC/DC BOOST CONVERTER WITH 0.5-A/1.2-A INTEGRATED SWITCH

FEATURES

- 2.5-V to 6-V Input Voltage Range
- Up to 27-V Output Voltage
- 0.5-A/1.2-A Integrated Switch
- 1.2-MHz/600-KHz Selectable Fixed Switching Frequency
- Built-in Power Diode
- Input to Output Isolation
- Short-Circuit Protection
- Programmable Soft Start
- Overvoltage Protection

- Up to 85% Efficiency
- 10-Pin 3×3 mm QFN Package

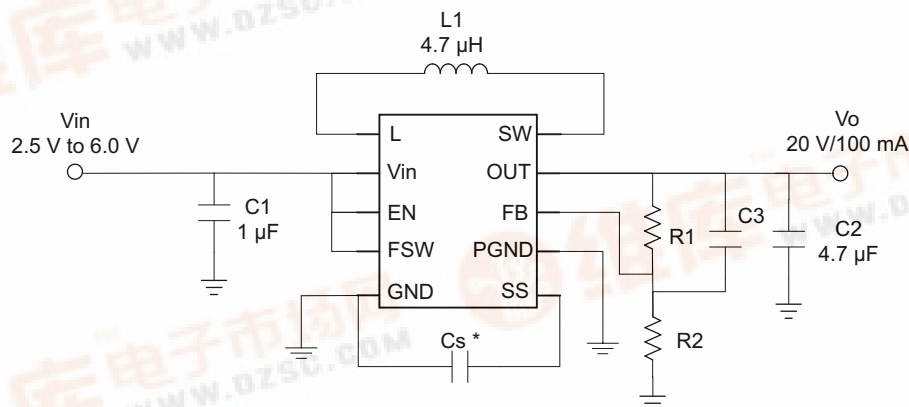
APPLICATIONS

- LCD Bias Supply
- OLED Power Supply
- White LED Backlight
- White LED Flash Light
- xDSL Applications
- 3.3-V/5-V to 12-V Conversion

DESCRIPTION

The TPS61080/1 is a 1.2-MHz/600-KHz fixed frequency boost converter designed for portable devices. The IC integrates a power PWM switch, input/output isolation switch, and power diode. The result is a highly integrated solution with the least number of external components. The input can support a single Li-ion battery and regulated 5 V, such as USB output. The output can be boosted up to 27 V; suitable for driving up to 7 white LEDs, as well as provide supply voltage to LCD bias, OLED and 12-V line. TPS61080/1 provides comprehensive protection for highly reliably operation. The IC can survive and protect external components from a short on any single pin, except for the Vin pin. The integrated isolation MOSFET turns off when the inductor, power MOSFET, or output is shorted to ground. It also isolates the output from the input during shutdown to prevent any leakage current. Other provision for protection includes 0.5-A/1.2-A peak-to-peak overcurrent protection, programmable soft start (SS), overvoltage protection (OVP), thermal shutdown and undervoltage lockout (UVLO).

TYPICAL APPLICATION



*Cs is an optional soft-start capacitor

PRODUCT PREVIEW