

LM2759 PRODUCT BRIEF

1A Switched Capacitor Flash LED Driver with I²C Compatible Interface

General Description

LM2759 is an integrated low-noise, high-current switched capacitor DC/DC converter with a regulated current source. The device requires only four small ceramic capacitors making the total solution area less than 22 mm² and the height less than 1 mm. The LM2759 is capable of driving loads up to 1A from a single-cell Li-Ion battery. Maximum efficiency is achieved over the input voltage range by actively selecting the proper gain based on the LED forward voltage and current requirements.

The LED current can be programmed up to 1A via an I²C-compatible interface, along with eight selectable Flash Time-Out durations. One high-current Flash LED can be driven either in a high-power Flash mode or a low-power Torch mode. The Strobe pin allows the flash to be toggled via a Flash enable signal from a camera module. The TX input pin limits the Flash LED current to the Torch current level during a RF PA pulse, to reduce high loads on the battery. Internal soft-start circuitry limits the amount of inrush current during start-up.

LM2759 is offered in a small 12-pin thermally enhanced LLP package.

Notice: This document is not a full datasheet. For more information regarding this product or to order samples, please contact your National Semiconductor sales office or visit <http://www.national.com/support/dir.html>.

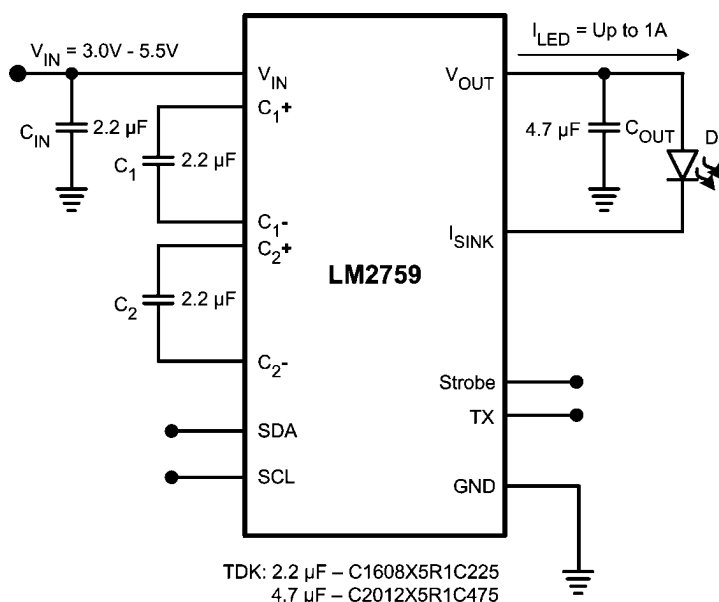
Features

- Up to 1A Output Current
- Solution Area < 22 mm²
- No Inductor Required
- 90% Peak Efficiency
- Adaptive 1x, 1.5x and 2x Gains for Maximum Efficiency
- Load Disconnect in Shutdown
- Accurate Input Current Control During Gain Transitions
- Flash Time-Out
- TX Input Pin Ensures Synchronization with RF Power Amplifier Pulse
- Torch, Flash, and Indicator Modes
- External Flash Enable via Strobe Input Pin
- Strobe Input Disable via I²C
- Programmable Flash Pulse Duration, and Torch and Flash Currents via I²C-Compatible Interface
- 1MHz Constant Frequency Operation
- Low Profile 12-Pin LLP (3mm x 3mm x 0.8mm)

Applications

- Camera Flash in Cellular Phones

Typical Application Circuit



30069301

Notes

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