Two-Channel Flash LED Driver with Independent Current Control

Features

- High efficiency synchronous boost converter with 2MHz/4MHz switching frequency option
- I²C interface programming and hardware STROBE/TORCH control
- Two-channel independent current sources
  - LED1/LED2: Up to 1.5A
  - Flash/Torch/IR modes
  - Independent LED on/off and current settings
  - Programmable ramp shape and time control
  - Three input low voltage protection modes
  - Torch currents up to 187.5mA (KTD2688) or 375mA (KTD2688A)
  - Flash time-out protection up to 1.60s(KTD2688A)
  - LED cathode ground connection for improved thermal dissipation
- LED open/short protection
- I²C fault read back

Applications

- Smartphones and Tablets Camera Flash
- Digital Cameras

Brief Description

KTD2688 is the ideal power solution for high-power flash LEDs. It includes a highly integrated synchronous boost converter and two current sources, providing a very small total solution in portable application. It has both I²C interface and hardware STROBE/TORCH pins for maximum control flexibility. The two integrated current sources are independently controlled, their on/off conditions and current settings in Flash/Torch/IR modes can be programmed independently by the I²C interface. It also has three selectable input low voltage protection modes to prevent a system reset under low battery condition.

Various protection features are integrated into KTD2688, including cycle-by-cycle input current limit protection, output over-voltage protection, LED fault (open or short) protection, flash timeout protection and thermal shutdown protection.

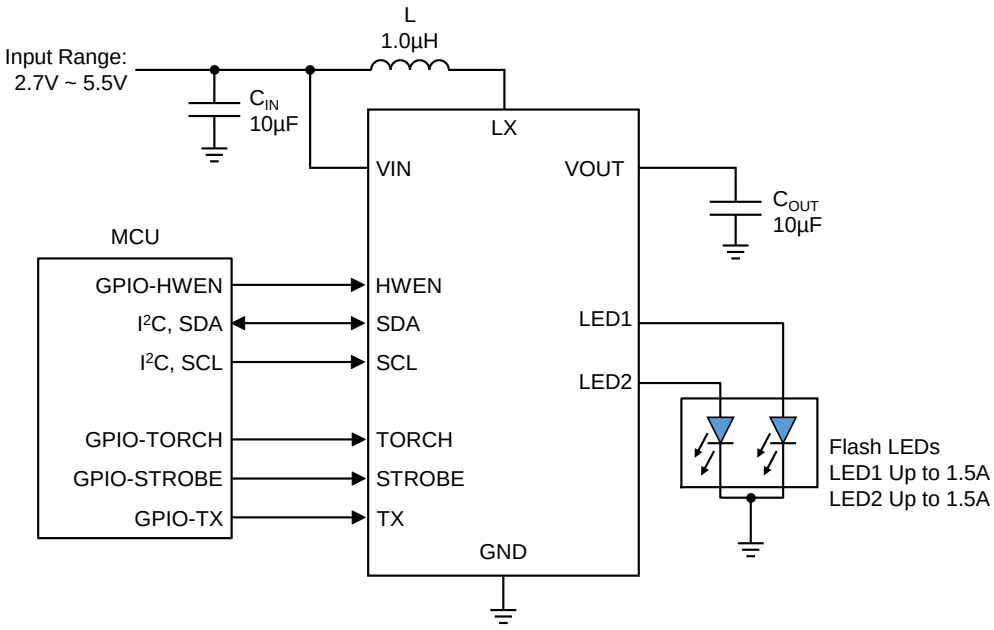
KTD2688 is available in a RoHS and Green 12-ball 1.30mm x 1.57mm WLCSP package with 0.4mm pitch.

Ordering Information

Part Number	Marking[1]	Operating Temperature	Package	Maximum Torch Current per Channel	Flash Time-Out
KTD2688EUR-TR	JXYYZZ	-40°C to +85°C	WLCSP-12	187.5mA	10ms to 400ms
KTD2688AEUR-TR	JYYYZZ	-40°C to +85°C	WLCSP-12	375mA	40ms to 1600ms

1. “XXYYZZ” is the top mark, date code and assembly code respectively.

Typical Application



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KTD2688AEUR-TR