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STEVAL-ILL063V1

3 A LED driver based on the LED5000 in floating boost topology

Data brief



Features

- 5.5 V to 48 V operating input voltage range
- 850 kHz fixed switching frequency
- 200 mV typ. current sense voltage drop
- Floating boost topology
- PWM dimming
- ±3% output current accuracy over temperature
- 200 mOhm typical R_{DSON}
- Peak current mode architecture
- Short-circuit protection
- Compliant with ceramic output capacitors
- Inhibit for zero current consumption
- Thermal shutdown
- RoHS compliant

Description

The STEVAL-ILL063V1 is a product evaluation board based on the LED5000, an 850 kHz fixed switching frequency monolithic step-down DC-DC converter designed to operate as a precise constant current source with an adjustable current capability up to 3 A DC.

The embedded PWM dimming circuitry features LED brightness control. The regulated output current level is set by connecting a sensing resistor to the feedback pin. The 200 mV typical R_{SENSE} voltage drop enhances performance in terms of efficiency.

The size of the overall application is minimized thanks to the high switching frequency and its compatibility with ceramic output capacitors. The device is fully protected against overheating, overcurrent and output short-circuit.

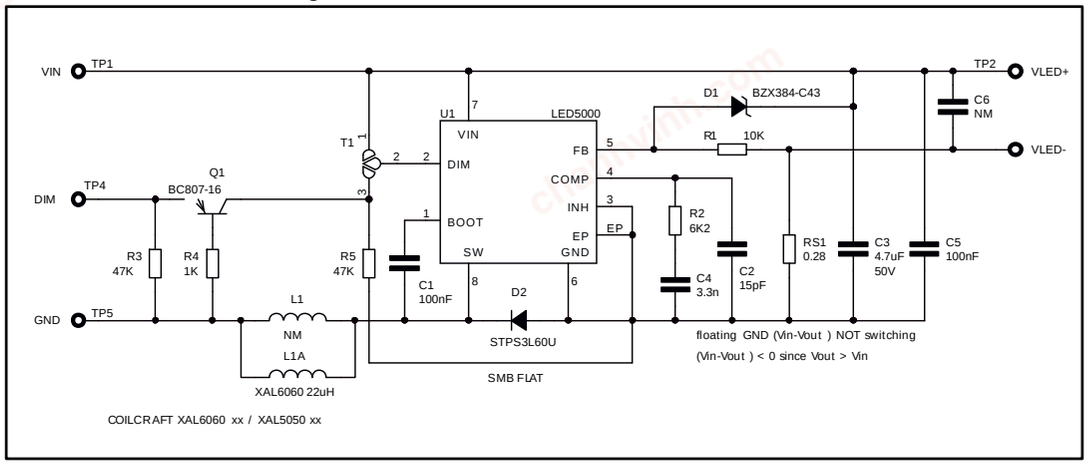
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1 Schematic diagram

Figure 1: STEVAL-ILL063V1 board schematic



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2 Revision history

Table 1: Document revision history

Date	Revision	Changes
28-Jul-2014	1	Initial release.
17-Dec-2014	2	Minor text edits. No technical changes.

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