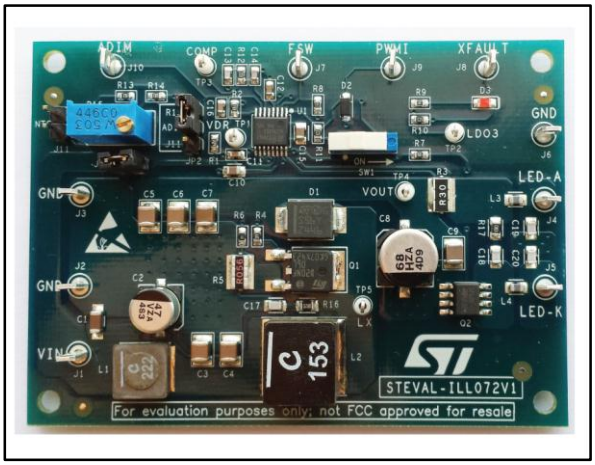
STEVAL-ILL072V1

Single channel, 1 A automotive LED driver with boost controller for interior/exterior lights based on the ALED6001

Data brief



Features

- Wide DC input voltage (8 V - 24 V)
- Single channel, 1000 mA constant-current output with PWM brightness control
- 500 kHz switching frequency
- Up to 10 high-brightness white LEDs (40 V OVP threshold)
- High efficiency (92% @ V_{in} = 12 V, V_{out} = 32 V, I_{out} = 1 A)
- All automotive grade components
- RoHS compliant

Description

The purpose of this evaluation board is to provide an application example of a single-channel, high-current LED driver using the ALED6001 chip operating with a boost topology. The brightness of the LED string connected to its output can be controlled through a PWM signal (0% - 100% dimming) or a control voltage (10:1 analog dimming). Open LED, feedback disconnection & LED overcurrent fault conditions are detected and managed. The evaluation board has been designed to provide an example of a compact solution for all automotive applications involving several LEDs arranged is a single string, and day-time running lights (DTRL) in particular.

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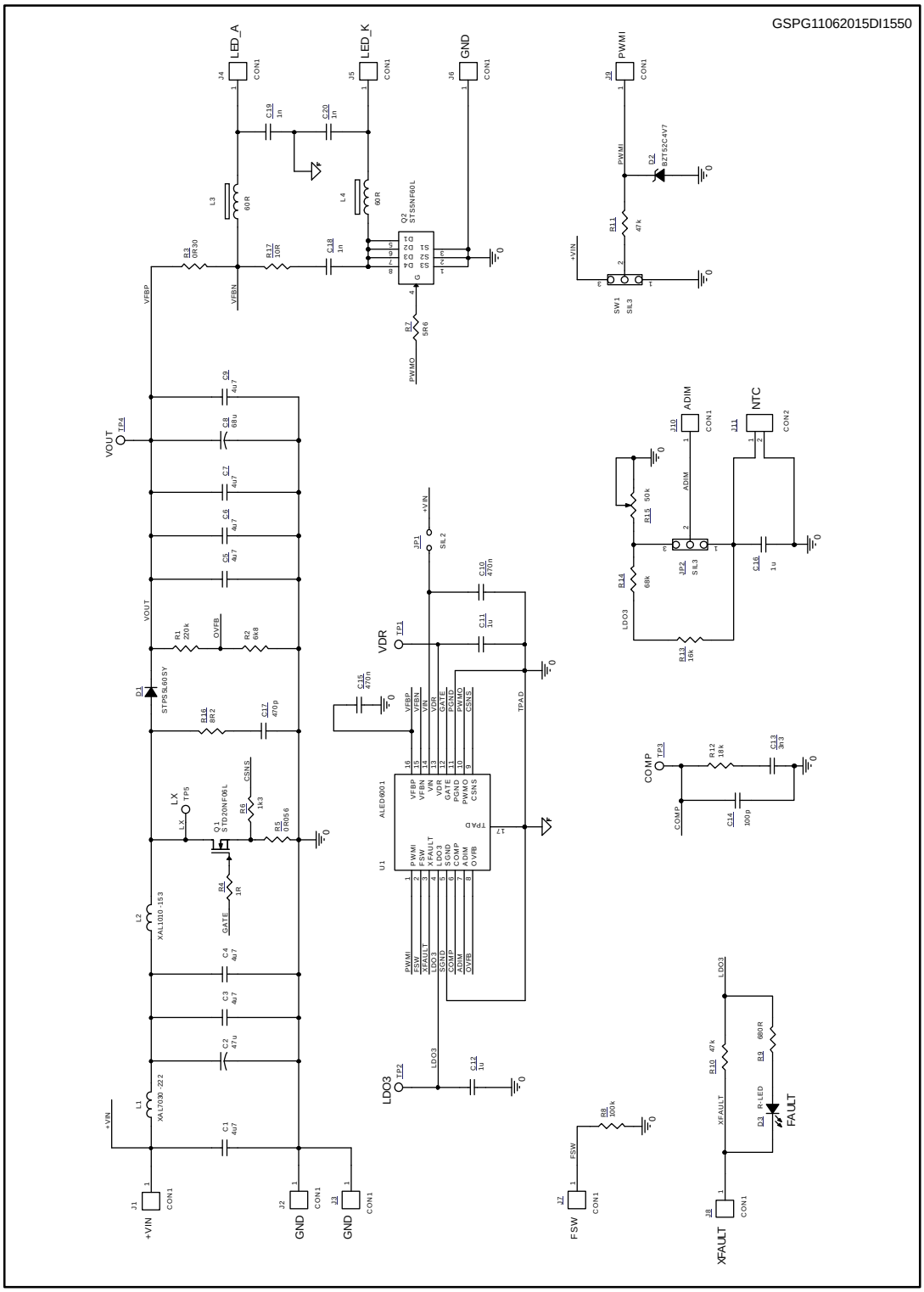
1 Schematic diagram

Figure 1: STEVAL-ILL072V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
12-Jun-2015	1	Initial release.
12-Oct-2015	2	Updated title on the cover page.

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