

Driver for up to 6 white LEDs for display backlights based on the STLA02

Data brief

Features

- Boost DC-DC converter
- Drives up to 6 LEDs with a total current up to 20 mA
- Output power capability up to 500 mW
- Input voltage range 2.5 V to 18 V
- Output current control
- 2.3 MHz switching frequency
- PWM input for the output current dimming with 300:1 dimming range
- 350 mA integrated switch
- Overvoltage protection
- Chip overtemperature detection and protection
- Soft-start implemented
- RoHS compliant



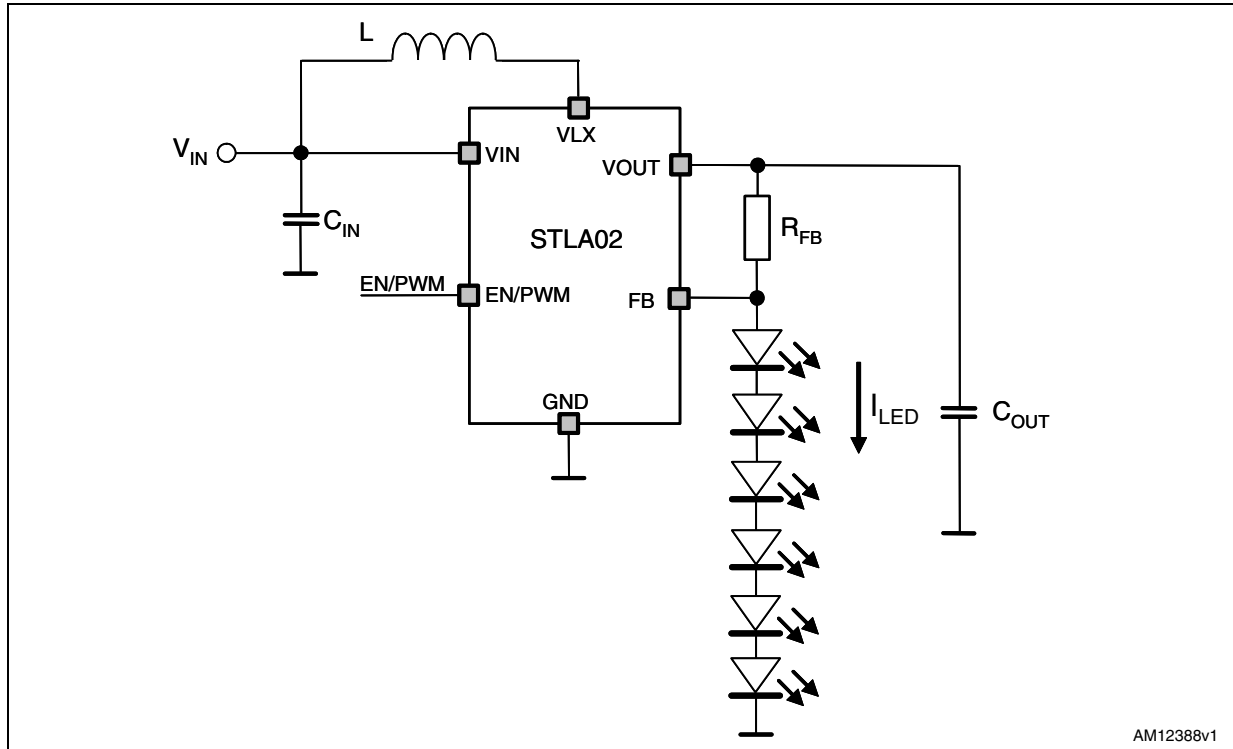
Description

The STEVAL-TLL010V1 demonstration board is based on the STLA02, a boost converter dedicated to powering and controlling the current of white LEDs in an LCD backlight. The device operates at a typical constant switching frequency of 2.3 MHz. It steps an input voltage ranging from 2.5 V to 18 V, up to 27 V. The output current is adjustable by the resistor RFB connected between the V_{OUT} and FB pins. The STLA02 device contains high-side sensing to simplify the PCB layout in terms of LED connection.

The output current is dimmable by the PWM signal applied to the EN pin with minimum PWM frequency equal 100 Hz.

1 Schematic

Figure 1. Schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
11-Jun-2012	1	Initial release.

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