1 CHANNEL SWITCHED MODE CONSTANT CURRENT CONTROLLER E522.31/33

PRODUCTION DATA - JUL 29, 2016

RoHS compliant

Features

- Switched-Mode, PWM LED Controller
- 5V to 55V input voltage range, up to 80V boosted output voltage
- Boost-, SEPIC, Buck-Boost- or Buck Topology supported
- Constant Current Regulation implemented
- High-Precision Differential High-Side Sense up to 60V
- High-Frequency PWM Dimming Capability for constant LED Color
- Analog 10:1 Dimming Capability for LED Binning
- Integrated Softstart
- Advanced Error Detection (e.g. Over-Voltage, Open-Load Detection, different Shorts or GND Loss)
- Integrated Automotive LDOs for 5V & 3.3V
- AEC-Q100 Qualified
- Junction temperature range -40°C to +150°C

Applications

- Automotive LED lighting Applications (daytime running light, indicator, front- and rear light, interior lighting etc.)
- General Indoor and Outdoor Lighting and -Signals
- TFT Backlighting
- General Current driven Applications

General Description

E522.31 and E522.33 are part of a family of fixed frequency switched-mode high voltage LED power supplies and controllers with high efficiency. Integrated high-side sensing allows topologies related to the supply input (Boost-to-Battery) or to GND (Boost-to-GND).

The device is suitable for operation in boost-, buck-boost-, SEPIC- and buck-topologies, particularly in harsh automotive environments.

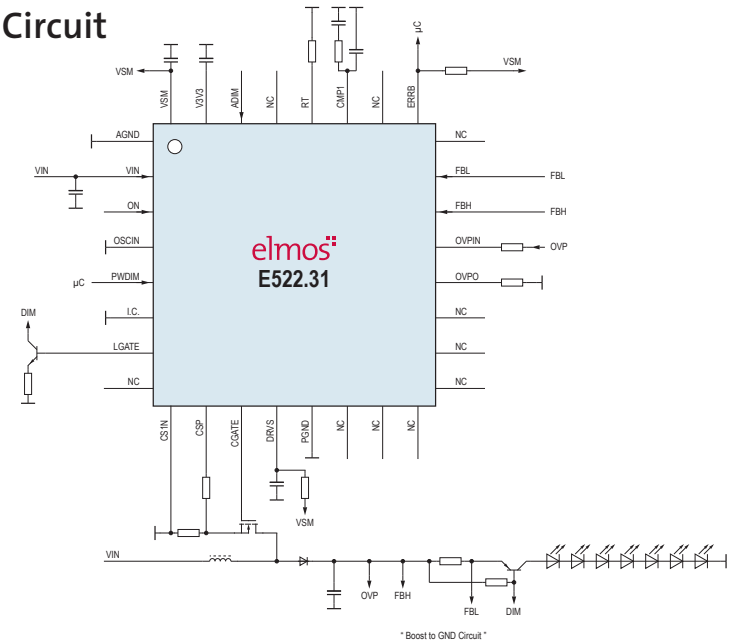
The constant switching frequency is adjustable up to 600kHz by an external resistor or can be synchronized in Master-Slave configurations with other devices.

Multiple control- and monitoring functions, e.g. short- and open load detection, over-temperature shutdown and under-voltage lockout are implemented.

Ordering Information

Ordering-No.	Oscillator Spectrum	Softstart Ramping	Package
E52231A61C	spread	Slow Ramping (SR)	QFN32L5
E52231A61CXFR	spread	Fast Ramping (FR)	QFN32L5
E52233A61C	narrow	Slow Ramping (SR)	QFN32L5
E52233A61CXFR	narrow	Fast Ramping (FR)	QFN32L5

Typical Application Circuit



Elmos Semiconductor AG reserves the right to change the detail specifications as may be required to permit improvements in the design of its products.

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