

Features

- ▶ Wide input voltage range 3.8V to 40V
- ▶ Defined VIN Reset at typ. 2.85V
- ▶ Adjustable output voltage with either 800mV or 200mV internal reference voltage
- ▶ Application output currents up to 2A
- ▶ Up to >90% efficiency
- ▶ Overtemperature protection
- ▶ Integrated VIN undervoltage detection with hysteresis
- ▶ Precise ON threshold for programmable VIN voltage supervision
- ▶ Integrated IDLE detection
- ▶ Ultra low IDLE quiescent current of typ. 15µA
- ▶ Low sleep current of typ. 10µA
- ▶ High-voltage, power-good, open-drain output for over- and undervoltage detection
- ▶ Open-load stable regulation and 100% duty cycle capability without external compensation network
- ▶ Adaptive operation frequency up to 500kHz

Applications

- ▶ Battery driven applications
- ▶ Simple switched-mode LED controllers
- ▶ Always-On supply for µController
- ▶ Energy efficient design in automotive environment
- ▶ Cascaded power supplies with startup sequencing
- ▶ Junction temperature range -40°C to +160°C

General Description

E522.10 is a low-cost, easy-to-use step down converter suitable for automotive and industrial/consumer environment (QFN20L4 and SO8EP) at elevated junction temperatures up to +160°C. Overtemperature protection is available for a typical junction temperature of +185°C. It provides resistor programmable output voltage based on internal 800mV reference, also supporting current regulation topologies (e.g. LED drivers) by providing internal 200mV reference.

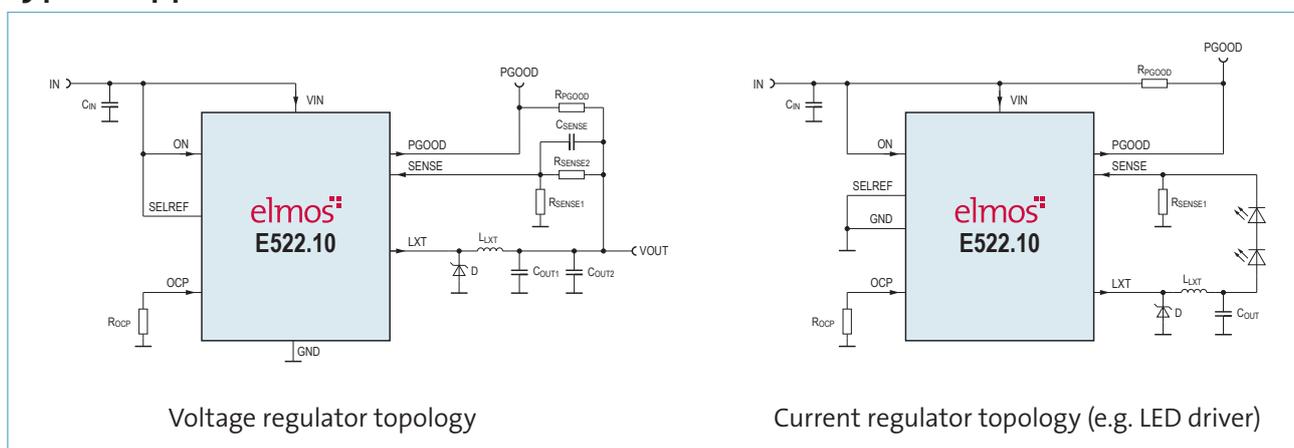
Low current consumption of typ. only 10µA during sleep mode are provided. Integrated light-load detection can automatically switch current consumption to only 15µA with active output regulation. The versatile high-voltage power-good signal provides under- or overvoltage information.

Utilizing fast adaptive frequency operation (pulse frequency modulation scheme) from 0Hz up to typ. 500kHz allows best possible line- and load-transient response without the need of external compensation networks. Regulation is open-load stable and allows 100% duty cycle without bootstrap capacitance. Integrated foldback overcurrent protection limits input currents during startup and in case of output short circuit.

Ordering Information

Ordering No.:	Wettable flanks		Package
	Yes	No	
E52210A52C		●	QFN20L4
E52210A52CXX2	●		QFN20L4
E52210A80D		●	SOIC8EP

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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