

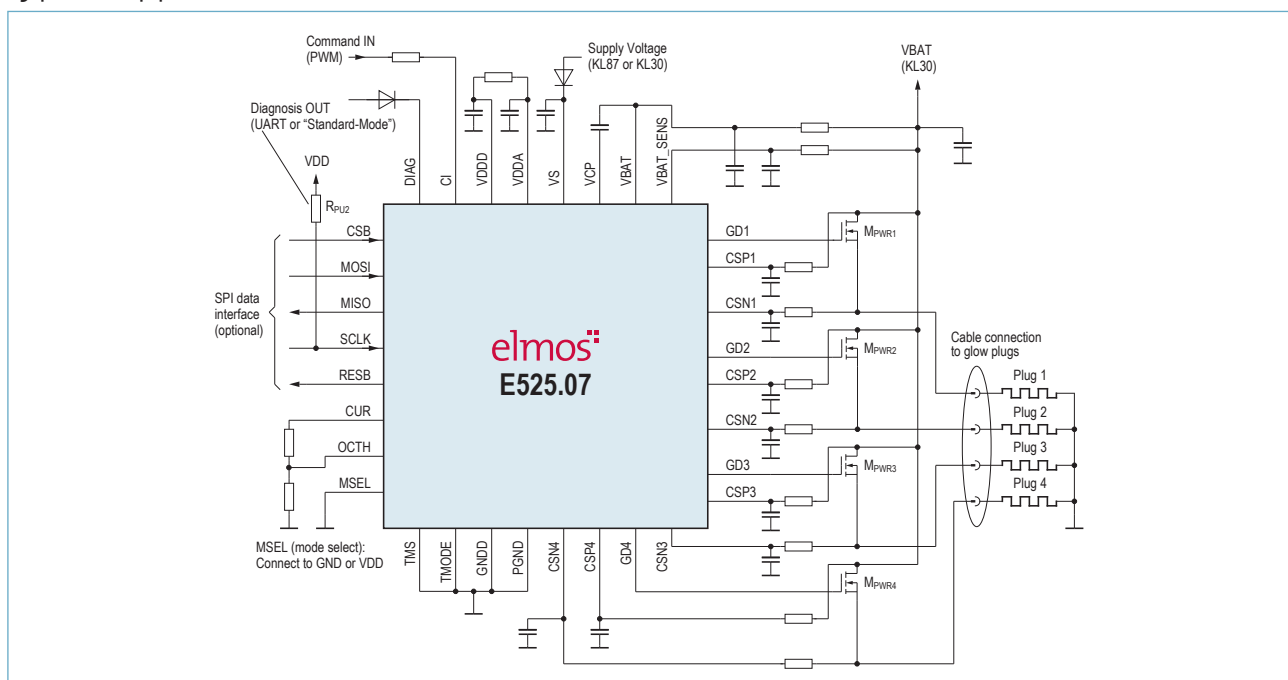
Features

- 4 gate drivers for external high-side power-NMOS:
 - PWM controlled gate output drive with integrated charge pump
 - adjustable gate charge / discharge currents
 - Gate sequencing for minimum current ripple
 - MOS protection by gate-source voltage limitation
- Glow plug current sensing with overcurrent shut-off
- Battery voltage measurement, overvoltage and undervoltage shut-down, charge pump monitoring
- Regulated 3.3V supply output
- Sensing ground shift at glow plugs
- RMS voltage regulation by observing VBAT and glow plug ground shift for correction of duty cycle
- Overheating shut-down integrated
- Two-wire interface: Control-In PWM, Diagnosis Output
 - Standard 8-bit diagnosis with 1 data frame/s or 3-byte
 - Advanced diagnosis using UART type output
- Optional use of SPI for advanced diagnosis and control via μ P, watchdog function with reset

Added value factors

- Autonomous system for glow plug controls and diagnosis using PWM-interface
- Advanced diagnosis features for glow plug assessment via SPI communication
- Qualified according to AEC-Q100

Typical Application Circuit



General Description

The E525.07 is a control IC for up to 4 high-side power-NMOS typically driving glow plugs in Diesel engines. The load current is varied by PWM duty cycle modulation at the power-NMOS gates according to the requirements determined by an engine management unit.

Advanced control and diagnosis features such as load current monitoring, battery-, supply-, and charge pump- voltage and temperature supervision are included. The load current is measured via the drain-source voltage drop at the power-NMOS transistors. Ground voltage sensing at the glow plugs to compensate for ground shifts is included also.

For communication with the engine control unit either a 2-wire PWM interface which can be operated in two modes (Standard or Advanced) is used, or a SPI communication interface for a micro processor is available.

Main application fields

- Quick start Diesel engine controls
- PTC heater controls

Ordering Information

Ordering-No.:	T _{Amb} Range	Package
E52507A77B	-40°C to +125°C	QFN32L6

Elmos Support

Headquarters

Elmos Semiconductor AG
Heinrich-Hertz-Str. 1
44227 Dortmund (Germany)
Phone: +49 (0) 231 / 75 49-100
Fax: +49 (0) 231 / 75 49-149
sales-germany@elmos.com
www.elmos.com

Sales and Application Support Office North America

Elmos NA. Inc.
32255 Northwestern Highway, Suite 220
Farmington Hills, MI 48334 (United States)
Phone: +1 (0) 248 / 8 65 32 00
Fax: +1 (0) 248 / 8 65 32 03
sales-usa@elmosna.com

Sales and Application Support Office China

Elmos Semiconductor Technology (Shanghai) Co., Ltd.
Unit 16B, 16F Zhao Feng World Trade Building,
No. 369 Jiang Su Road,
Chang Ning District,
Shanghai, PR China, 200050
Phone: +86 (0) 21 / 6219 7502
Fax: +86 (0) 21 / 6210 0908 115
sales-china@elmos.com

中国地区销售与应用支持

艾尔默斯半导体技术(上海)有限公司
中国 上海市 长宁区 江苏路369号
兆丰世贸大厦16楼 16B单元, 200050
电话: +86 (0) 21 / 6219 7502
传真: +86 (0) 21 / 6210 0908 115
sales-china@elmos.com

Sales and Application Support Office Korea

Elmos Korea
Office: C-301, Innovalley, 253, Pangyo-ro,
Bundang-gu, Sungnam-si, Gyeonggi-do,
13486 Korea
Phone: +82 (0) 31 714-1131
Fax: +82 (0) 31 8018-0790
sales-korea@elmos.com

Sales and Application Support Office Japan

Elmos Japan K.K.
BR Shibaura N Bldg. 7F
3-20-9 Shibaura, Minato-ku,
Tokyo 108-0023 Japan
Phone: +81 3 / 3451-7101
Fax: +81 3 / 3451-7104
sales-japan@elmos.com

Sales and Application Support Office Singapore

Elmos Semiconductor Singapore Pte Ltd.
3A International Business Park
#09-13 ICON@IBP
609935 Singapore
Phone: +65 (0) 6908 1261
Fax: +65 (0) 6570 5906
sales-singapore@elmos.com

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