

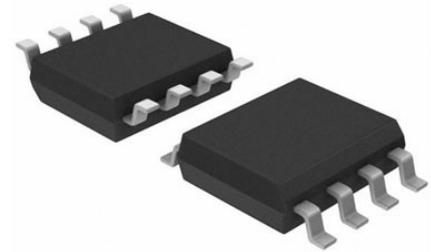
Manufacturers [Infineon Technologies Corporation](#)

Package/Case PG-TSDSO-14

Product Type

RoHS

Lifecycle



Images are for reference only

Please submit RFQ for TLS4125D0EPV50XUMA1 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The OPTIREG™ Switcher TLS4125D0EP V50 is a synchronous standalone step-down DC/DC-converter especially designed for automotive applications. The device has a current capability of 2.5 A, fixed 5 V output voltage and a feedback voltage accuracy of +/- 1.5% in PWM mode. Integrated power-stages, soft start feature and compensation reduce the required amount of external components and thus system costs and board space. The wide input voltage range (3.7 V – 35 V) and a 100% duty-cycle operation mode make the device suitable for battery cranking scenarios in automotive applications. The wide switching frequency range allows the selection of appropriated coils and capacitors. The switching frequency can be synchronized with an external clock signal. Spread spectrum frequency modulation can be activated to improve the EMI performance in PWM operation. The device is offering a low-current consumption in PFM mode at light loads to optimize the efficiency. In disabled mode, the current consumption is reduced to typically 1  $\mu$ A. The TLS4125D0EP V50 is able to detect undervoltage and overvoltage conditions of the output voltage and indicates this with the reset output signal. Overcurrent and overload protections avoid excessive currents to protect the device during short circuit conditions at the buck converter output. The integrated thermal shutdown feature additionally protects the device from overheating. Furthermore the enhanced PG-TSDSO-14 exposed-pad package enables an advantageous thermal performance in the application.

## Features

2.5 A step down regulator

Input voltage from 3.7 V to 35 V

5V output voltage

Ultra low current consumption of 31  $\mu$ A

Enable

Flexible Reset function with Under and Overvoltage detection

Precised timing for reset with external resistor

Wide Switching Frequency range 320 kHz - 560 kHz & 1.6 MHz - 2.8 MHz

100 % duty cycle operation

Synchronization to external frequency

Spread spectrum frequency modulation for improved EMI performance

Soft start function

Integrated compensation Network

Output discharge function during disabled state

Ultra low current consumption during disabled state (typically 1  $\mu$ A)

Overtemperature Shutdown

Output Current Limitation

Wide Junction Temperature Range from -40 °C up to 150 °C

AEC Qualified

Designed for harsh automotive environment

Wide input voltage range

Low quiescent current operation at no load condition

Optimized for size and flexibility

Suitable for cranking condition with 100% duty cycle

Flexible Reset with minimum external components

## Application

Automotive general ECUs

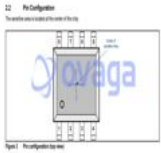
BCM, Gateway, Cluster

Camera, Radar, Telematics

Infotainment, Car-Media, Display, Dashboard

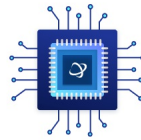
## Related Products

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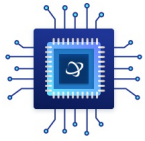
[TLE5009](#)

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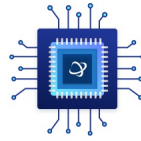
[TLD1125EL](#)

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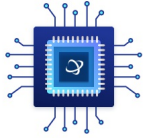
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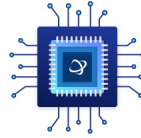
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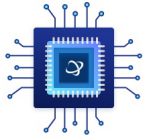
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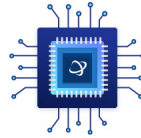
[TLE94112ES](#)

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[TLE9251VLE](#)

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[TLE4966V-1K](#)

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