

Product brief

TLS830A4EPV50

Ultra low quiescent current linear voltage regulator

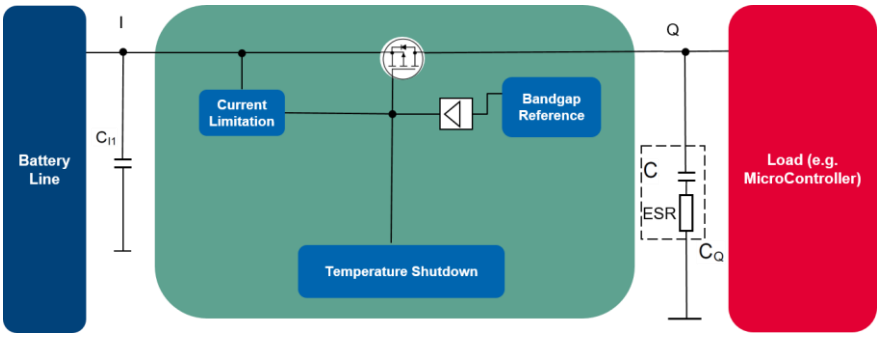
The OPTIREG™ linear voltage regulator TLS830A4EPV50 is a linear voltage regulator with high performance, low dropout voltage and ultra low quiescent current. With only 4.3 µA typical quiescent current at light load and an input voltage range of 3.2 V to 40 V the device is perfectly suitable for automotive supply systems or other supply systems that are permanently connected to the battery.

The loop concept combines fast regulation and very high stability while requiring only one small ceramic capacitor of 4.7 µF at the output. The operating range starts at an input voltage of 3.2 V (extended operating range). This makes the device suitable for automotive systems that need to operate in cranking condition.

Internal protection features, such as output current limitation and overtemperature shutdown, are designed to protect the device from immediate damage caused by failures such as

- output shorted to GND
- overcurrent condition
- overtemperature condition

Block Diagram



Key features

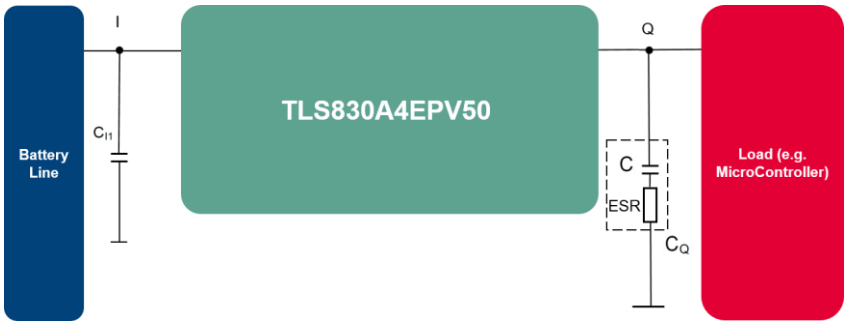
- Ultra low quiescent current, typically 4.3 µA at light loads
- Wide input voltage range from 3.2 V to 40 V
- Output voltage 5 V
- Output voltage accuracy ±2%
- Output current capability up to 300 mA
- Low dropout voltage, typically 190 mV, at output current below 100 mA
- Stable with ceramic output capacitor of 4.7 µF
- Overtemperature shutdown
- Output current limitation
- Wide temperature range
- Green Product (RoHS compliant)

Key benefits

- Suitable for very low cranking (stop and start support from Vin = 3.2 V)
- Energy efficiency: Longer Battery life
- Less external components: Lower PCB size and BOM cost

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Key applications

- Automotive supply systems or other supply systems that are connected to the battery permanently
- Automotive systems that need to operate in cranking condition
- General automotive applications
- Automotive supply for CAN transceivers
- Remote keyless systems

Product summary

Sales name	OPN	Package
TLS830A4EPV50	TLS830A4EPV50XUMA1	PG-TSDSO-14

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