

Product brief

TLS850A4TEV50

High performance, low dropout linear voltage regulator and ultra-low quiescent current.

The TLS850A4TEV 50 is a high performance, low dropout linear voltage regulator and ultra low quiescent current for 5.0 V supply in a PG-TQ252-3 package.

The input voltage range of 3.7 V to 40 V and ultra low quiescent current of 4.3 μ A at light load make the device 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 μ F at the output. Below an output current of 100 mA the typical dropout voltage is below 190mV.

The operating range starts at an input voltage of only 3.7 V (extended operating range). This makes the TLS850A4TEV50 suitable for automotive systems that need to operate during 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 and overtemperature condition.

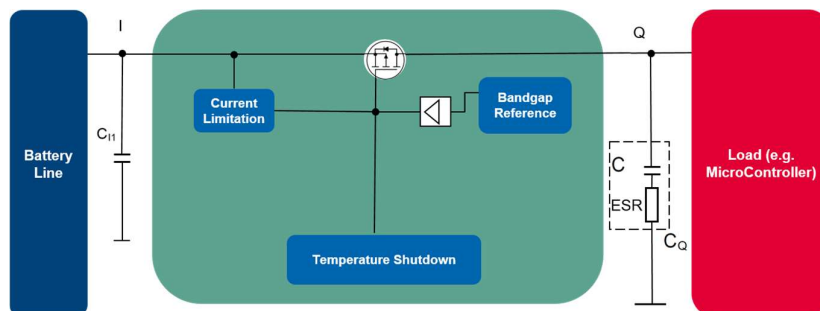
Key features

- > Ultra-low quiescent current, typically 4.3 μ A at light loads
- > Wide input voltage range from 3.7 V to 40 V
- > Output voltage 5 V
- > Output voltage accuracy $\pm 2\%$
- > Output current capability up to 500 mA
- > Low dropout voltage, typically 190 mV, at output current below 100 mA
- > Stable with ceramic output capacitor of 4.7 μ F
- > Overtemperature shutdown
- > Output current limitation
- > Wide temperature range
- > Green Product (RoHS compliant)

Key benefits

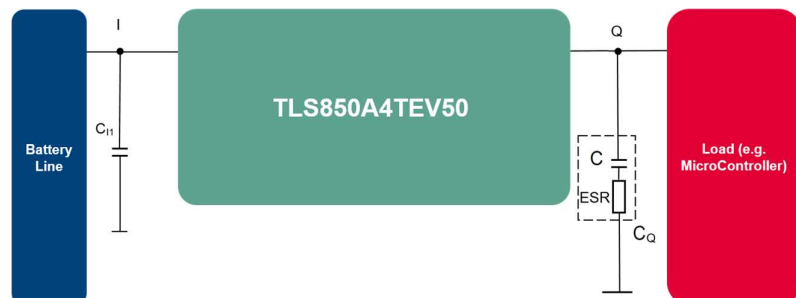
- > Suitable for very low cranking (stop and start support from $V_{in} = 3.7$ V)
- > Energy efficiency: Longer Battery life
- > Less external components: Lower PCB size and BOM cost

Block Diagram



TLS850A4TEV50

High performance, low dropout linear voltage regulator and ultra-low quiescent



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

Product summary

Sales name	OPN	Package
TLS850A4TEV50	TLS850A4TEV50ATMA1	PG-TQ252-3



www.infineon.com

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neubiberg
Germany

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Public

Document number: B000-I0000-V1-X-7600-EU-EC
Date: 04 / 2023

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