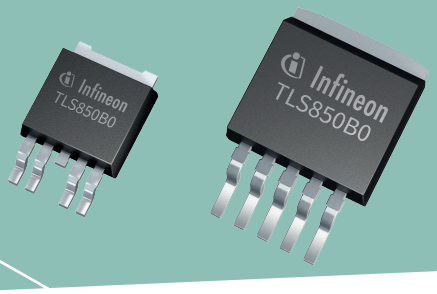


Product brief

TLS850B0-family

High-performance linear voltage regulator

High Performances

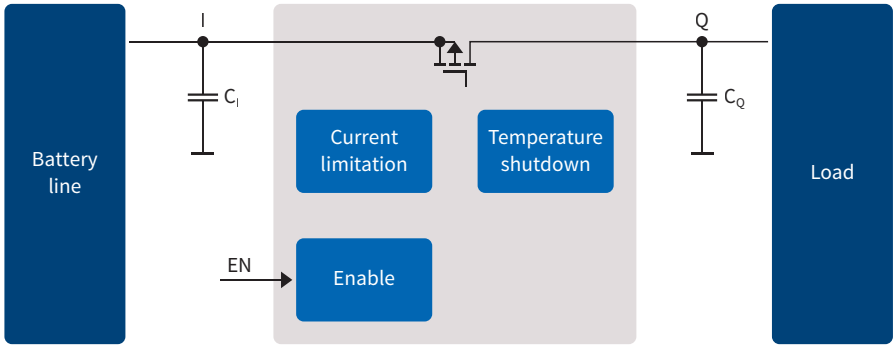
The TLS850B0 is a high-performance, very low dropout linear voltage regulator for 3.3 V and 5.0 V supply in a TO263-5 and TO252-5 package.

The input voltage range of 3.0 V to 40 V and a very low quiescent current of 20 µA make it the perfect match for automotive or other supply systems connected to the battery permanently. The new loop concept combines fast regulation and very high stability while requiring only one small ceramic capacitor of 1 µF at the output. Below an output current of 100 mA the typical dropout voltage of 100 mV is very low. The operating range starts at an input voltage of only 3 V (extended operating range). This makes the TLS850B0 suitable for automotive systems that need to operate during cranking condition.

The device can be switched on and off by the enable feature.

Internal protection features like output current limitation and overtemperature shutdown protect the device from immediate damage.

Application diagram for TLS850B0 for 12 V ECUs



Key features

- Enable
- Output voltage accuracy: ±2 percent
- Dropout voltage: 100 mV
- Current consumption: 20 µA
- Available in TO252 and TO263 package
- Wide operating temperature range: -40°C ≤ T_j ≤ 150°C

Benefits

- Wide input voltage range
- Robust TO252 and TO263 package
- Reduces energy consumption, suitable for stand-by operation
- Minimized external BOM

Applications

- General automotive MCU power supply
- EPS, 2 wheeler dashboard, instrument cluster
- Body electronics, HVAC panel, etc.

AEC Qualified

RoHS

Enable

www.infineon.com/voltage-regulator

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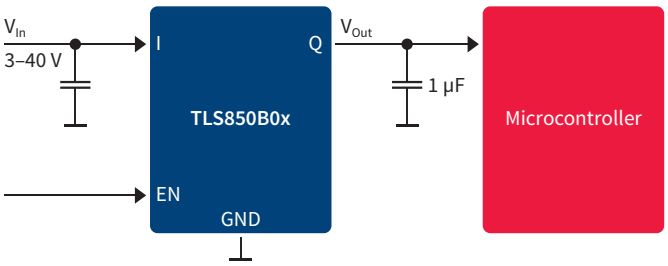
High Performances



Key features	Key benefits
Low drop voltage (~100 mV)	Suitable for cranking (stop and start support from V_{In} = 3 V)
Low current consumption (~20 µA)	Longer battery lifetime
Excellent regulation loop	BOM cost optimized stable V_{Out}

Products

Product name	OPN	Output current I_{Out} [mA]	Quiescent current I_q [µA]	Enable	R_{thJA} [K/W]	Output voltage [V]	Package
TLS850B0TBV33	TLS850B0TBV33ATMA1	500	20	Yes	26	3.3	TO263
TLS850B0TBV50	TLS850B0TBV50ATMA1	500	20	Yes	26	5.0	TO263
TLS850B0TEV33	TLS850B0TEV33ATMA1	500	20	Yes	26	3.3	TO252
TLS850B0TEV50	TLS850B0TEV50ATMA1	500	20	Yes	26	5.0	TO252

Demoboards

Product name	OPN	Description
TLS850B0TB50 BOARD	TLS850B0TB50BOARDTOBO1	TLS850B0 Demoboard D^2PAK TO263-5, 5.0 V
TLS850B0TB33 BOARD	TLS850B0TB33BOARDTOBO1	TLS850B0 Demoboard D^2PAK TO263-5, 3.3 V
TLS850B0TE50 BOARD	TLS850B0TE50BOARDTOBO1	TLS850B0 Demoboard DPAK TO252-5, 5.0 V
TLS850B0TE33 BOARD	TLS850B0TE33BOARDTOBO1	TLS850B0 Demoboard DPAK TO252-5, 3.3 V

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