

Product Brief

TLF51801ELV

DC/DC Buck Controller

The TLF51801 is an AEC-qualified high current buck-controller providing an adjustable output voltage. The controller is capable to drive external power MOSFETs for load currents up to 10A. The current limitation can be realized either by sensing an external shunt resistor or by sensing the $R_{DS(on)}$ of the HS-switch reducing external components. Very low drop-out operation is achieved by a maximum duty-cycle of more than 99%. The adjustable switching frequency in the range of 100 to 700kHz can be synchronized to an external clock. An Enable-feature allows very low shutdown current consumption. TLF51801 is coming in a small, thermal enhanced SSOP-14 exposed-pad package (RoHS).

At a Glance

Key Features

- Driving FETs for loads up to 10A
- Adjustable switching frequency can be synchronized to an external clock
- Very low shut-down current
- Internal soft-start
- Protection functions
- PG-SSOP-14 EP
- AEC-qualified

Key Benefits

- Flexibility in current limitation to reduce external components
- Integrated soft-start limits the current peak as well as voltage overshoot at startup

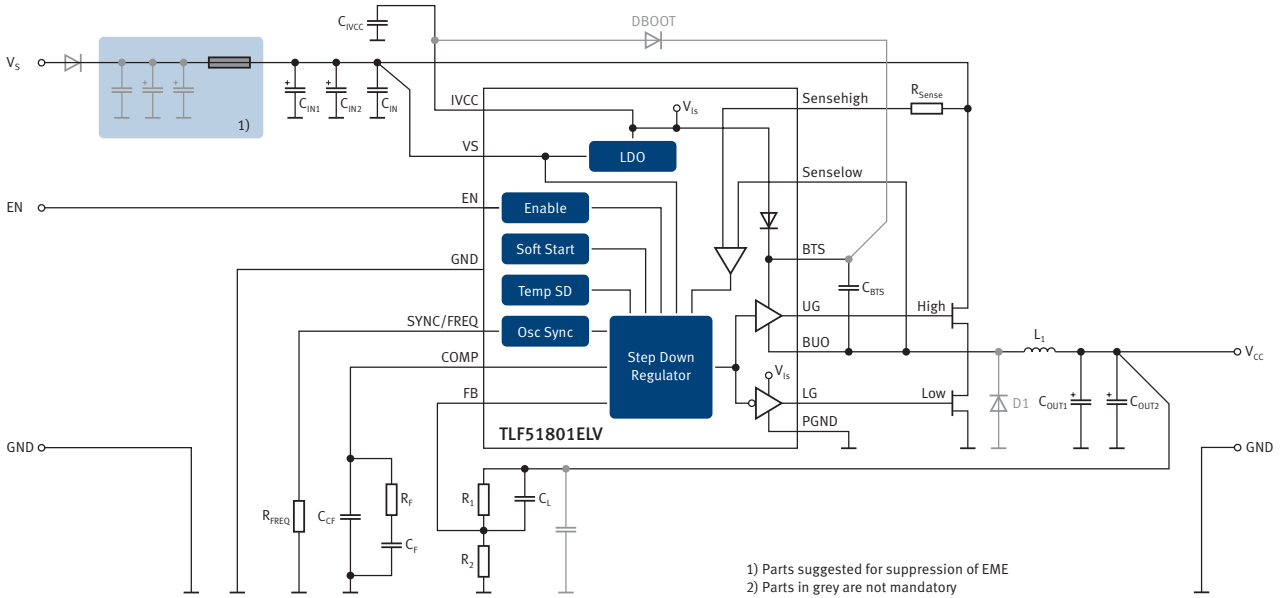
Application

- Automotive
- Pre-Regulator
- General purpose: high-current applications

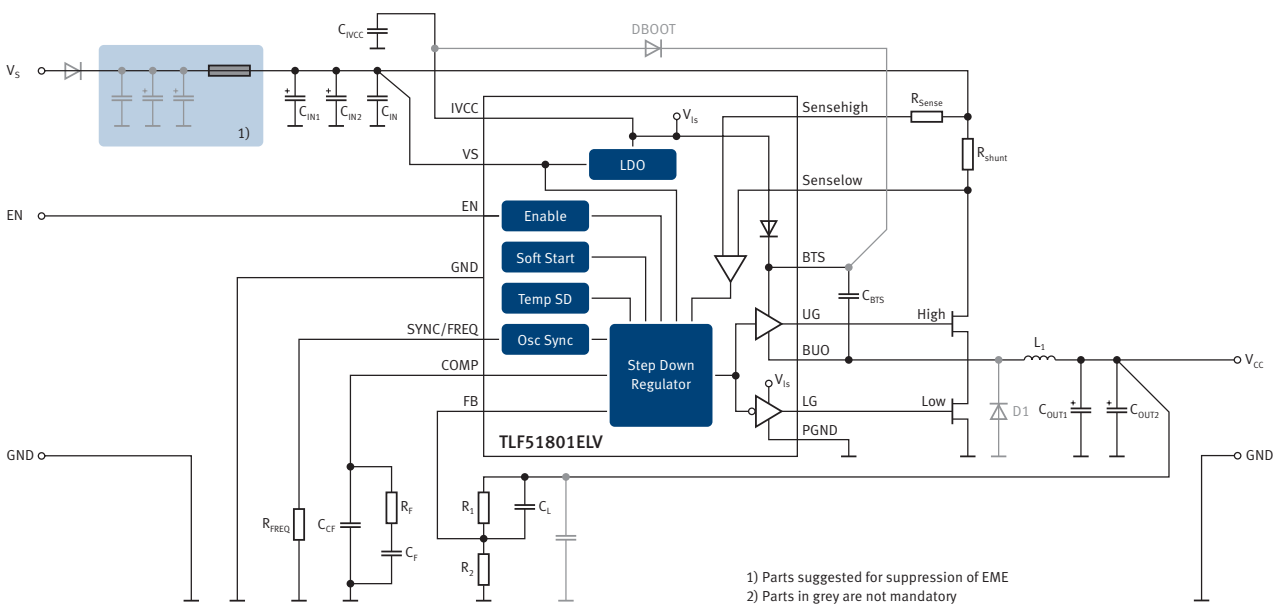
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Application Diagram: Current Limitation via $R_{DS(on)}$ -sense



Application Diagram: Current Limitation via Shunt-sense



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