

2 A step down DC - DC switching regulator ($V_{IN} = 4.5\text{ V to }60\text{ V}$) based on the L7987L

Data brief



Features

- 4.5 V to 60 V input voltage
- Step-down (buck) conversion
- 5 V output voltage ($V_{IN} > 6\text{ V}$)
- Up to 2 A DC output current
- 500 kHz switching frequency
- 5 ms programmed soft-start
- Compliant with ceramic output capacitors
- 180° out of phase synchronization available
- Auto recovery overcurrent and thermal protection
- RoHS compliant

Description

The STEVAL-ISA198V1 product evaluation board is a step-down switching power supply based on the L7987L regulator in an HTSSOP16 package. The output voltage can be set starting from 0.8 V. Low drop-out operation, due to the advanced integrated switch management, can be achieved.

The L7987L is a 61 V, 2 A step-down asynchronous switching regulator with embedded power MOSFET capable of delivering up to 2 A of current, depending on the application conditions.

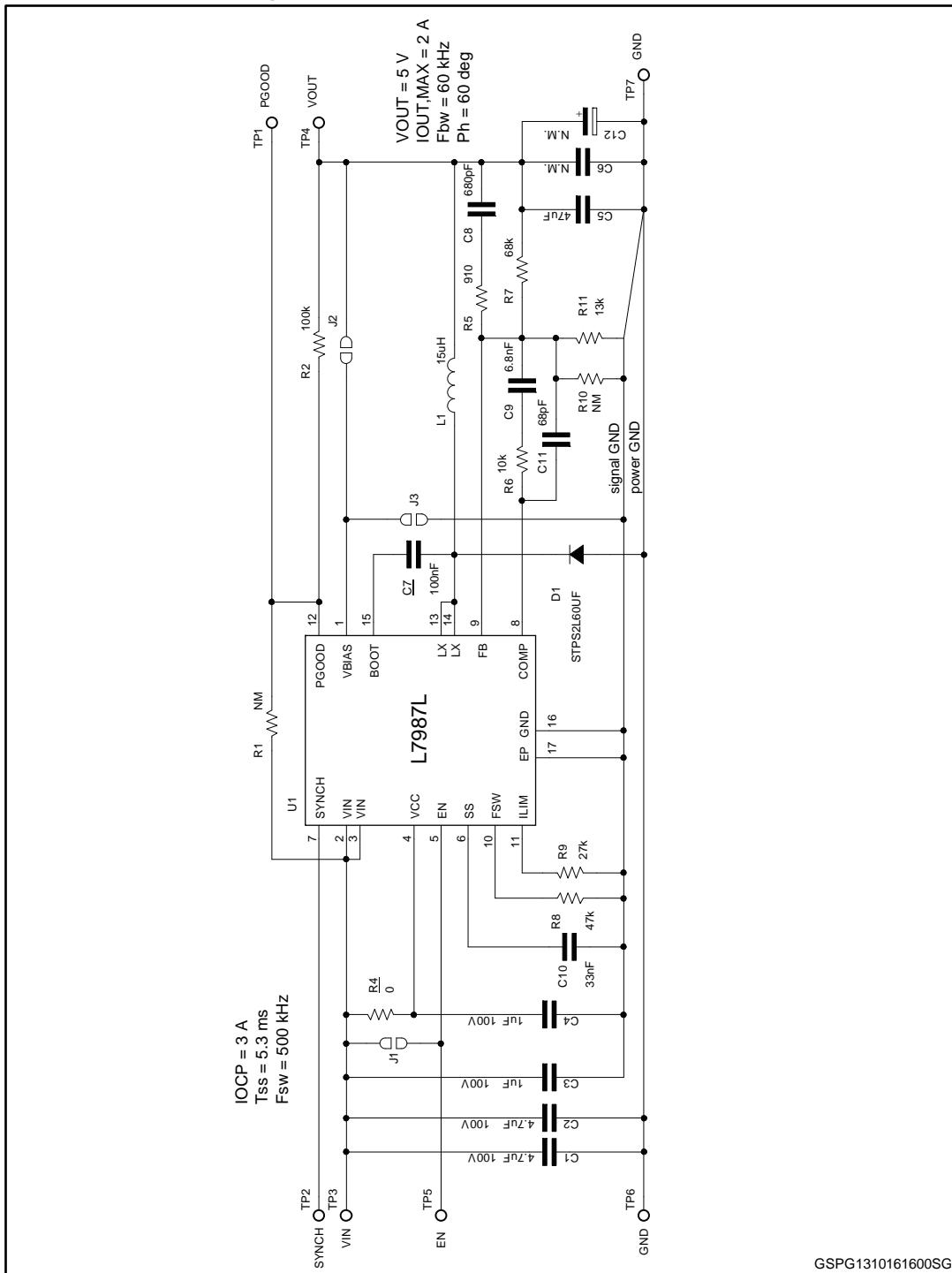
The embedded switch-over feature on the V_{BIAS} pin and the light load management (pulse skipping) help maximize power conversion efficiency across the entire load range.

The soft-start, current limit threshold and switching frequency are adjustable for application optimization.

The device includes an internal 250 kHz oscillator that can be externally adjusted up to 1.5 MHz; two L7987L regulators can be synchronized in a 180° out-of-phase configuration for reduced total input RMS current.

1 Schematic diagram

Figure 1: STEVAL-ISA198V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
11-Nov-2016	1	Initial release.

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