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STEVAL-ISA207V1

Data brief

3 A step down DC/DC switching regulator (VIN = 4.5 V to 60 V) based on the A7987





Product summary	
3 A step down DC/DC switching regulator (VIN = 4.5V to 60 V) based on the A7987	STEVAL-ISA207V1
61 V 3 A asynchronous step-down switching regulator with adjustable current limitation for automotive	A7987

Features

- 4.5 V to 60 V input voltage
- Step-down (buck) conversion
- 3.3 V output voltage
- Up to 3 A DC output current
- 500 kHz switching frequency
- 3.5 ms programmed soft-start
- Compliant with ceramic output capacitors
- 180° out-of-phase synchronization available
- Auto recovery overcurrent and thermal protection
- RoHS and China RoHS compliant
- WEEE compliant (2012/19/UE RAEE II)

Description

The STEVAL-ISA207V1 evaluation board is a step-down switching power supply based on the A7987 regulator in an HTSSOP16 package. It is designed for automotive system battery-powered applications. The output voltage can be set starting from 0.8 V. Almost low drop-out operation, due to the advanced integrated switch management, can be achieved.

The A7987 is a 61 V, 3 A step-down asynchronous switching regulator with embedded high-side power MOSFET is capable of delivering up to 3 A of current, depending on the application conditions.

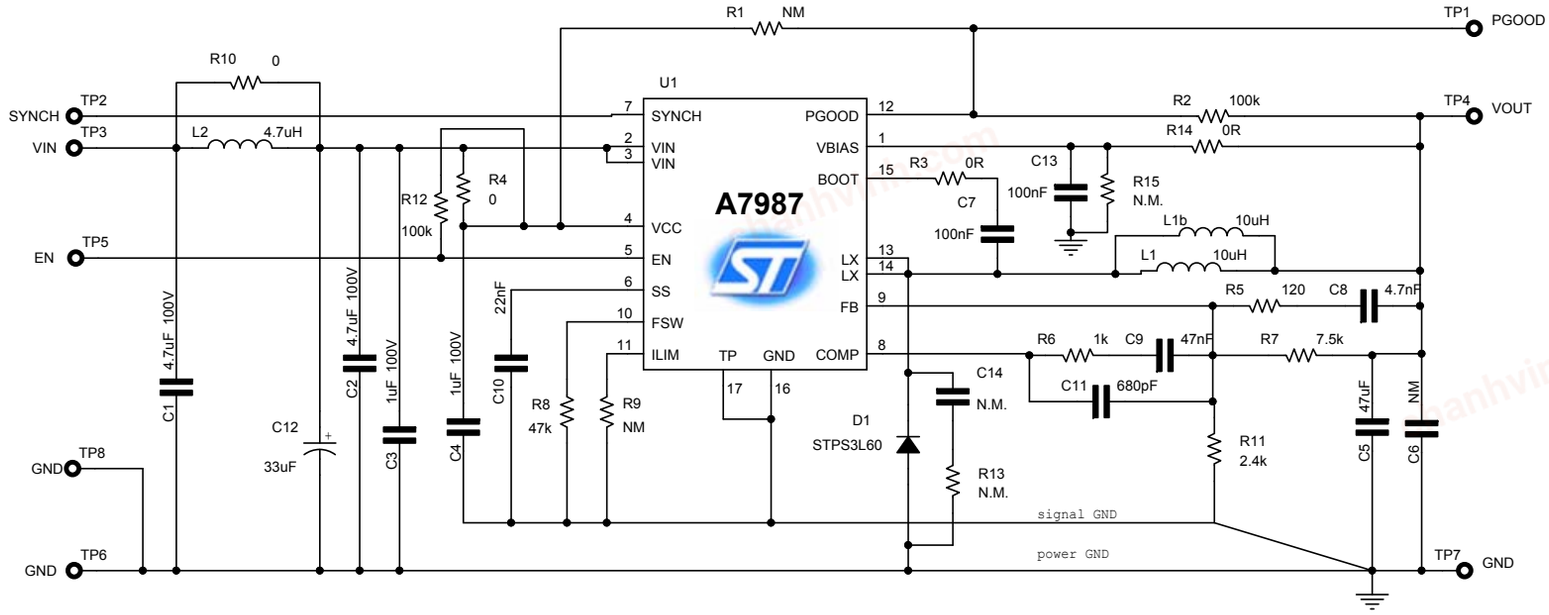
The embedded switchover feature on the VBIAS pin and the light load management (pulse skipping) are included to maximize power conversion efficiency across the entire load range, and the soft-start current limit threshold and switching frequency can be adjusted according to specific application requirements.

The device includes an internal 250 kHz oscillator that can be set up to 1.5 MHz by changing an on-board resistor. Two A7987 regulators can be synchronized in a 180° out-of-phase configuration for reduced total input RMS current.

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1 Schematic diagram

Figure 1. **STEVAL-ISA207V1 board schematic**



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Revision history

Table 1. **Document revision history**

Date	Version	Changes
02-Apr-2019	1	Initial release.

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