

## 3 A step down DC/DC switching regulator ( $V_{IN} = 4.5\text{ V to }60\text{ V}$ ) based on the 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.

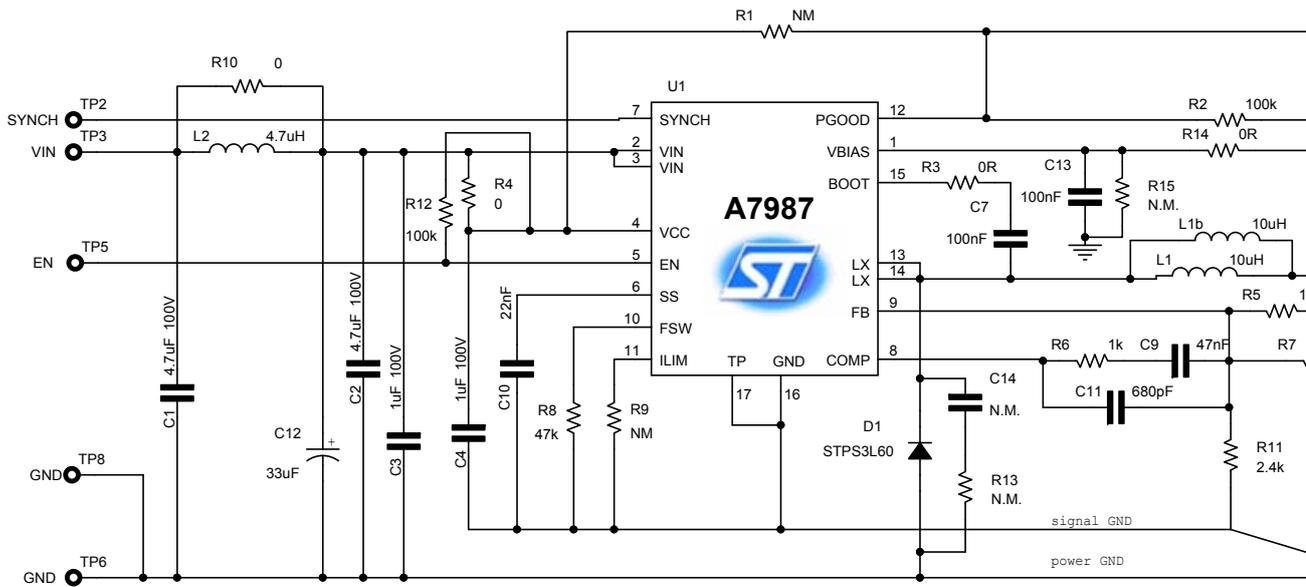
The embedded switchover feature on the VBIAS pin and the light load management (pulse skipping) are included to maximize power conversion efficiency across the entire load range, and the soft-start current limit threshold and switching frequency can be adjusted according to specific application requirements.

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.

Product summary	
3 A step down DC/DC switching regulator ( $V_{IN} = 4.5\text{ V to }60\text{ V}$ ) based on the A7987	<a href="#">STEVAL-ISA207V1</a>
61 V 3 A asynchronous step-down switching regulator with adjustable current limitation for automotive	<a href="#">A7987</a>

# 1 Schematic diagram

Figure 1. STEVAL-ISA207V1 board schematic



## Revision history

**Table 1. Document revision history**

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

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