

3 A / 2.3 MHz step-down synchronous switching regulator based on the AST1S31HF in a DFN 3x3 package

Data brief



Description

The STEVAL-ISA160V1 evaluation board is based on the AST1S31HF internally compensated 2.3 MHz fixed-frequency PWM synchronous step-down regulator.

The device operates on a 2.8 V to 4.0 V input voltage and provides a regulated output voltage from as low as 0.8 V up to V_{in} .

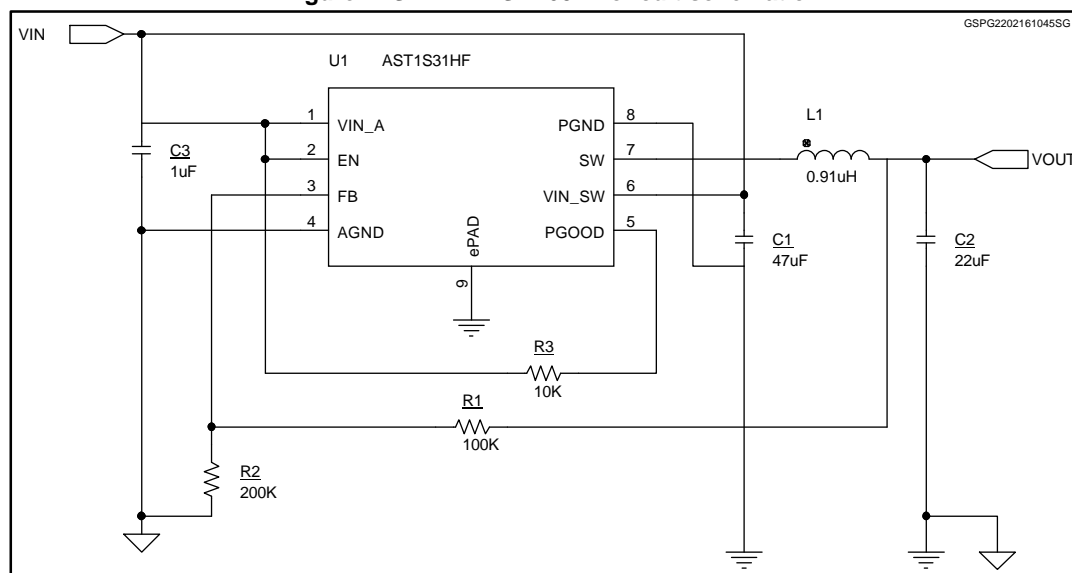
The peak current mode control with internal compensation delivers a very compact solution with a minimum component count.

All the components on the evaluation board are automotive grade.

Features

- AECQ100 qualification
- 3 A DC output current
- 2.8 V to 4 V input voltage
- Output voltage adjustable from 0.8 V
- 2.3 MHz switching frequency
- Internal soft-start and enable
- Integrated 70 mΩ and 55 mΩ power MOSFETs
- All ceramic capacitor
- Power good (POR)
- Cycle by cycle current limiting
- Current fold back short circuit protection
- VFDFPN 3x3 - 8L package
- RoHS compliant

1 Schematic diagram

Figure 1: STEVAL-ISA160V1 circuit schematic

2 Revision history

Table 1: Document revision history

Date	Version	Changes
25-Feb-2016	1	Initial release.

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