



STEVAL-ISA108V1

4 A, 850 kHz fixed-frequency PWM synchronous step-down demonstration board based on the ST1S41 in a VFQFPN package

Data brief

Features

- 4 to 18 V input voltage
- Output voltage adjustable from 0.8 V
- 850 kHz switching frequency
- Internal soft-start
- Integrated 95 mΩ and 69 mΩ power MOSFETs
- All ceramic capacitor
- Enable function
- Cycle-by-cycle current limiting
- Current fold-back short-circuit protection
- RoHS compliant

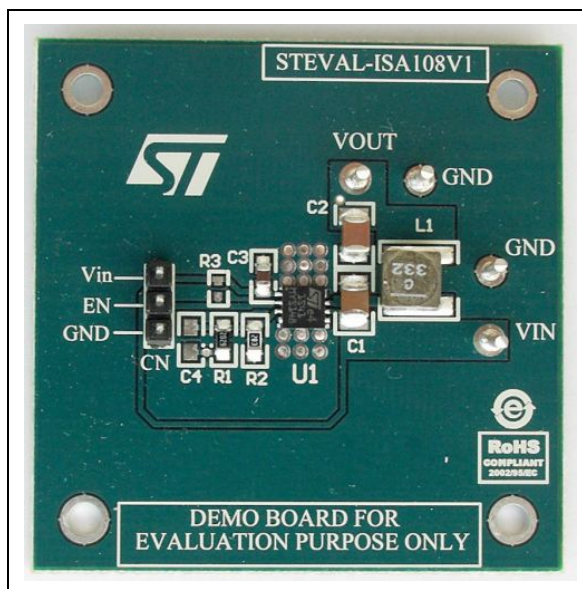
Description

Based on the ST1S41 step-down switching regulator, the STEVAL-ISA108V1 demonstration board is an internally-compensated 850 kHz fixed-frequency PWM synchronous step-down converter.

The ST1S41 operates from 4.0 V to 18 V input, while it regulates an output voltage as low as 0.8 V and up to V_{IN} (100% duty cycle).

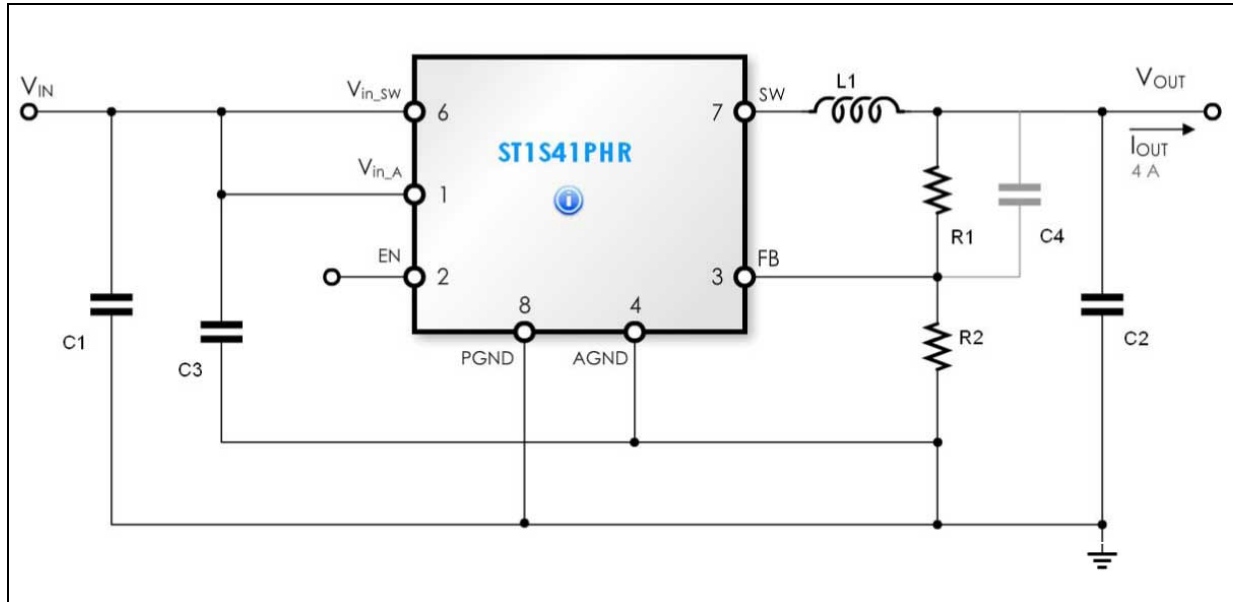
The ST1S41 integrates a 95 mΩ high side switch and 69 mΩ low side synchronous rectifier, resulting in very high efficiency with very low output voltages.

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



1 Schematic diagram

Figure 1. STEVAL-ISA108V1 circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
12-Feb-2013	1	Initial release.

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