STEVAL-ISA083V1

4 A peak 800 kHz fixed-frequency PWM synchronous step-down demonstration board with enable on/off based on the ST1S40IPUR

Data brief

Features

- Input voltage V_{in} : 4 V to 18 V
- Output voltage V_{out} : 3.3 V
- Maximum output current: 4 A
- Switching frequency: 800 kHz
- Short-circuit protected
- RoHS compliant



STEVAL-ISA083V1

Description

The STEVAL-ISA083V1, based on the ST1S40IPUR, is an internally compensated 800 kHz fixed-frequency PWM synchronous step-down converter demonstration board.

The ST1S40 operates from 4.0 V to 18.0 V input, while it regulates an output voltage as low as 0.8 V and up to V_{IN} (100% duty cycle).

The ST1S40 integrates a 95 mΩ high-side switch and a 69 mΩ synchronous rectifier allowing very high efficiency with very low output voltage.

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

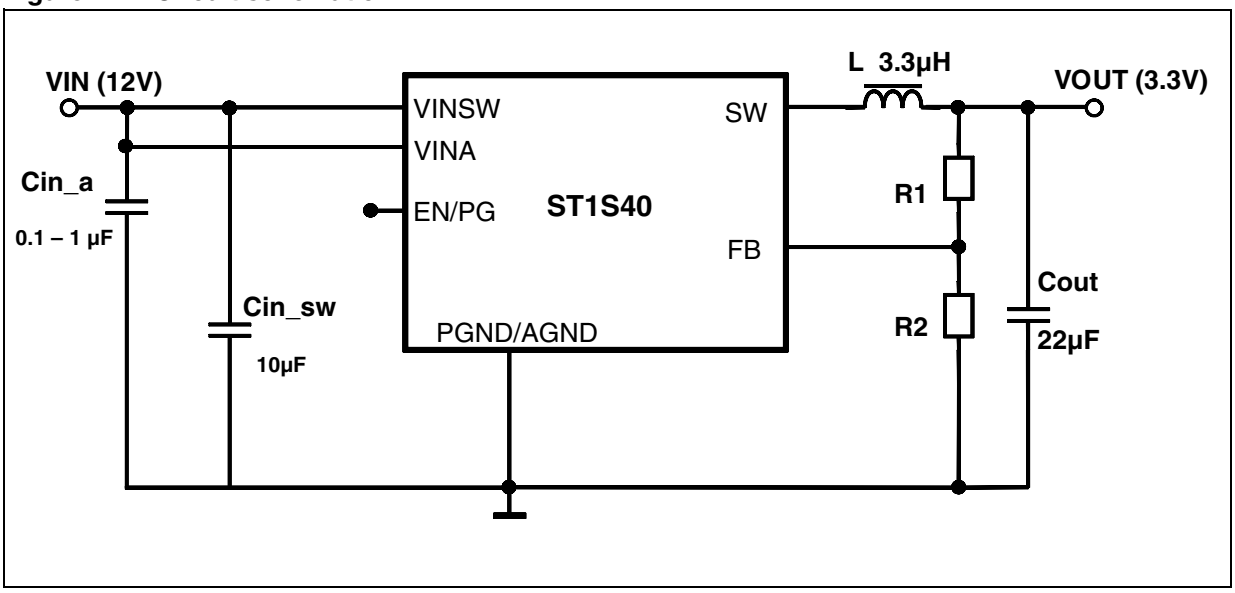
The ST1S40 is protected through cycle-by-cycle current limiting in case of overload and is also protected by a current foldback function with frequency reduction in case of short-circuit.

The device is available with an enable on/off function.

For further information contact your local STMicroelectronics sales office. www.st.com

1 Schematic

Figure 1. Circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Sep-2011	1	Initial release.

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