



## 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

### 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 m $\Omega$  high-side switch and a 69 m $\Omega$  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.

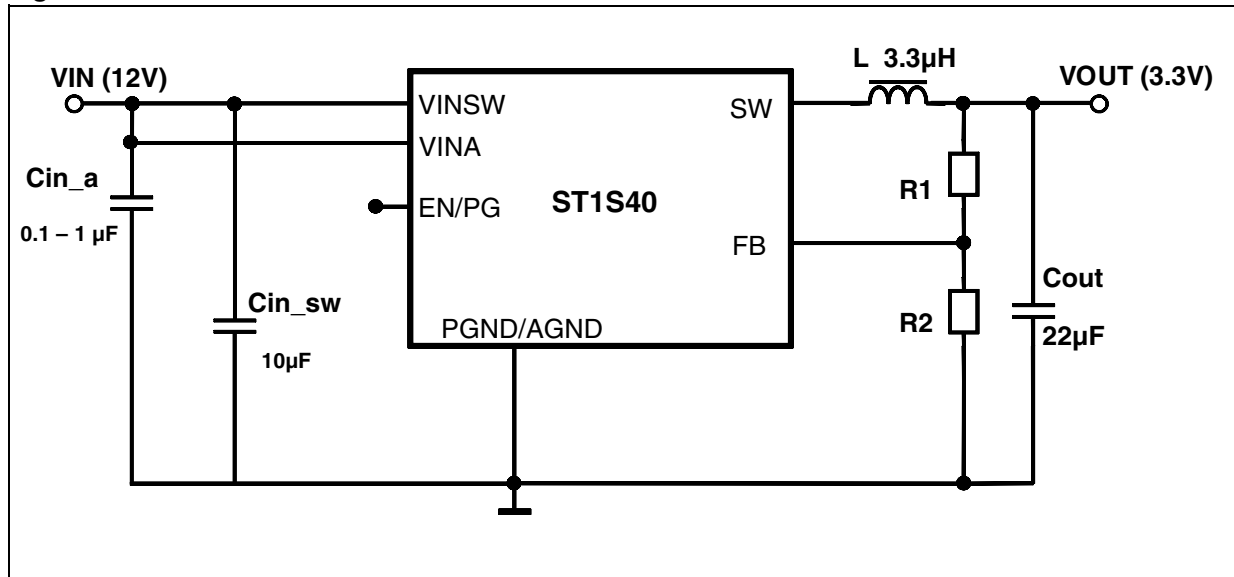
The ST1S40 is protected through cycle-by-cycle current limiting in case of overload and is also protected by a current foldback function with frequency reduction in case of short-circuit.

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



# 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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