



# STEVAL-ISA084V1

4 A peak, 800 kHz fixed-frequency PWM synchronous step-down demonstration board with enable on/off based on the ST1S40

Data brief

## Features

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

## Description

The STEVAL-ISA084V1, based on the ST1S40, is an internally compensated 800 kHz fixed-frequency PWM synchronous step-down converter demonstration board.

The ST1S40 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 ST1S40 integrates 95 m $\Omega$  high side switch and 69 m $\Omega$  synchronous rectifier allowing very high efficiency with very low output voltages.

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

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

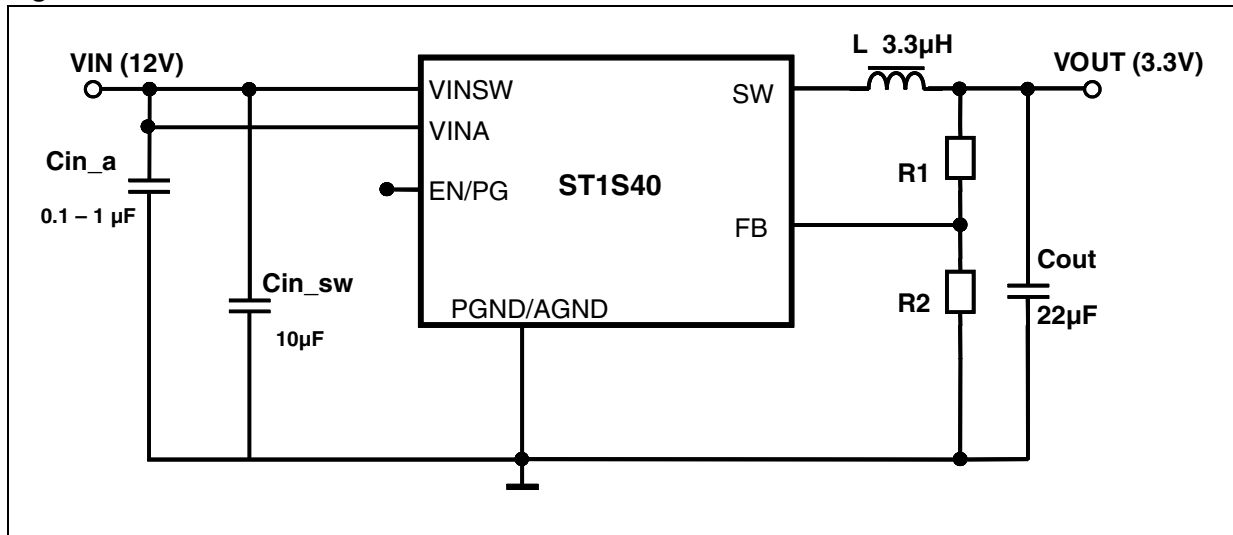
The device is available with an enable on/off function.



STEVAL-ISA084V1

# 1 Circuit schematic

Figure 1. Circuit schematic



## 2 Revision history

**Table 1. Document revision history**

Date	Revision	Changes
28-Nov-2010	1	Initial release.