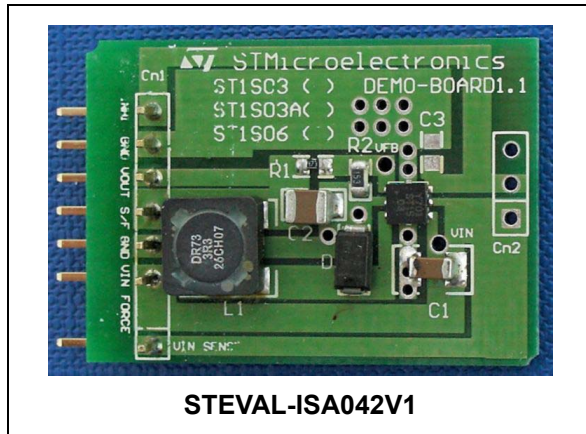


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**1.5 A / 1.2 V step-down DC-DC converter demonstration board  
based on the ST1S03**

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Data brief



as the use of a resistor divider to set the output voltage value. Only an inductor, a Schottky diode, and two capacitors are required. In addition, a low output ripple is guaranteed by the current-mode PWM topology and by the use of low ESR SMD ceramic capacitors. It is thermally protected and current limited to prevent damage due to accidental short-circuits.

The ST1S03 is available in a DFN6 (3x3 mm) package.

## Features

- Adjustable current-mode PWM step-down DC-DC converter
- Output voltage,  $V_{out}$ : 1.2 V
- Output current,  $I_{out}$ : 1.5 A
- Internal compensation to eliminate additional components
- Pulse skipping for  $I_{out}$  lower than 15 mA, to maintain the regulation with light loads
- RoHS compliant

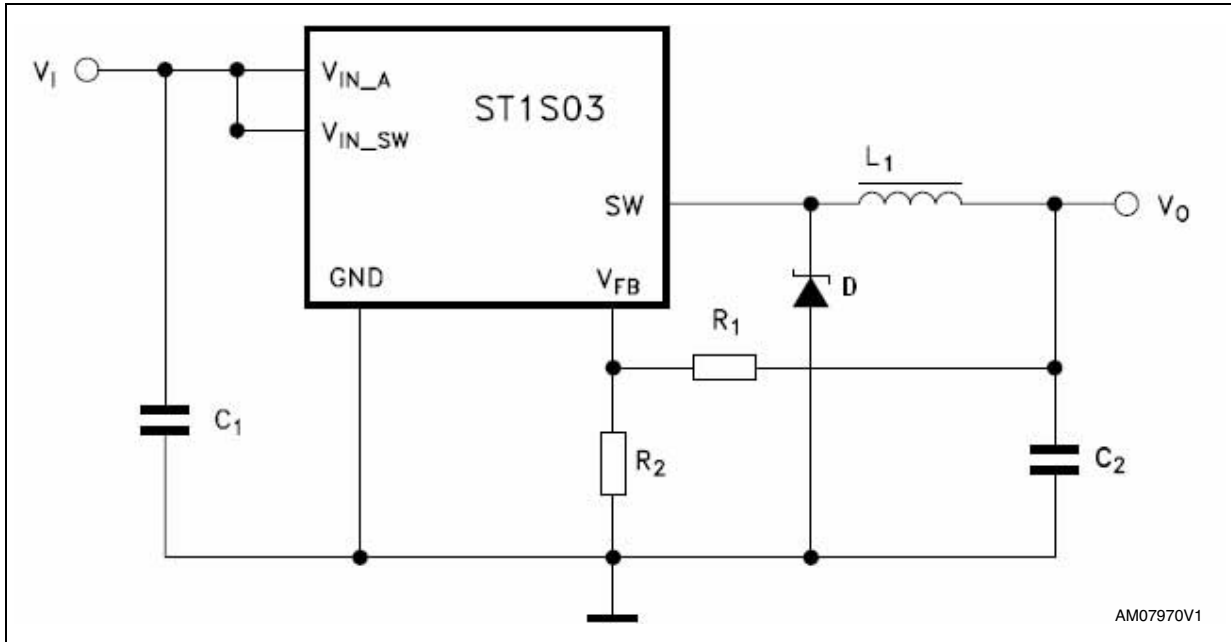
## Description

The STEVAL-ISA042V1 demonstration board is a step-down DC-DC converter based on ST's ST1S03 switching regulator, optimized for powering the low-voltage digital core in HDD applications and, more generally, replacing the high-current linear solution when the power dissipation may cause excessive heating of the application environment. It provides up to 1.5 A over an input voltage range of 3 V to 16 V.

A high switching frequency (1.5 MHz) allows the use of tiny surface-mounted components, as well

# 1 Circuit schematic

Figure 1. STEVAL-ISA042V1 demonstration board schematic



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
21-May-2013	1	Initial release.

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