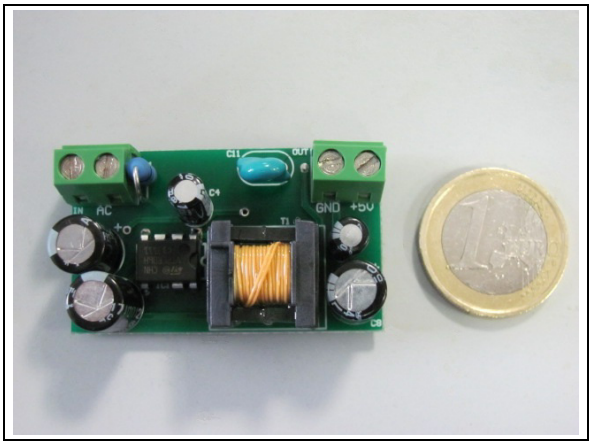
STEVAL-ISA136V1

3W, 5V output, isolated flyback converter using VIPer™ Plus - VIPER06HN

Data brief



Features

- Universal input mains range: 85 - 265 V_{AC} frequency: 50 - 60 Hz
- Output voltage: 5 V / 0.6 A
- Very compact size
- Stand-by mains consumption: < 30 mW at 230 V_{AC}
- Min active mode efficiency η_{AV}=66.89%
- EMI: according to EN55022-Class-B
- RoHS compliant

Description

The STEVAL-ISA136V1 evaluation board implements a 5 V / 0.6 A isolated flyback 3 W wide-range mains developed for general-purpose applications.

The core of the application is the VIPER06HN, a new off-line high voltage converter from the VIPer plus family.

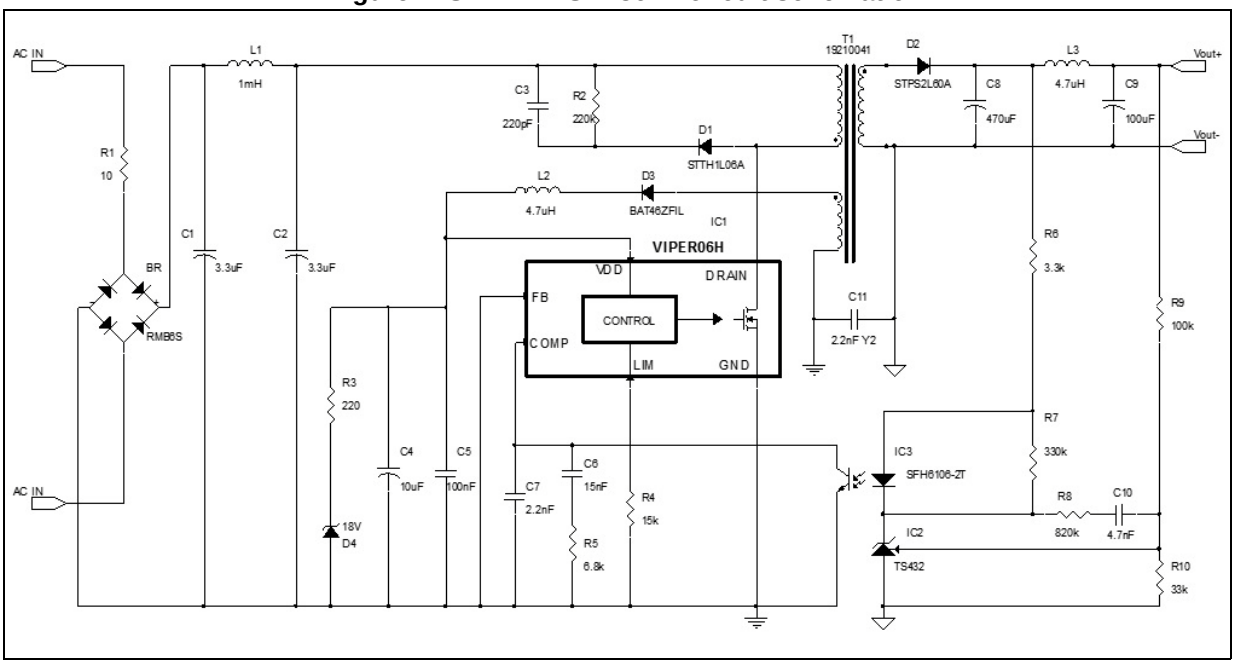
The IC combines a high-performance low-voltage PWM controller chip and an 800 V, avalanche-rugged power MOSFET in the same package.

The main characteristics of the board are its small size, high efficiency and low standby consumption. Extremely low consumption under no-load conditions is ensured thanks to burst mode operation, which reduces the average switching frequency and minimizes all frequency-related losses.

The VIPER06HN operates at fixed frequency (115 kHz). Frequency jittering is implemented, helping it to meet electromagnetic disturbance standards. The device is equipped with protection features, such as delayed overload, open-loop failure and hysteretic thermal protection, which improve the reliability and safety of a design.

1 Schematic diagram

Figure 1. STEVAL-ISA136V1 circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Jul-2013	1	Initial release.
08-May-2014	2	Cover image, *Figure 1* and title have been updated.