STEVAL-ISA197V1

12 V, 7.8 W isolated flyback converter based on VIPer114LS

Data brief



Features

- Universal input mains range: 90 – 265V_{AC}, frequency: 50 – 60 Hz
- Output voltage: 12 V
- Output current: 0.65 A
- Very compact size
- Stand-by mains consumption: < 20 mW at 230V_{AC}
- Average efficiency: > 81%
- EMI: according to EN55022-Class-B
- RoHS compliant

Description

The STEVAL-ISA197V1 evaluation board implements a 7.8 W (12 V / 0.65 A) isolated flyback wide range mains developed for general purpose applications.

The core of the application is the innovative VIPer114LS IC, designed for smart power supplies incorporating green energy management.

The device is a high-voltage converter that intelligently integrates an 800 V rugged power MOSFET with PWM current-mode control. VIPer114LS operates at fixed frequency 60 kHz with frequency jittering to meet standards regarding electromagnetic disturbance. The multiple protections on the device, including pulse skip mode to avoid flux-runaway, delayed overload, max duty cycle counter, input or output overvoltage and thermal shutdown improve the reliability and safety of the design.

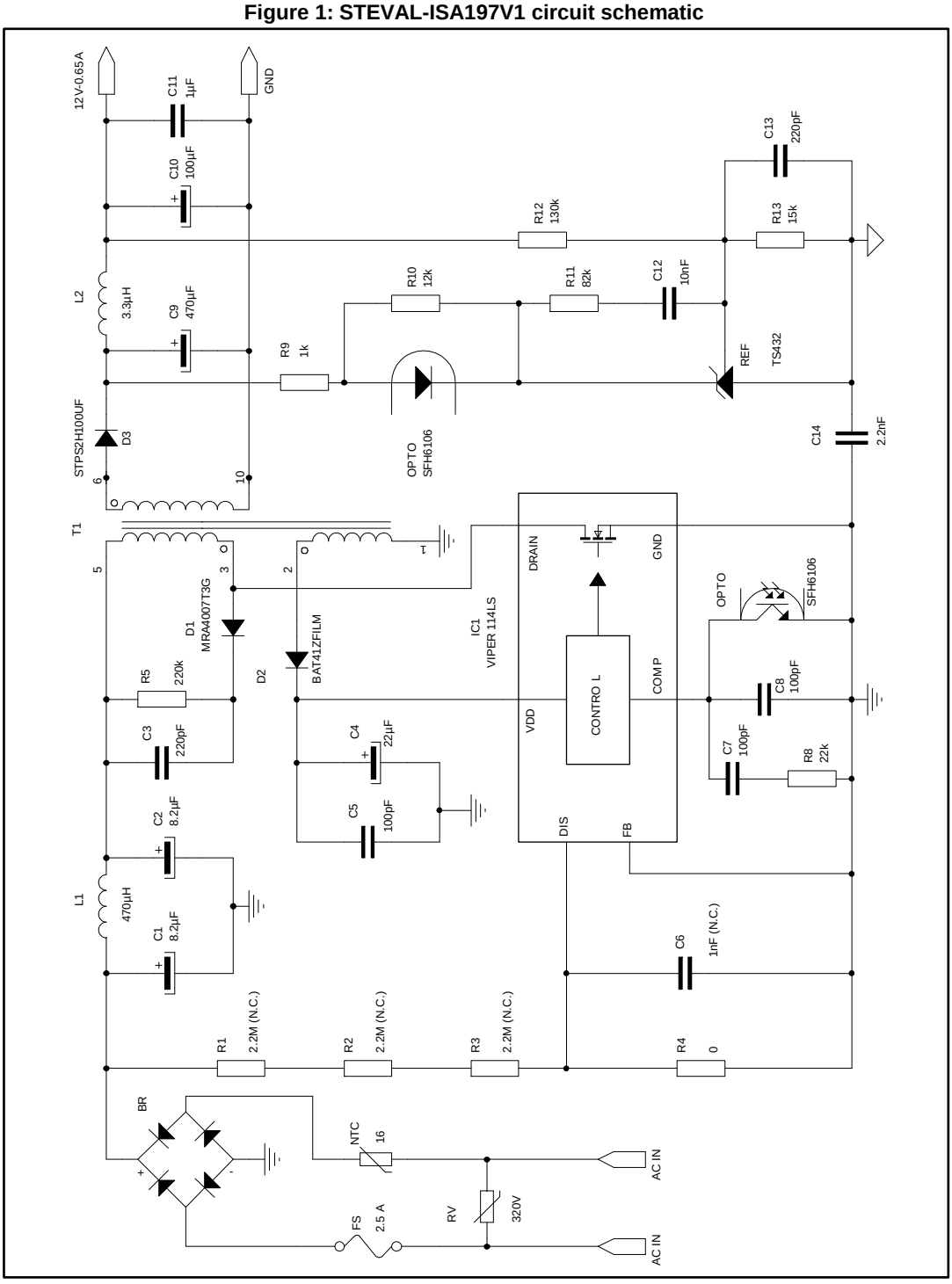
The main characteristics of the evaluation board are its small size and minimal BOM, high efficiency and low standby consumption. Extremely low consumption under the no-load condition is ensured thanks to burst mode operation, which reduces the average switching frequency and minimizes all frequency-related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

For further information contact your local STMicroelectronics sales office

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1 Schematic diagram

Figure 1: STEVAL-ISA197V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
28-Jun-2017	1	Initial release.

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