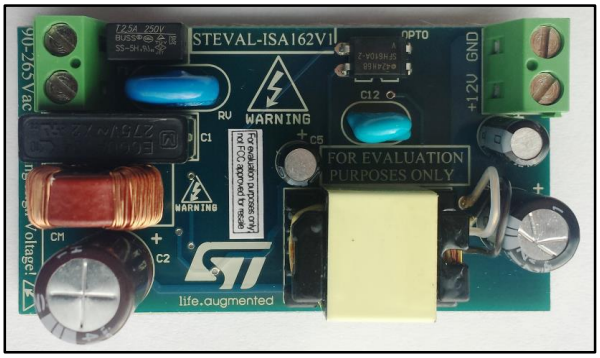
STEVAL-ISA162V1

12 V/10 W quasi resonant flyback converter based on the VIPer25HD

Data brief



Features

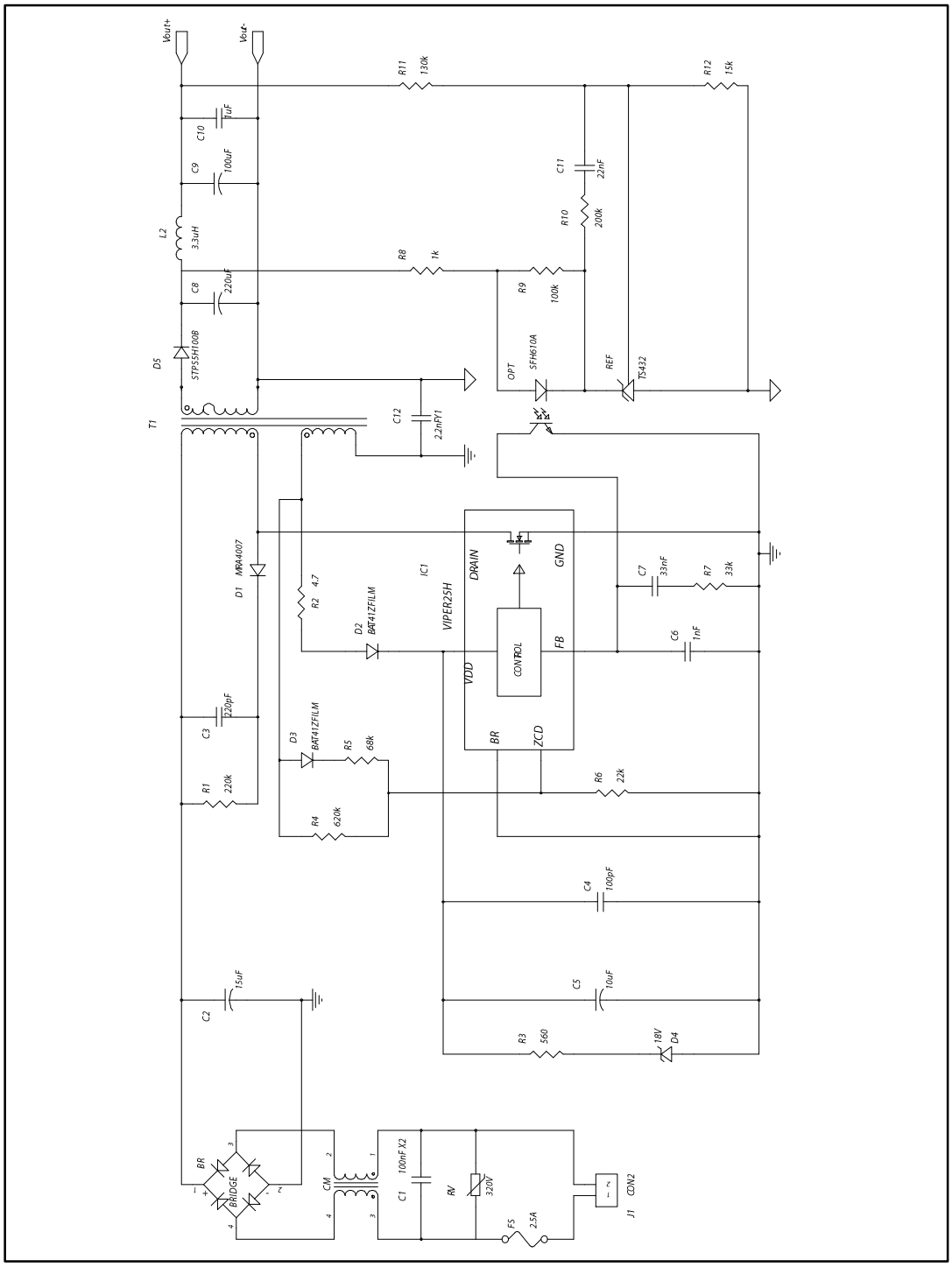
- Universal input mains range: 90 – 265 V_{AC}, frequency: 50 – 60 Hz
- Output voltage: 12 V/0.84 A
- Very compact size
- Quasi resonant operation
- Standby mains consumption: < 35 mW at 230 V_{AC}
- Average efficiency: > 82% (compliant with CoC version 5, Tier 2)
- EMI: in accordance with EN55022-Class-B

Description

The STEVAL-ISA162V1 evaluation board implements an isolated flyback (12 V/0.84 A) 10 W wide-range mains developed for general-purpose applications. The core of the application is the VIPer25HD, a new off-line high voltage converter from the VIPerPlus family. The device is a high-voltage converter that "smartly" integrates an 800 V rugged power MOSFET with PWM current mode control. The main characteristics of the board are its small size, minimal BOM, high efficiency and low standby consumption. Extremely low consumption under no-load conditions is ensured thanks to burst mode operation that reduces the average switching frequency and minimizes all frequency related losses. The VIPer25HD operates in quasi resonant mode, a feature that helps it meet standards for electromagnetic disturbance. The IC features high level protection including dual-level OCP, output overvoltage, short-circuit and thermal shutdown with hysteresis. After the removal of a fault condition, the IC automatically restarts.

1 Schematic diagram

Figure 1: STEVAL-ISA162V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
02-Apr-2015	1	Initial release.

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