

Compact power supply for DVD/set top box evaluation board with three V_{out} (-30 V, +3.3 V, +12 V)

Data Brief

Features

- Input voltage range 85 V_{AC} – 300 V_{AC}
- $V_{OUT1}= 12\text{ V} (\pm 5\%)$
- $I_{OUT1}= 1\text{ A}$
- $V_{OUT2}= 3.3\text{ V} (\pm 2\%)$
- $I_{OUT2}= 100\text{ mA}$
- $V_{OUT3}= -24\text{ V} (\pm 10\%)$
- $I_{OUT3}= 40\text{ mA}$
- Safety EN60950 compliant
- EMI - conducted EN55022-B compliant



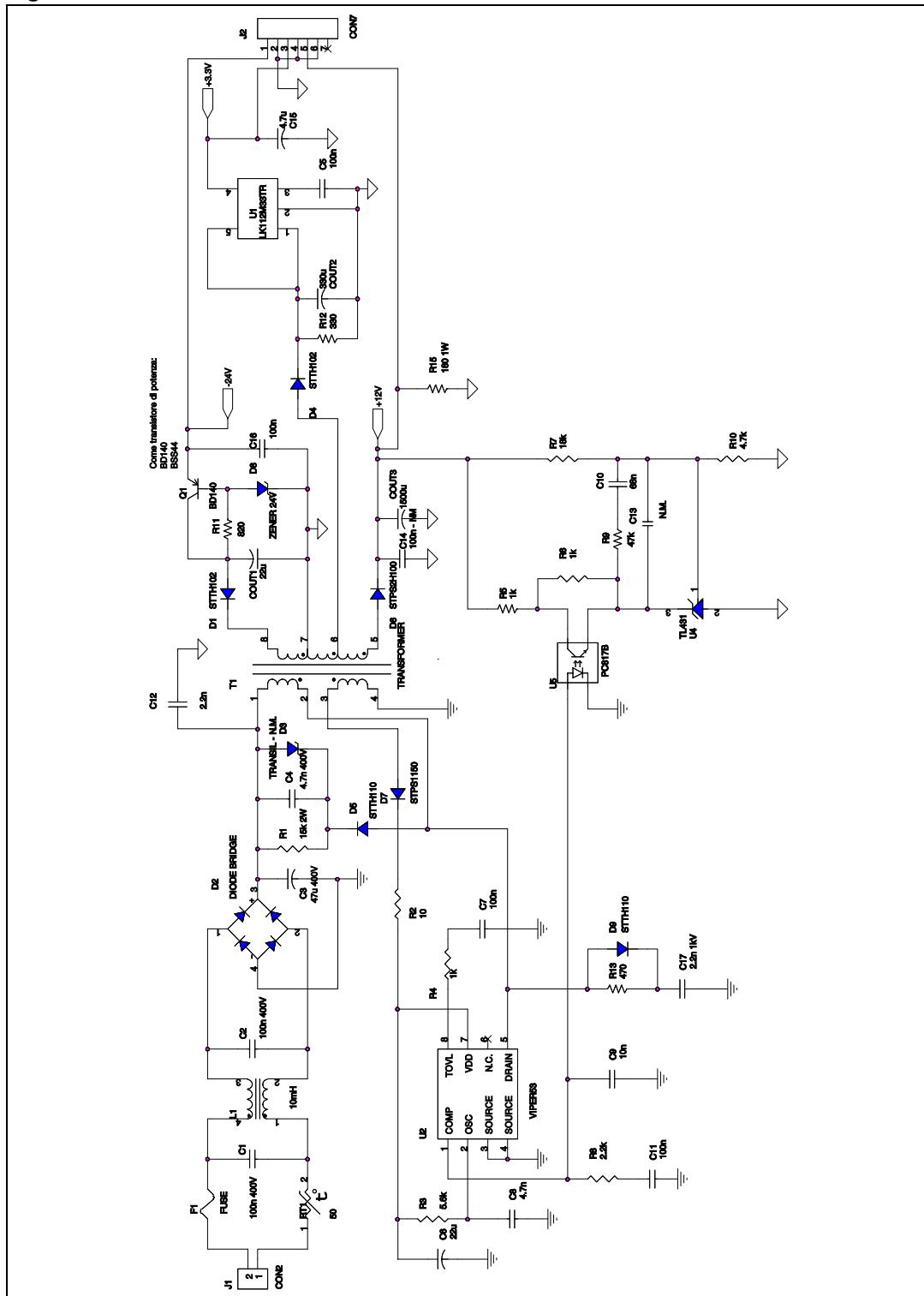
STEVAL-ISA029V1

Description

The STEVAL-ISA029V1 evaluation board is an isolated triple-output flyback converter, suitable for wide-range input voltage operation. The converter is based on the smart power VIPer53-E, which integrates, in the same package, an enhanced current-mode PWM controller with a high-voltage MDmesh™ Power MOSFET. The switching frequency is set to 60 kHz by means of an external RC network connected to a dedicated pin on the IC. The closed loop regulation is performed on the 12 V output using an optocoupler, which drives the COMP pin of the VIPer. The 3.3 V output is post regulated using a non-integrated low drop linear voltage regulator to achieve the required accuracy. The negative 24 V output is achieved by means of a discrete linear voltage regulator, made up of a Zener diode, a resistor and a PNP transistor.

1 Board schematic

Figure 1. Schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
06-Dec-2007	1	Initial release.

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