STEVAL-ISA129V1

16 V - 280 mA non isolated off-line high voltage converter based on the VIPer16

Features

- Input voltage range $V_{\text{IN}}$: 90 $V_{\text{RMS}}$ - 265 $V_{\text{RMS}}$
- Output voltage $V_{\text{OUT}}$: 16 V
- Max output current $I_{\text{OUT}}$: 0.28 A
- Precision of output regulation $V_{\text{OUT_LF}}$: ±5%
- High frequency output voltage ripple $V_{\text{OUT_HF}}$: 50 mV
- Max ambient operating temperature $T_A$: 60 °C
- RoHS compliant

Description

The STEVAL-ISA129V1 demonstration board is a 16 V - 280 mA application set in non isolated flyback topology using the VIPer16, a new off-line high voltage converter by STMicroelectronics.

The VIPer16 features an 800 V avalanche rugged power section, PWM operation at 115 kHz with frequency jittering for lower EMI, limiting current with adjustable set point, on-board soft-start, and safe auto-restart after a fault condition.

Moreover, the VIPer16 can work with or without the auxiliary winding. In the former case, it can reach very low standby consumption (< 50 mW at 265 $V_{\text{ac}}$), while in the latter the IC is supplied by an internal current generator, thus eliminating the cost of the transformer auxiliary winding.

- Protection features available include thermal shutdown with hysteresis and delayed overload protection.

For further information contact your local STMicroelectronics sales office.

www.st.com
Figure 1. STEVAL-ISA129V1 circuit schematic
2 Revision history

Table 1. Document revision history

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<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
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<tbody>
<tr>
<td>16-Apr-2013</td>
<td>1</td>
<td>Initial release.</td>
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