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STEVAL-VP319X1B

Data brief

5 V / 0.6 A Buck converter based on VIPER319X



Features

- Universal input mains range: 85–265VAC
- Frequency: 50-60 Hz
- Output voltage: 5 V
- Output current: 0.6 A
- Input power consumption in no load condition: < 16 mW at 230VAC
- 4-point average active mode efficiency at full load: > 69.7% (compliant with European CoC ver. 5)
- 4-point average active mode efficiency at 10% full load: > 60.58% (compliant with European CoC ver. 5)
- Meets IEC55022 Class B conducted EMI
- RoHS compliant

Description

The STEVAL-VP319X1B evaluation board implements a 5V/3W Buck converter developed for general purpose applications, operating from 85 to 265VAC.

If the size of the input bulk capacitors is increased, the evaluation board is able to supply the 3 W in extended range (40 – 265VAC).

The reference design is built around the new VIPERP319X, an offline high-voltage converter of the VIPERPlus family with 800 V avalanche-rugged Power MOSFET, PWM current-mode control, fixed 30 kHz switching frequency with jittering to satisfy electromagnetic disturbance standards, burst mode for light load management.

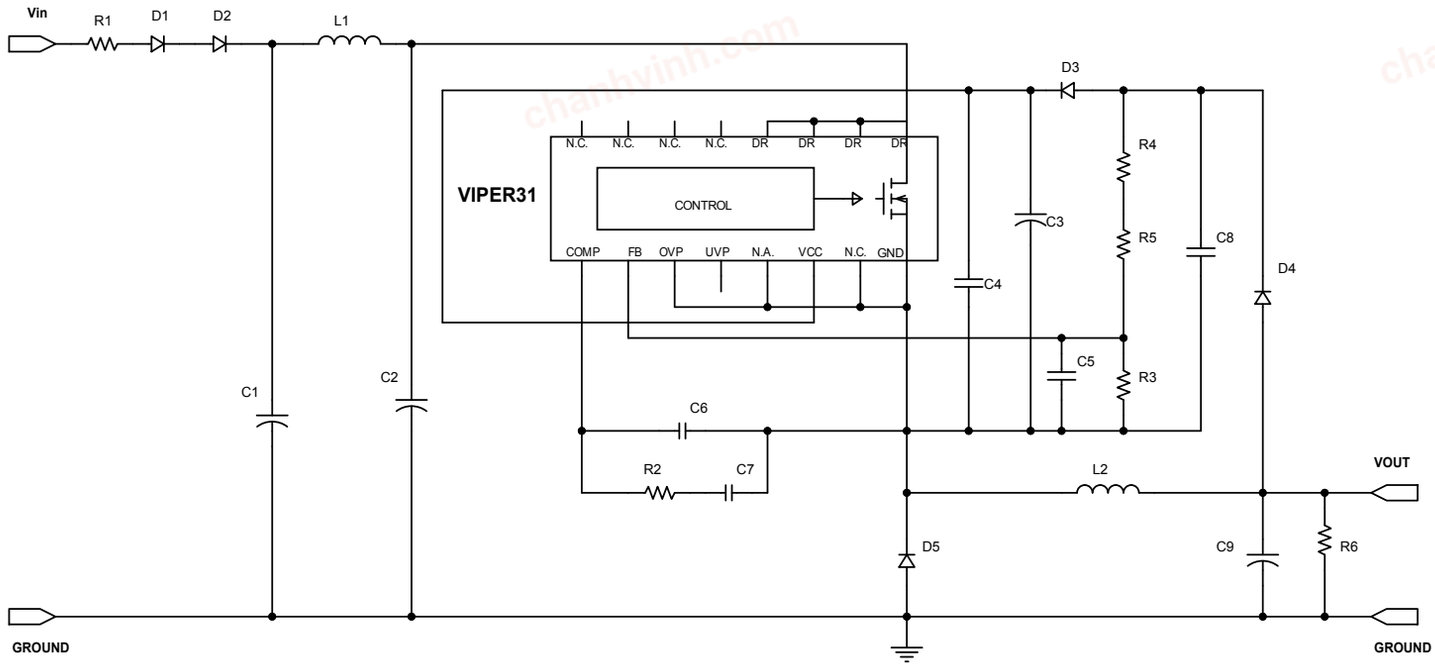
The main features of the evaluation board are: small size, minimal BOM, high efficiency, low stand-by consumption.

Product summary	
5 V/0.6 A buck converter based on VIPER319X	STEVAL-VP319X1B
Energy Saving Off-line High Voltage Converter	VIPER319X
Applications	Non-Isolated Auxiliary Power Supply up to 20 W

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1 Schematic diagrams

Figure 1. **STEVAL-VP319X1B circuit schematic**



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Revision history

Table 1. **Document revision history**

Date	Version	Changes
15-Sep-2020	1	Initial release.

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