

15 V/1.2 A isolated PSR Flyback converter based on VIPER31



Features

- Universal input mains range: 90 – 265 V_{AC}
- Frequency: 50-60 Hz
- Output voltage: 15 V
- Output current: 1.2 A
- Average efficiency: > 83%
- Tight line and load regulation over the entire input and output ranges
- Meets IEC55022 Class B conducted EMI even with reduced EMI filter, thanks to the frequency jittering feature
- RoHS compliant

Description

The **STEVAL-VP318L2F** implements a 15 V-18 W isolated flyback converter in primary side regulation (PSR) developed for general purpose applications, operating from 90 to 265 V_{AC}.

The reference design is built around the **VIPER318LDTR** offline high-voltage converter which belongs to the VIPerPlus family and features an 800 V avalanche-rugged power MOSFET, PWM current mode control, fixed 60 kHz switching frequency with jittering to meet electromagnetic disturbance standards and burst mode for light load management.

The evaluation board main characteristics are: small size, minimal BOM, high efficiency and tight line, load regulation over the entire input and output ranges.

Input overvoltage and undervoltage protections, with separate and settable intervention thresholds, are available at OVP and UVP pins.

Product summary	
15 V / 1.2 A PSR flyback converter based on VIPer318L	STEVAL-VP318L2F
Energy Saving Off-line High Voltage Converter	VIPER318LDTR
Applications	Power tools

Revision history

Table 1. Document revision history

Date	Version	Changes
30-Jun-2021	1	Initial release.

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