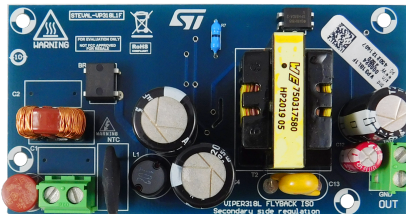# 15 V / 1.2 A SSR Flyback converter based on VIPer318L

Features

- Universal input mains range: 85 – 265VAC
- Frequency: 50-60Hz
- Output voltage: 15 V
- Output current: 1.2 A
- Stand-by mains consumption: < 55mW at 230VAC
- Average efficiency: > 85%
- Tight line and load regulation over the entire input and output range
- Meets IEC55022 Class B conducted EMI even with reduced EMI filter, thanks to the frequency jittering feature
- RoHS compliant
- WEEE compliant

Description

The STEVAL-VP318L1F reference design implements a 15 V - 18 W SSR isolated flyback converter developed for general purpose applications operating from 85 to 265 V_{AC}.

The design is built around the new VIPer318L offline high-voltage converter from the VIPerPlus family with 800 V avalanche-rugged Power MOSFET, PWM current-mode control, fixed 60 kHz switching frequency with jittering to satisfy electromagnetic disturbance regulations, and burst mode for light load management.

The board features a small size, minimal BOM, high efficiency, low stand-by consumption and tight line and load regulation over the entire input and output range. Input overvoltage and undervoltage protections with separate and settable trigger thresholds are available on the respective OVP and UVP pins.

Product summary	
15 V / 1.2 A SSR Flyback converter based on VIPer318L	STEVAL-VP318L1F
Energy Saving Off-line High Voltage Converter	VIPER318L
Applications	Isolated Auxiliary Power Supply up to 20W

DB4224 - Rev 2 - November 2020
For further information contact your local STMicroelectronics sales office.

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1   Schematic diagrams

Figure 1. STEVAL-VP318L1F board schematic

Revision history

Table 1. Document revision history

Date	Version	Changes
03-Sep-2020	1	Initial release.
04-Nov-2020	2	Updated Section 1 Schematic diagram.

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