
35 W wide input range flyback converter using HVLED001B quasi resonant flyback controller and STF10LN80K5

Data brief



fold-back feature that, contemporarily, reduces the output voltage ripple at light load.

Output short-circuit and overload protections are auto-restart for a safe operation in lighting environment.

Extremely low input power is there at no load conditions.

Features

- Input voltage: V_{in} : 90 - 265 Vrms, f: 45-66 Hz
- Output voltage: 48 V / 730 mA
- High power factor, low THD
- No-load: better than 150 mW @ 230 V_{in}
- Average full load efficiency: 90%
- Short-circuit protection with auto restart
- Safety: Acc. to EN60065
- EMI: Acc. to EN55022 - conducted emissions

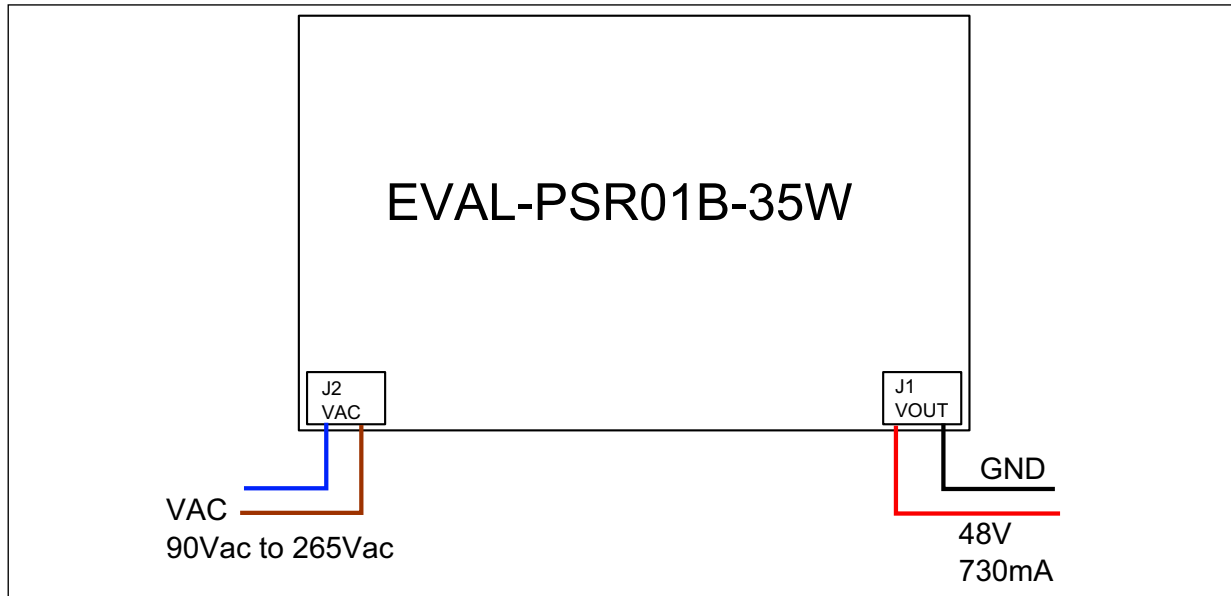
Description

The EVAL-PSR01B-35W is intended to provide a stable and insulated 48 V voltage bus suitable to supply secondary side circuitry for a total output power of 35 W when a wide range of input voltages is applied at its input. A very high power factor is obtained thanks to HVLED001B features. Input voltage variations, excessive input voltage (overvoltage like surge or bursts) or very low input voltages are managed by some of the HVLED001B protections, improving the reliability of the application.

The efficiency of the application is very high even at very low load thanks to the improved frequency

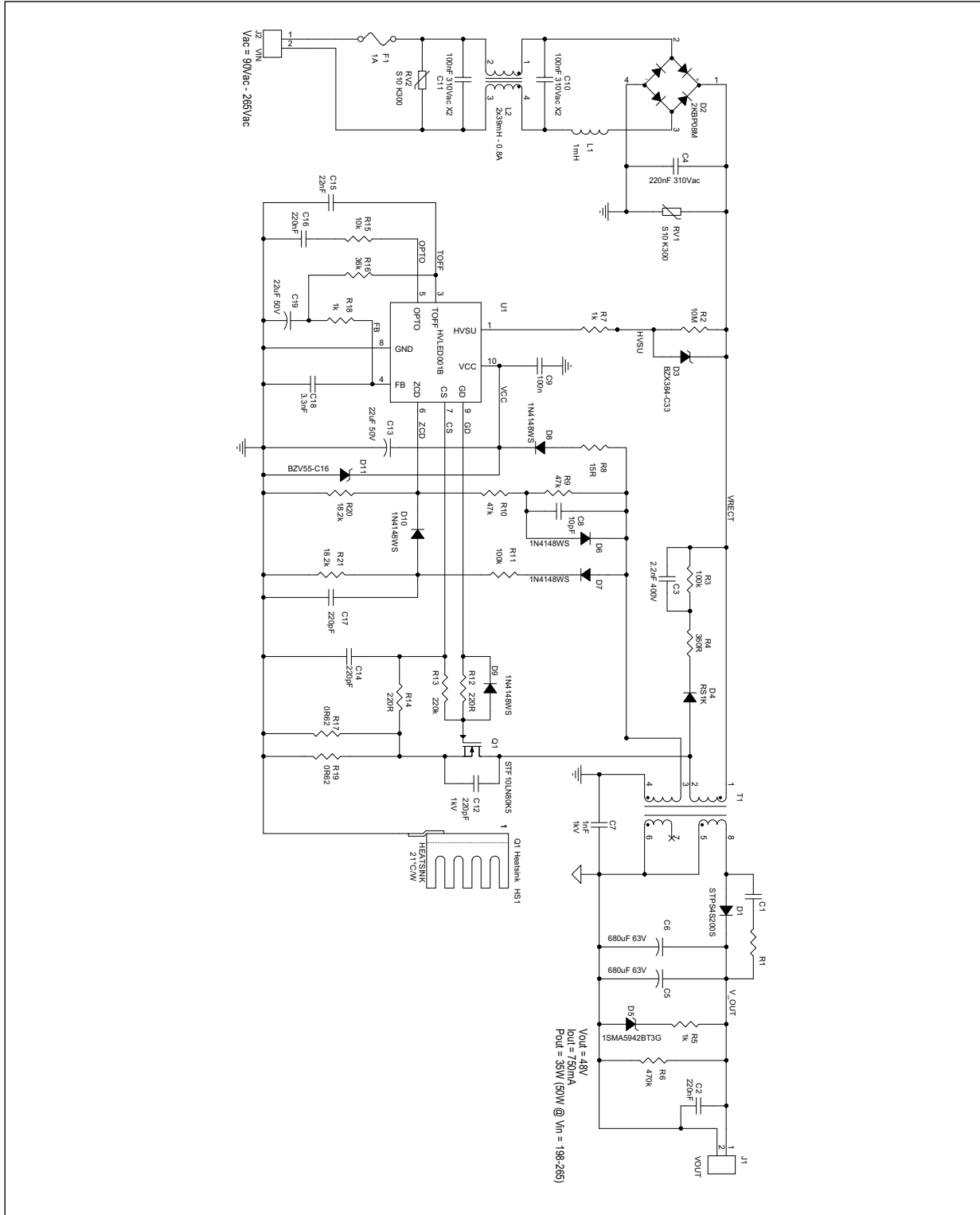
1 Board description

Figure 1. Jumpers and connectors location



2 Schematic diagram

Figure 2. . EVAL-PSR01B-35W - Schematic (* = component not fitted)



3 Revision history

Table 1. Document revision history

Date	Revision	Changes
24-Oct-2018	1	Initial release

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved