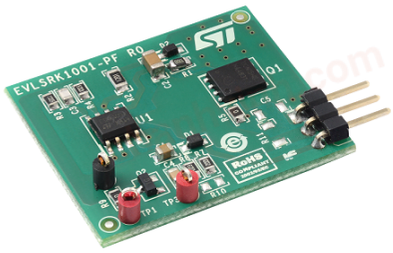
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EVLSRK1001-PF

Data brief

SRK1001 adaptive synchronous rectification controller for flyback converter demonstration board with SR MOSFET



Product status link
EVLSRK1001-PF

Features

- Synchronous rectifier for flyback converter, with fixed turn-on and adaptive turn-off
- V_{CC} range: 3.5 V to 32 V
- DVS sensing voltage: 185V AMR
- Max frequency: 500 kHz
- Internal gate drive for N-channel MOSFET
- SR MOSFET type: BSC110N15NS5 standard level (150 V – 11 mΩ) PowerFLAT 5 x 6

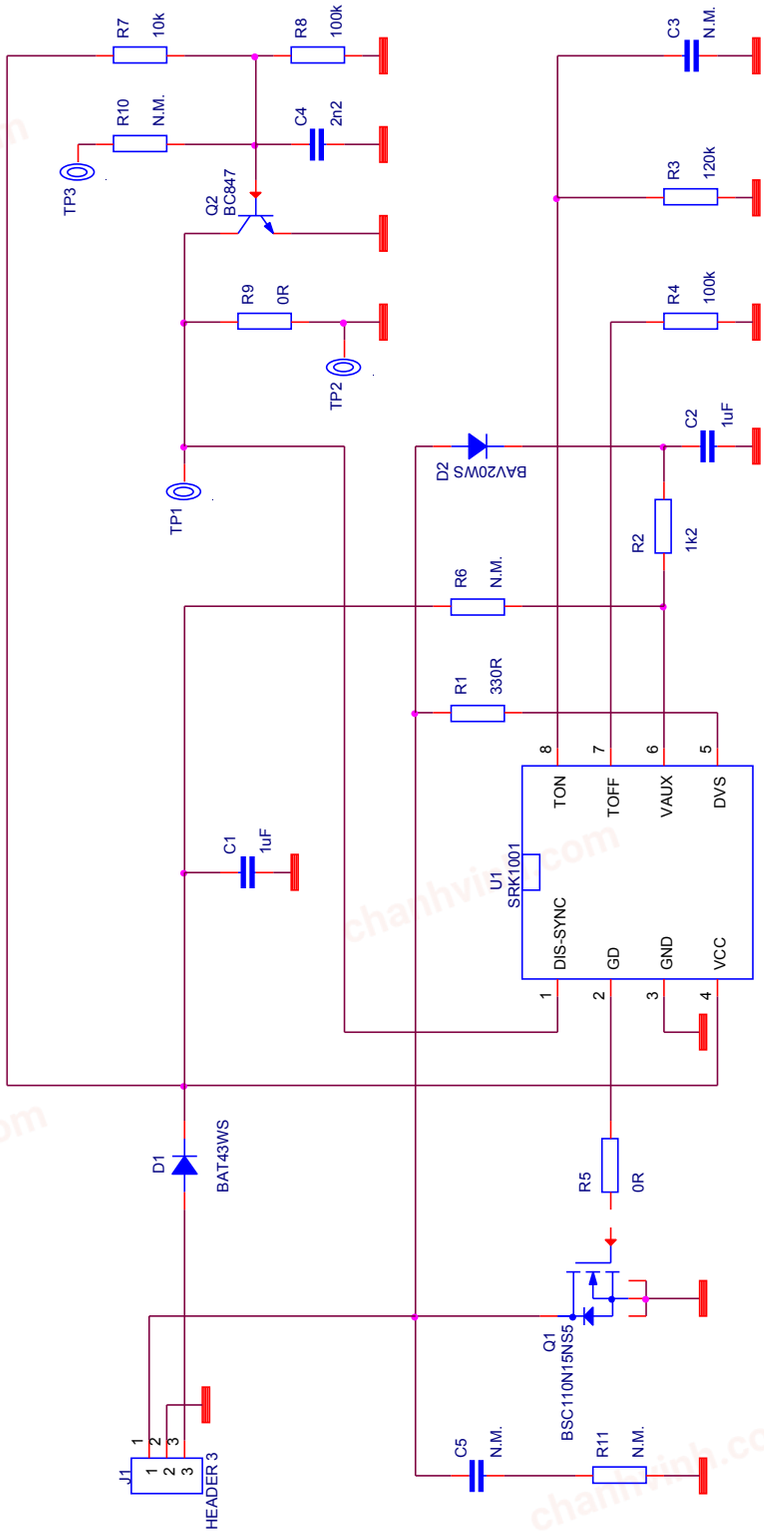
Description

The EVLSRK1001-PF is a demonstration board, designed for evaluation of the SRK1001 synchronous rectification controller. The SRK1001 implements a control scheme specific for secondary-side synchronous rectification in flyback converters and provides high-current gate-drive outputs for driving N-channel Power MOSFET. The device can operate both in quasi-resonant (QR) applications and in fixed frequency (FF) mixed DCM-CCM applications. The board is provided with a setting suitable for QR application. To use in FF applications, a 100pF capacitor needs to be added in C3. A 120 kΩ resistor (R3) is provided on the TON pin that fixes the blanking after the turn-on to about 1.44 µs. The blanking time after turn-off is set to 3 µs through a 100 kΩ resistor (R4) on TOFF pin. In order to use the DIS/SYNC pin functionality, the user has to remove the zero ohm resistor R9: the PCB already provides a NPN transistor connected to this pin for remote ON/OFF. The board includes the SR MOSFET (PowFLAT 5 x 6 package) and can be easily implemented into an existing converter to substitute rectifier diodes.

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1 Electrical schematic

Figure 1. **Electrical schematic**



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Revision history

Table 1. **Document revision history**

Date	Version	Changes
07-May-2019	1	Initial release.
30-Oct-2019	2	Minor change to Description

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