

SRK1000 adaptive synchronous rectification controller for flyback converter demonstration board with STF80N10F7

Data brief



Features

- Synchronous rectifier for flyback converter, with fixed turn-on and adaptive turn-off
- V_{CC} range: 3.5 V to 32 V
- DVS max. operating voltage 90 V
- Max. frequency: 500 kHz
- Internal gate drive for N-channel MOSFET
- SR MOSFET type: STF80N10F7 (100 V - 10 m Ω) TO220FP

Description

The EVLSRK1000-TO is a demonstration board, designed for evaluation of the SRK1000 synchronous rectification controller.

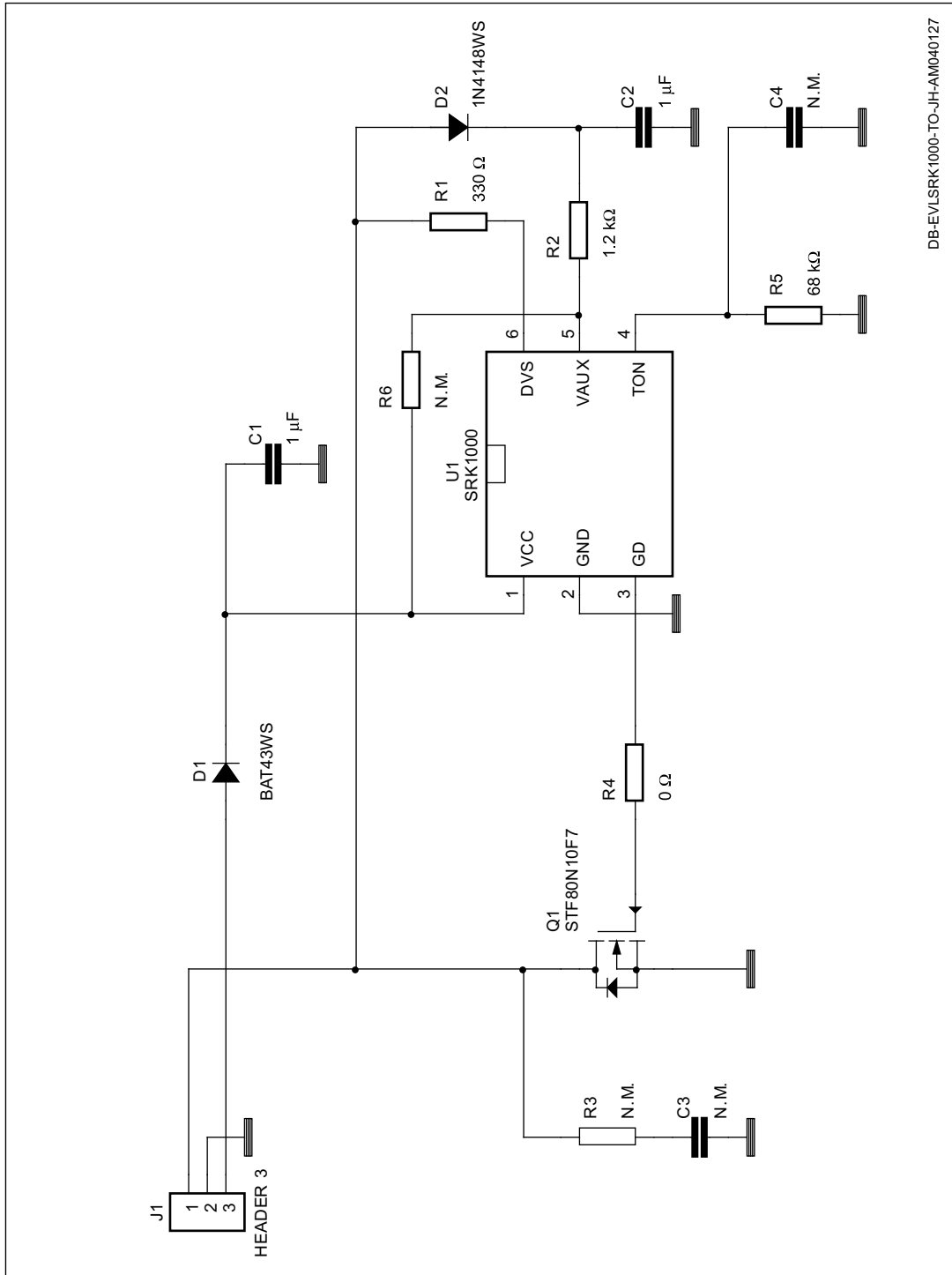
The SRK1000 implements a control scheme specific for secondary-side synchronous rectification in flyback converters and provides high-current gate-drive outputs for driving the N-channel power MOSFET.

The device can operate both in quasi-resonant applications and in fixed frequency (FF) mixed DCM-CCM applications. The board is provided with a setting suitable for QR applications. To use in FF applications, a 100 pF capacitor needs to be added in C4. A 68 k Ω resistor (R5) is provided on the TON pin that fixes the blanking after the turn-on to about 0.8 μ s.

The board includes the SR MOSFET (TO220FP package) and can be easily implemented into an existing converter to substitute rectifier diodes.

Electrical schematic

Figure 1. EVLSRK1000-TO electrical schematic



DB-EVLSRK1000-TO-JH-AM040127

Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Oct-2018	1	Initial release.