

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 mQ) 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.

Revision history

Table 1. Document revision history

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

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