

SRK1000B 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) TO-220FP

Description

The EVLSRK1000B-TO is a demonstration board, designed for evaluation of the SRK1000B synchronous rectification controller.

The SRK1000B 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 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 (TO-220FP 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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