Demoboard BTF3050TE V1.1

Smart Low Side Power Switch

Demoboard Description

V 1.1, 2015-04-14

Automotive Power

1 Demoboard BTF3050TE

Note: The following information is given as a hint for the implementation of the device only and shall not be regarded as a description or warranty of a certain functionality, condition or quality of the device.

Basic Features of this Demoboard

- RoHS compliant
- Driving one12 V DC resistive, capacitive or inductive load
- Supporting PWM < 20 kHz (via external signal generator)
- Additional equipment needed: 1x 12 V power supply, 1x signal generator

Description of how to use the Demoboard

This description is intended to give a fast introduction to the BTF3050TE demoboard. The demoboard gives the user a quick start for lab evaluation of the capabilities of the BTF3050TE. Stand-alone operation is possible.

The BTF3050TE demoboard (PCB size: 85 x 70 mm^2) has 2 layers (70 µm copper). It is equipped with one sample of the product BTF3050TE (IC3). **Figure 1** gives an overview of the demoboard. **Table 1** provides a description of major parts of the demoboard. The schematic and an example for external connection is given in **Figure 2**.

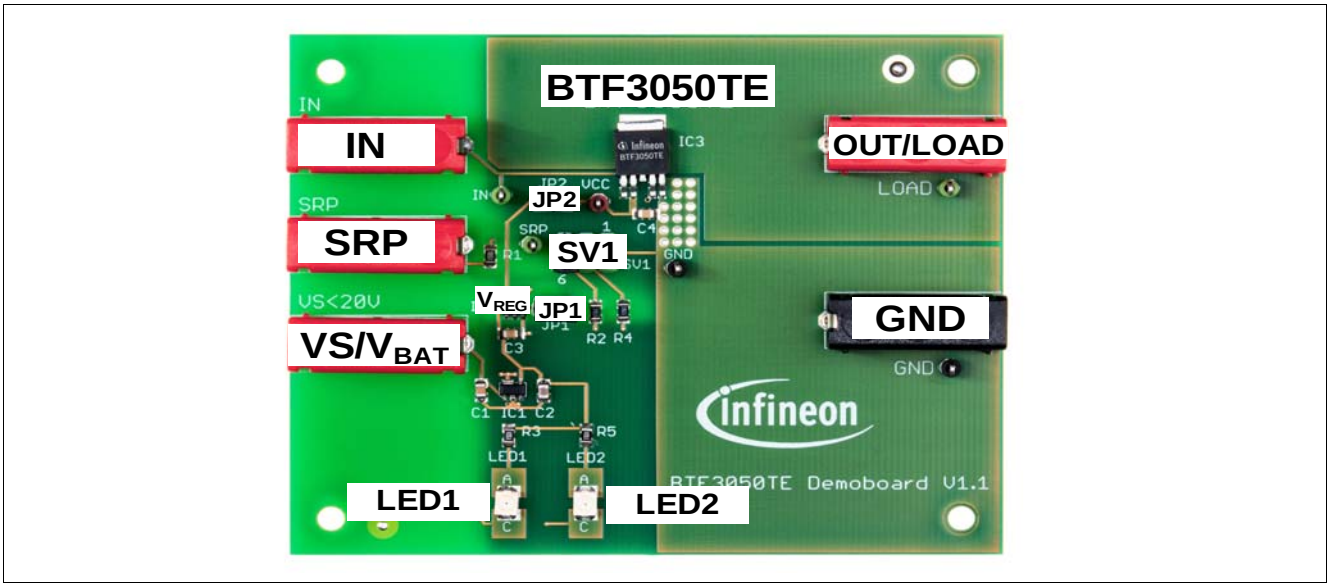

Figure 1 Board Overview

Table 1 Part Description

Name	Description
IN	Input signal; TTL logic level (5V recommended)
SRP	SRP output; digital fault feedback output. Slew Rate selection via SV1
VS	Supply voltage; Can be connected to battery supply line or an external power supply < 20 V. An integrated voltage regulator maintains VS at 5 V, supplying the BTF3050TE VDD pin

Table 1 Part Description (cont'd)

Name	Description
OUT	Output/Load; refers to the OUT pin of the device. Load (4.7 Ω for nominal current) to battery supply line (13.5 V recommended). For inductive loads check energy capabilities
GND	Ground; connect all grounds to this pin
VREG	Voltage regulator; TLE4295 provides a stable output voltage of 5 V
JP1	Jumper 1; connects the FAULT signaling LED1
JP2	Jumper 2; connects the Voltage regulator output to the device's VDD JP2 can be removed to implement an external power supply for VDD
SV1	SRP resistor selector; Controls the Slew Rate to the desired switching speed 1-2 connects 0 Ω between device's SRP pin and GND 3-4 connects 5.8 Ω between device's SRP pin and GND 5-6 connects 58 Ω between device's SRP pin and GND
LED1	FAULT indicator; If LED1 (red) is on, the fault feedback is active
LED2	VDD indicator; If LED2 (green) is on, the regulated 5 V supply is active

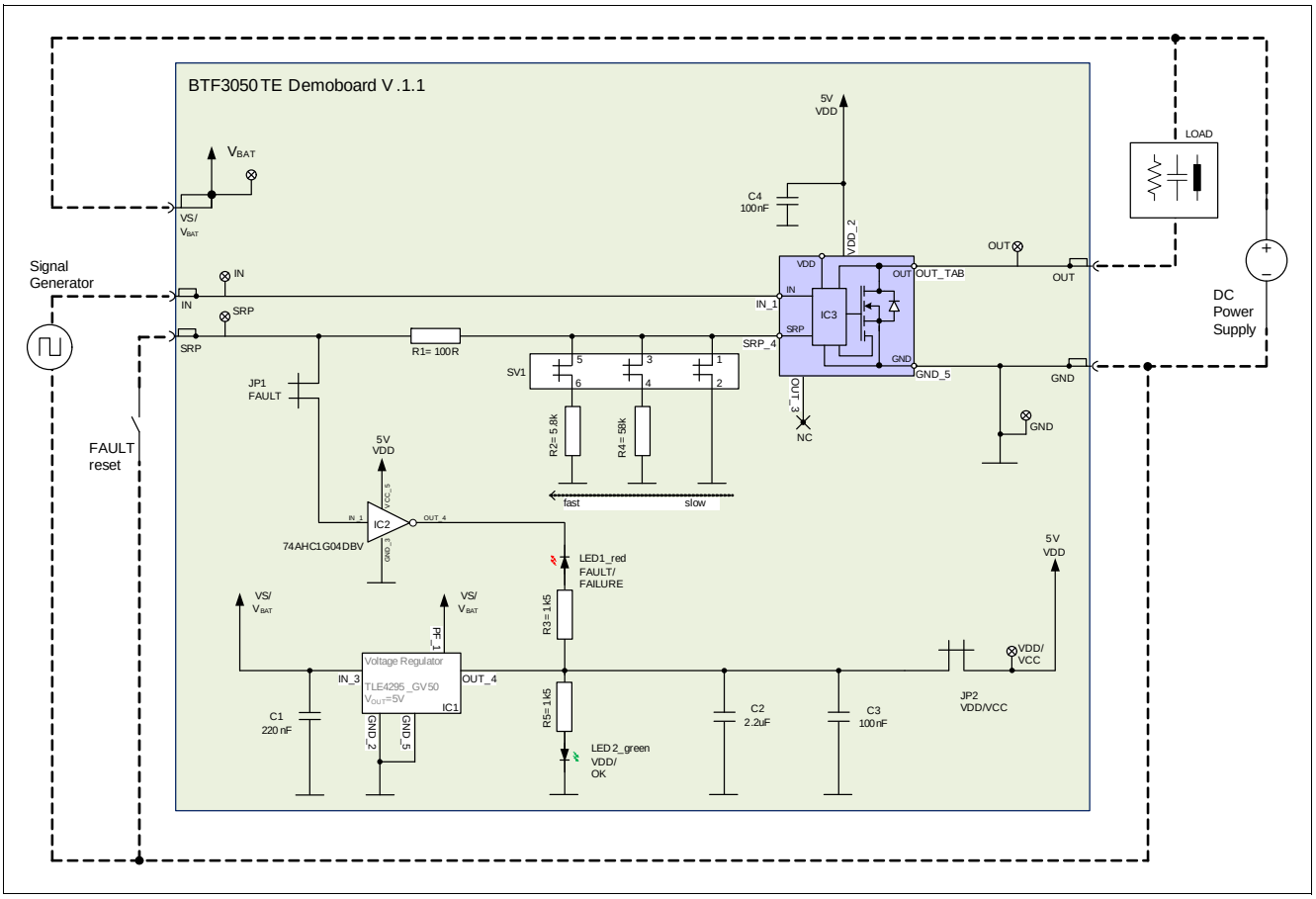

Figure 2 Demoboard Schematic

Note: The Figure above shows the demoboard schematics and a very simplified application example. The function in real applications must be verified to not exceed the limits of the device nor the demoboard and its components.

Table 2 Revision History

Revision	Date	Subjects (major changes since last revision)
Rev. 1.1	14.04.2015	Demoboard Description released

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