EVAL-L9942

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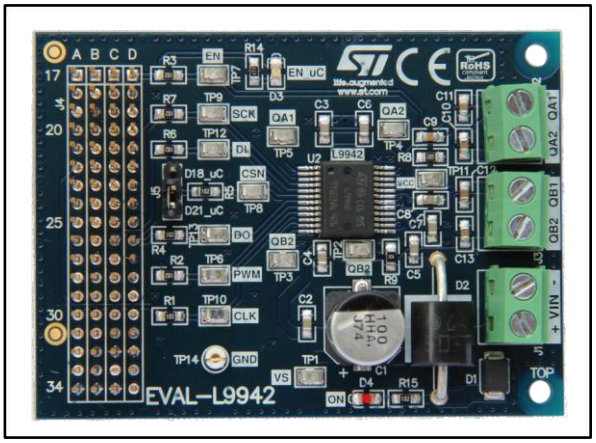
Data brief



Features

- Input signal connector compatible with the SPC56 Discovery boards. Possibility to connect the board to further microcontroller discovery or control boards by a simple adaptor.
- Two output terminal blocks.
- Wide supply voltage range (V_{Batt}): 7 V ÷ 20 V.
- 2 LEDs for monitoring V_{Batt} and EN signal.
- Device controlled and programmed via SPI.
- L9942 diagnostic functions via SPI.
- Test points to monitoring both input signals (SPI, PWM, EN, StepClock) and the four outputs (out power stage).
- No heat-sink is required

Description

The EVAL-L9942 is the Evaluation Board designed to provide the user a platform to evaluate the device L9942. The L9942 is a motor driver for bipolar stepper motors with micro-stepping and programmable current profile look-up-table to allow a flexible adaptation of the motor characteristics and intended operating conditions. Different current profiles can be chosen depending on target criteria: audible noise, vibrations, rotation speed or torque. The decay mode used in PWM-current control circuit can be programmed to have slow, fast, mixed and auto-decay. The programmable stall detection is useful to avoid running the motor too long time in stall position minimizing the noise. The EVAL-L9942 board provides all the inputs and outputs capabilities necessary to drive correctly a bipolar stepper motor and also to monitoring diagnostic functionalities. The board can be connected to the discovery boards developed for the SPC56 microcontroller.

Table 1: Device summary

Order code	Reference
EVAL-L9942	EVAL-L9942 evaluation board

Contents

1 System requirements, HW and SW resources

1.1 System requirements

- Power Supply: 7 V ÷ 20 V; 3 A
- SPC56 discovery board or microcontroller board able to offer SPI signals, EN, StepClock, PWM signals and +5 V (V_{cc})

2 Revision history

Table 2: Revision history

Date	Revision	Changes
17-Dec-2013	1	Initial release.
24-Mar-2015	2	Updated image in cover page.

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