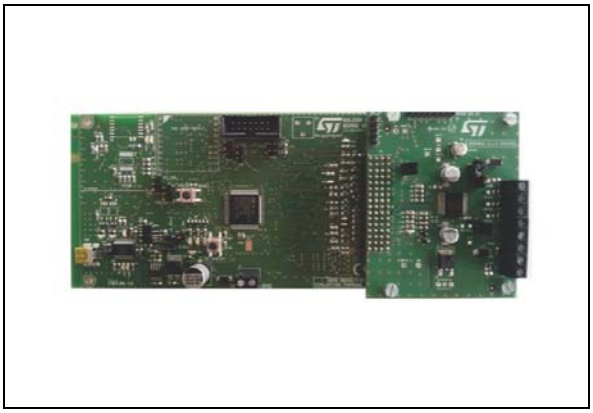
EVAL-L99SM81V

L99SM81V Evaluation Board

Data brief



Features

- Bipolar stepper motor driving through L99SM81V device
- MOSFET reverse battery protection, with the possibility to replace it with two diodes through dedicated jumper configuration
- ISO pulse protection (could not be soldered)
- Normally powered at 12V through specific daughter board connector
- Possibility to solder output capacitors at the motor terminals
- L99SM81V internal 5V linear voltage regulator output connector available on the daughter board
- The mother board allows selecting the digital power supply of the L99SM81V between 5V and 3.3V through a dedicated jumper

Description

The EVAL-L99SM81V is an evaluation board designed to drive one bipolar stepper motor in micro-stepping mode together with coil voltage measurement for stall detection.The evaluation board consists in a motherboard and a daughter board featuring L99SM81V stepper motor driver. Both of the evaluation boards provide electronic control modules with enhanced power management power supply functionalities including one standby mode.The motherboard, based on SPC56 microcontroller, provides the logic section for monitoring and driving the L99SM81V assembled on the daughterboard. With the aim of making the board usage and settings simpler, ST provides dedicated user-friendly software with a Graphic User Interface (GUI). This enables the user to set L99SM81V parameters and at the same time to get real time information from the device, such as voltage measurements, main power supply voltage, fault flags, device junction temperature and much more.

Table 1. Device summary

Order code	Reference
EVAL-L99SM81V	L99SM81V Evaluation Board

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1 Application schematics and layouts

1.1 L99SM81V daughterboard

Figure 1. EVAL-L99SM81V top layer

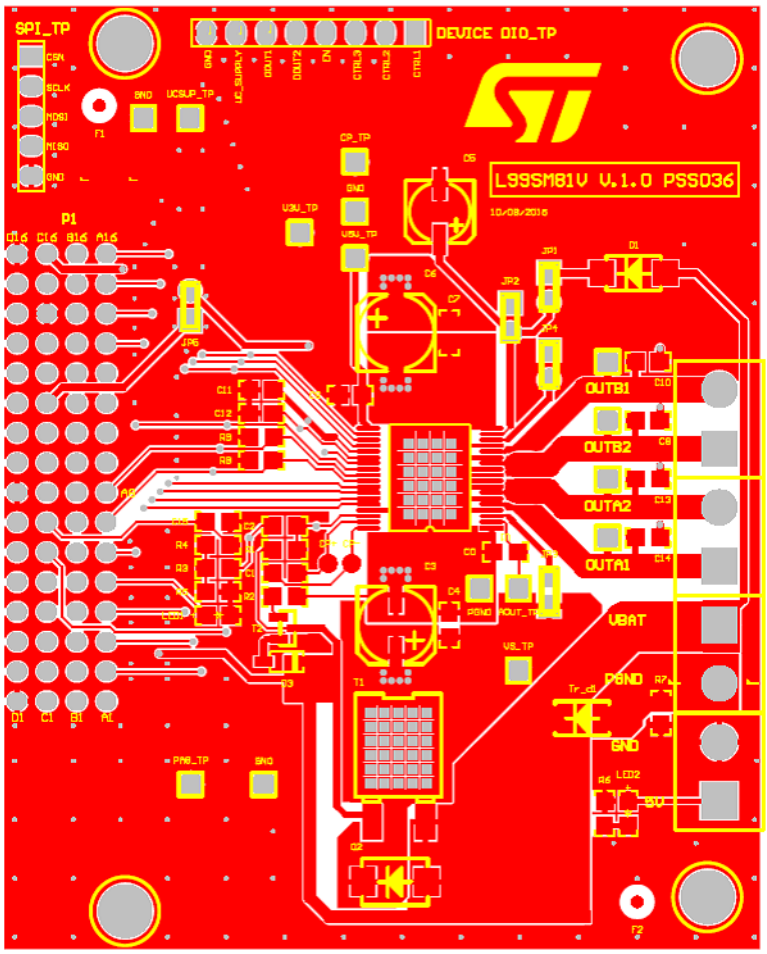


Figure 2. EVAL-L99SM81V bottom layer

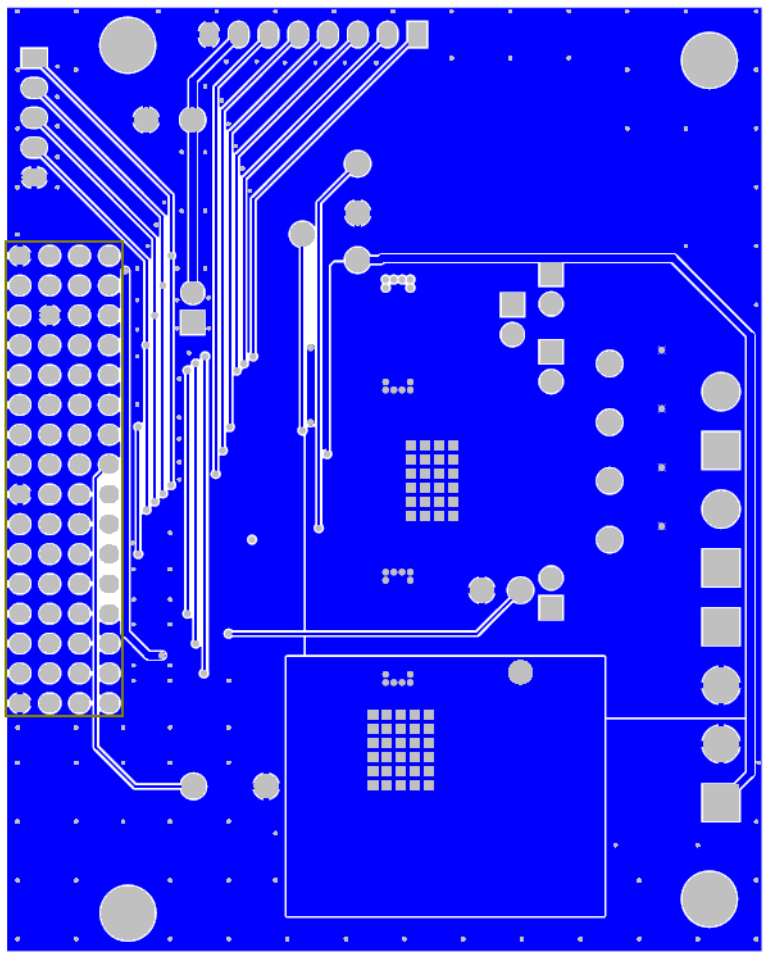
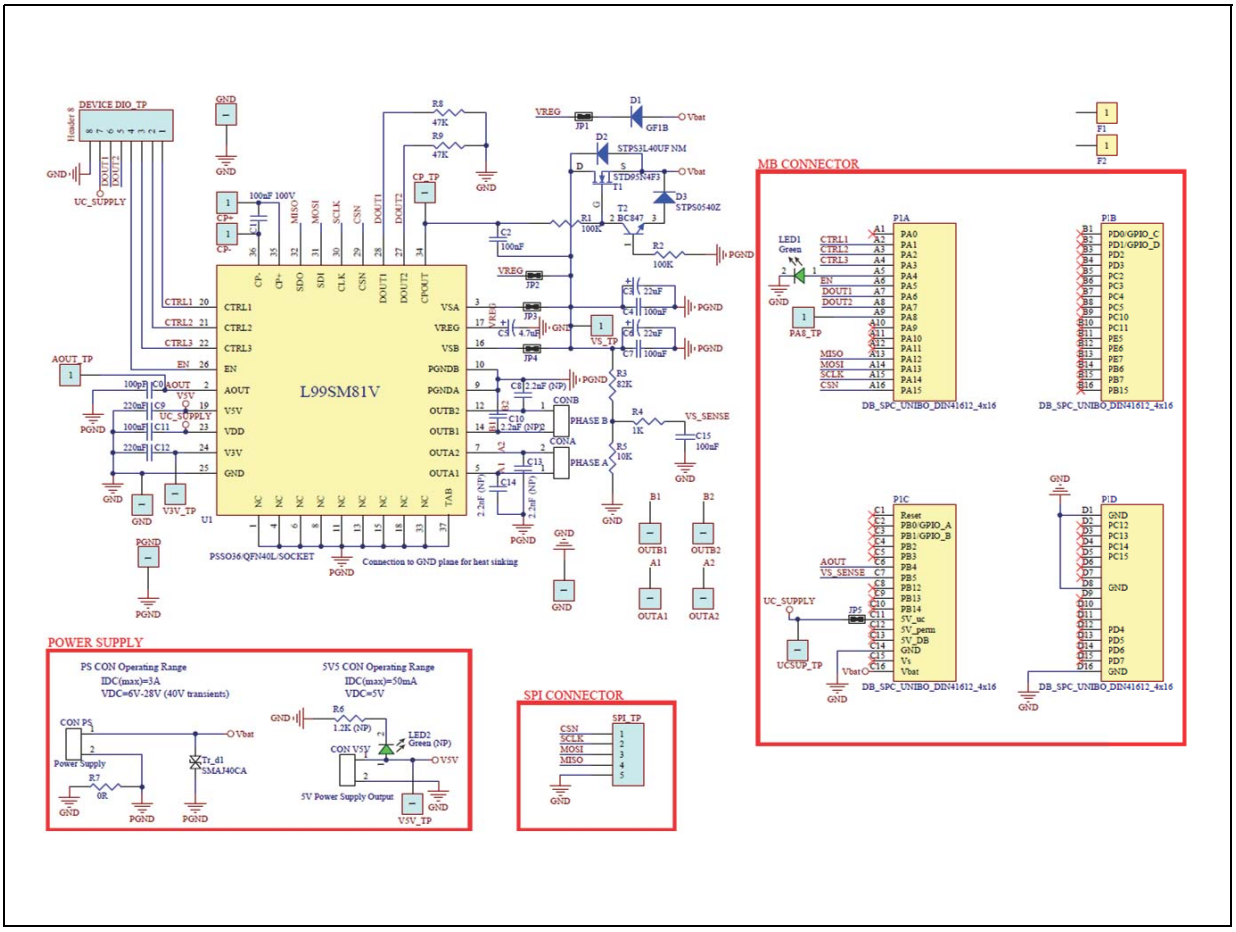


Figure 3. EVAL-L99SM81V schematic



2 Demonstration Software

A software GUI (Graphical User Interface) for easy demonstration of the L99SM81V features is distributed on customer request.

2.1 System requirements

- Windows OS(XP, 7, 8)
- USB type B

3 Revision history

Table 2. Document revision history

Date	Revision	Changes
08-Aug-2018	1	Initial release.