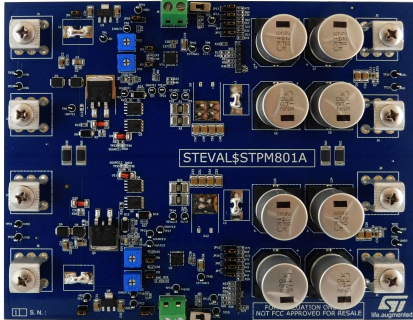


Automotive high voltage hot swap, soft start and oring



Features

- Evaluation board for STPM801, allowing to connect high current loads to the outputs (up to 30 A)
- Availability of two sections on the board (2x STPM801), with the possibility to operate in dual supply line approach
- Possibility to trim the undervoltage and the overvoltage thresholds, adapting them to the system in use (12 or 24 V)
- Onboard oring and hot swap MOSFETs

Description

The [STEVAL-STPM801](#) is an evaluation board that provides a complete test environment for [STPM801](#), allowing the possibility to work with a dual supply line approach.

User can evaluate the hot swap and oring functions between the two input supplies, taking advantage of [STPM801](#) control.

The [STEVAL-STPM801](#) consists of two identical sections, each one hosting an [STPM801](#) device, with all the circuitry needed to test the full functionality (external MOSFETs included).

The two outputs can be connected together achieving, for the load connected to them, the OR of the two supply voltages applied at the inputs.

The two sections are independent, and the user can also adopt a single supply approach, leaving unsupplied the unused line.

Product summary

Automotive high voltage hot swap, soft start and oring	STEVAL-STPM801
Hot Swap & Ideal Diode Controller for high redundancy power architectures	STPM801
Applications	Automotive Power Distribution

1 Featured component

The STEVAL-STPM801 can be considered an excellent starter kit for customer's quick evaluation and project development.

Table 1. Component

Name	Description
STPM801	Hot swap and ideal diode controller for high redundancy power architectures

Minimum system requirements

- Supply generator: 0-30 V, at least 3 A of current capability (it can be higher depending on the load connected to the outputs)
- Oscilloscope: 4 channels, 200 MHz bandwidth or higher
- Multimeter

2 Schematic diagrams

Figure 1. STEVAL-STPM801 circuit schematic (1 of 3)

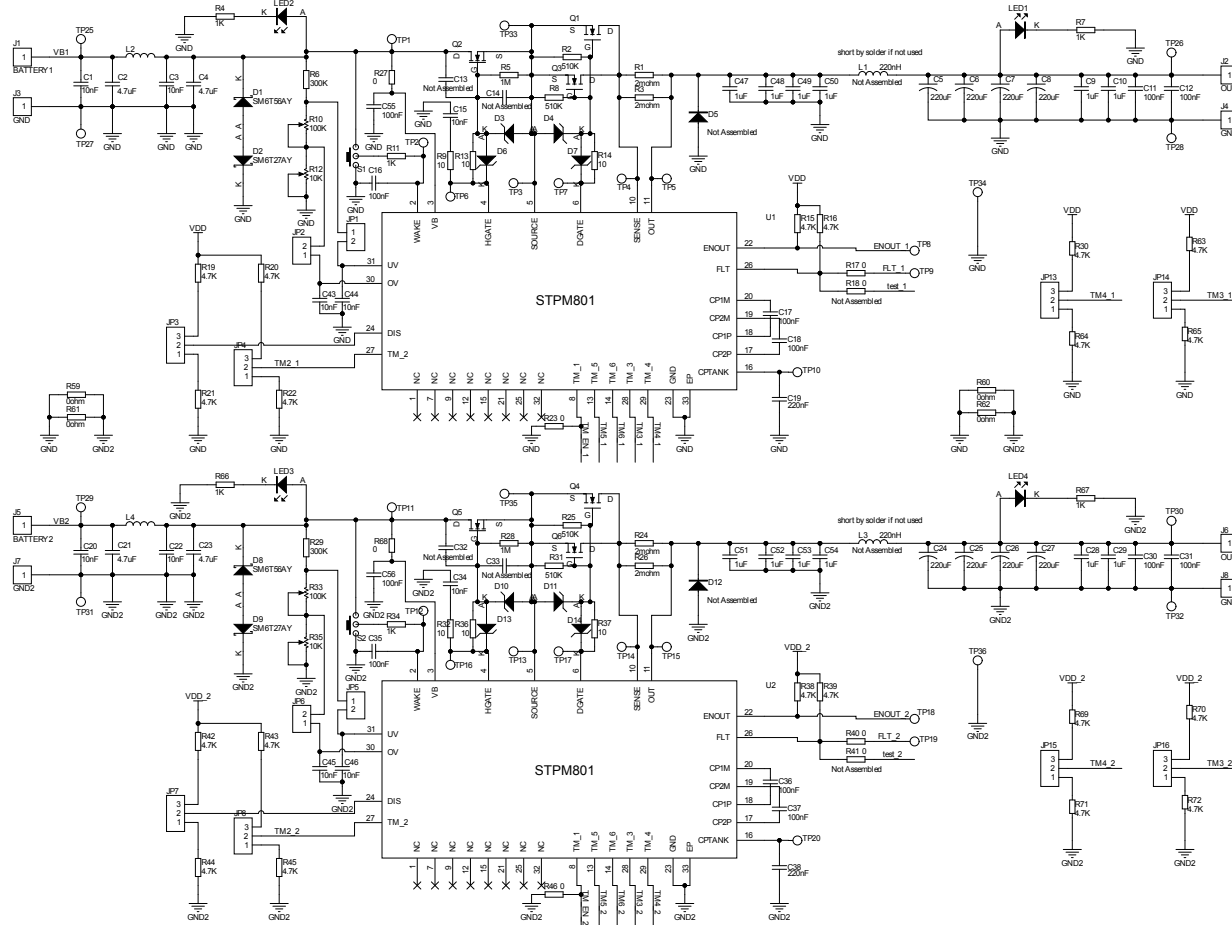


Figure 2. STEVAL-STPM801 circuit schematic (2 of 3)

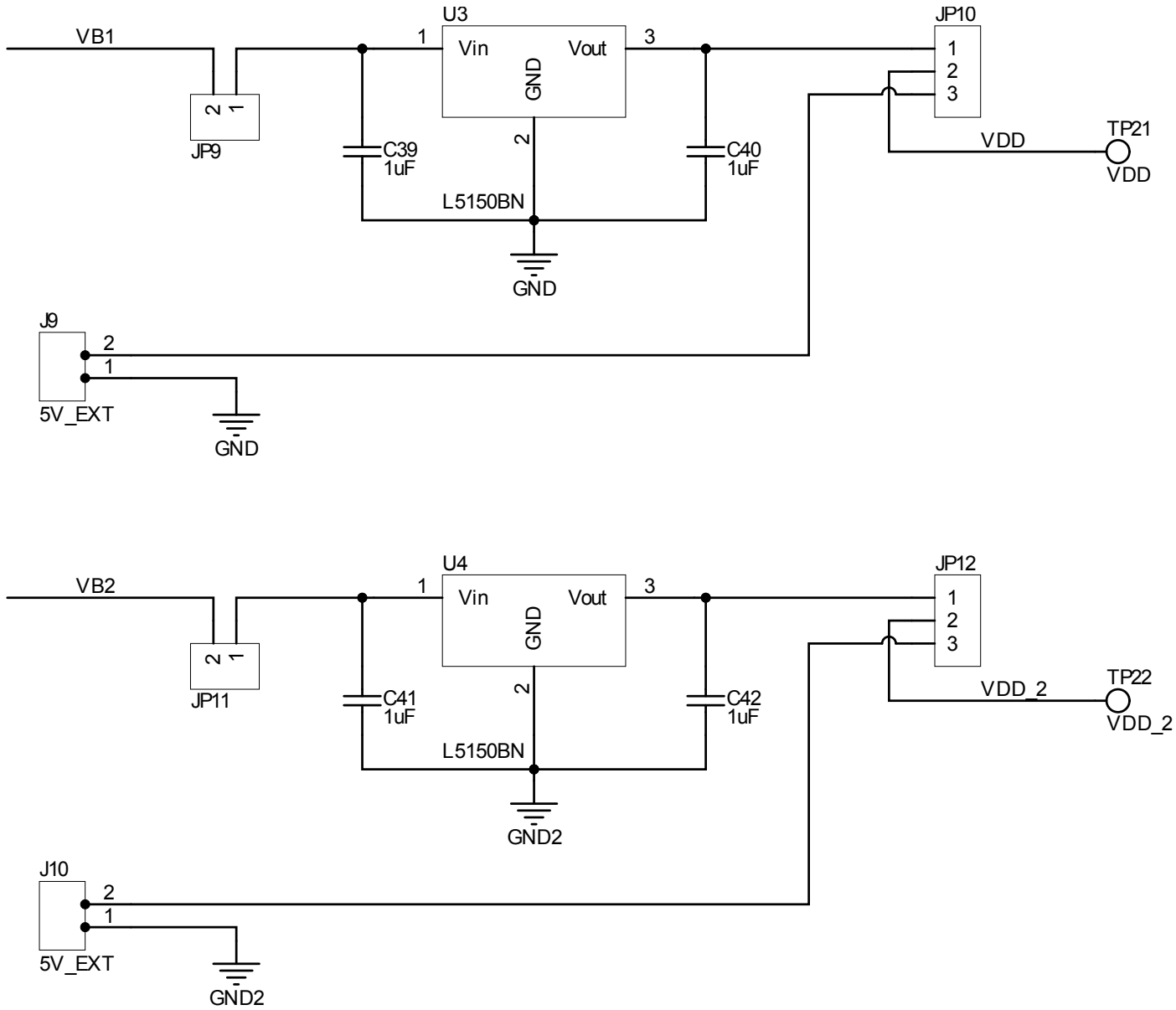
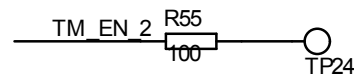
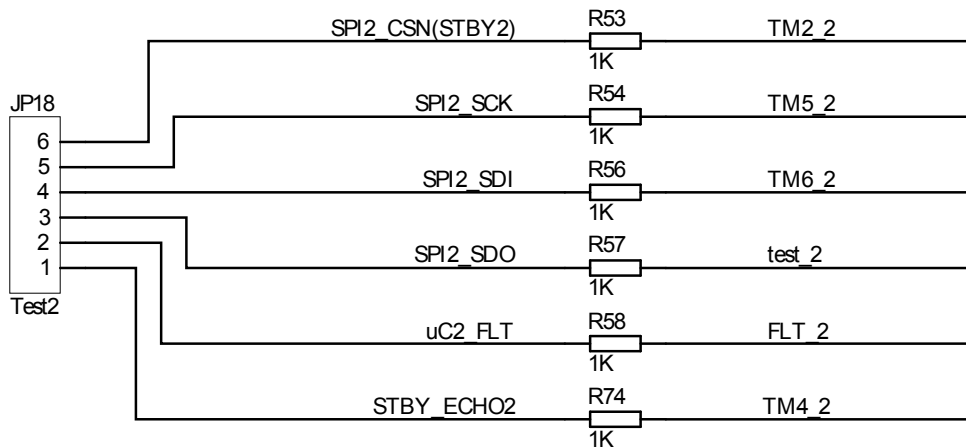
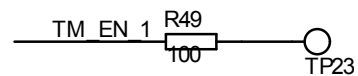
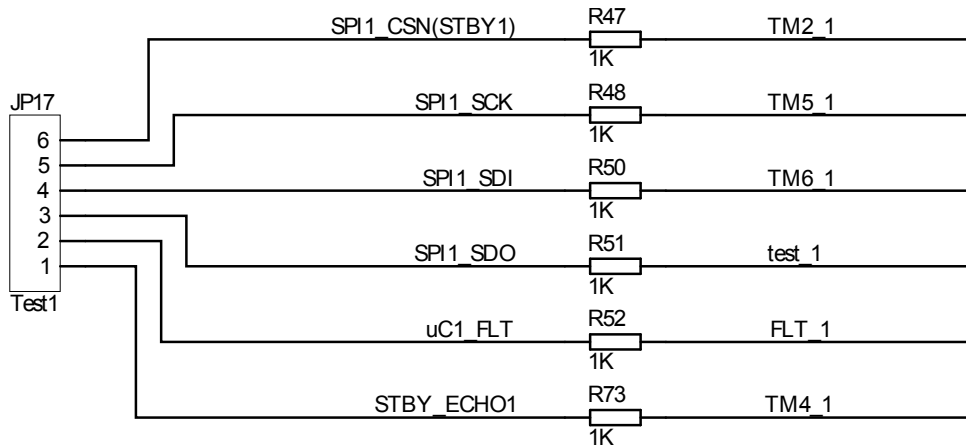


Figure 3. STEVAL-STPM801 circuit schematic (3 of 3)



3 Board versions

Table 2. STEVAL-STPM801 versions

PCB version	Schematic diagrams	Bill of materials
STEVAL\$STPM801A ⁽¹⁾	STEVAL\$STPM801A schematic diagrams	STEVAL\$STPM801A bill of materials

1. *This code identifies the STEVAL-STPM801 evaluation board first version. The STEVAL\$STPM801A code is printed on the board.*

Revision history

Table 3. Document revision history

Date	Revision	Changes
11-Jul-2023	1	Initial release.

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