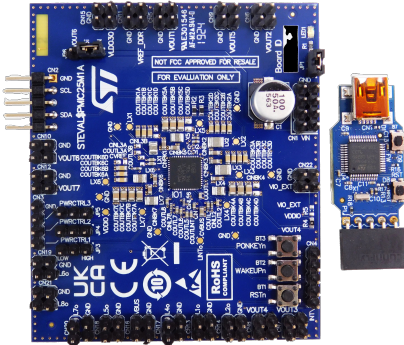


Evaluation board for high integration STPMIC25 power management IC for microprocessor units



Features

- Input voltage range from 2.8 V to 5.5 V
- 7 buck converters with adaptive constant on-time (COT) topology:
 - 2 MHz switching frequency
 - Selectable forced PWM
 - Spread spectrum function
 - Phase shift synchronization
- 6 adjustable general purpose LDOs
- 1 LDO configurable as:
 - Sink-source mode for DDR4 termination
 - Bypass mode for lpDDR
 - Adjustable output (normal mode) for general purpose use
- 1 LDO for USB PHY supply with automatic power source detection
- 1 reference voltage LDO for DDR memory
- User programmable nonvolatile memory (NVM), enabling scalability to support a wide range of applications
- Immediate output alternate settings toggle by dedicated power control pins
- Programmable output voltages turn ON/OFF sequences
- I²C and digital IO control interface
- Advanced customizable safety management
- Typical applications:
 - Power management for embedded microprocessor units, wearable, and IoT, portable devices, man-machine interfaces, smart home, power management unit companion chip of the STM32MP2x MPU

Description

The **STEVAL-PMIC25V1** is a power management IC evaluation board for the highly integrated **STPMIC25**, which is designed to manage the power requirements of the core, memory and interfaces of the STM32MP2x series MPU and other application microprocessors.

The kit includes a USB dongle, which provides I²C access to the configuration registers of the **STPMIC25** device, where voltage settings, power sequences, protection thresholds and other parameters can be set.

The evaluation board includes header connectors for external access to the embedded regulators and switches in the device, as well as internal routing via jumpers to satisfy any physical configuration requirements.

The passive components on the board are chosen for optimal performance across most use conditions, and three push buttons and digital I/Os allow triggering of the digital controls of the device.

Product summary	
Evaluation board for high integration STPMIC25 power management IC for microprocessor units	STEVAL-PMIC25V1
Highly integrated power management IC for microprocessor units	STPMIC25
Software for STEVAL-PMIC25V1 evaluation board for STPMIC25 configuration	STSW-PMIC25GUI
Software for USB Dongle	STSW-USBDNGFW
Applications	Telecom Infrastructure Factory Automation Human Machine Interface IoT for Smart Industry Home and Professional Appliances Wearable

1 Schematic diagrams

Figure 1. STEVAL-PMIC25M1 circuit schematic (1 of 5)

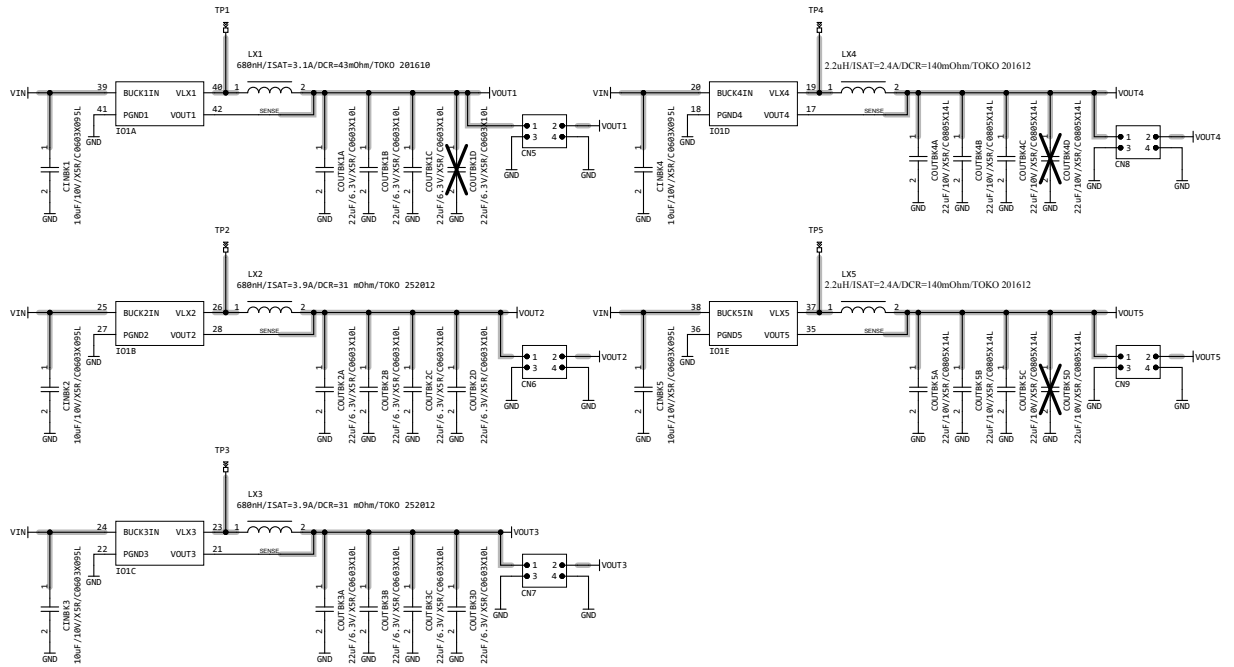


Figure 2. STEVAL-PMIC25M1 circuit schematic (2 of 5)

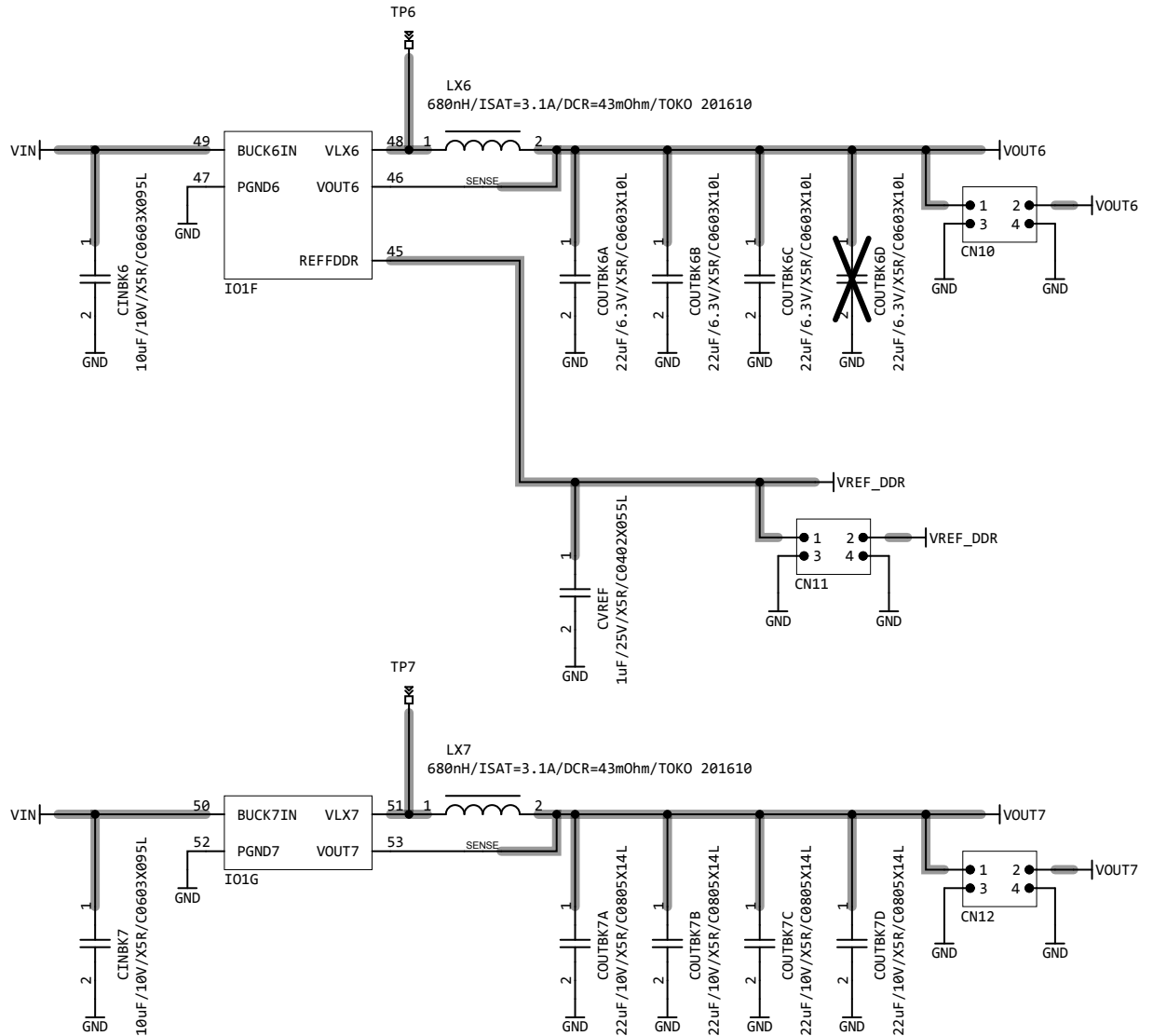


Figure 3. STEVAL-PMIC25M1 circuit schematic (3 of 5)

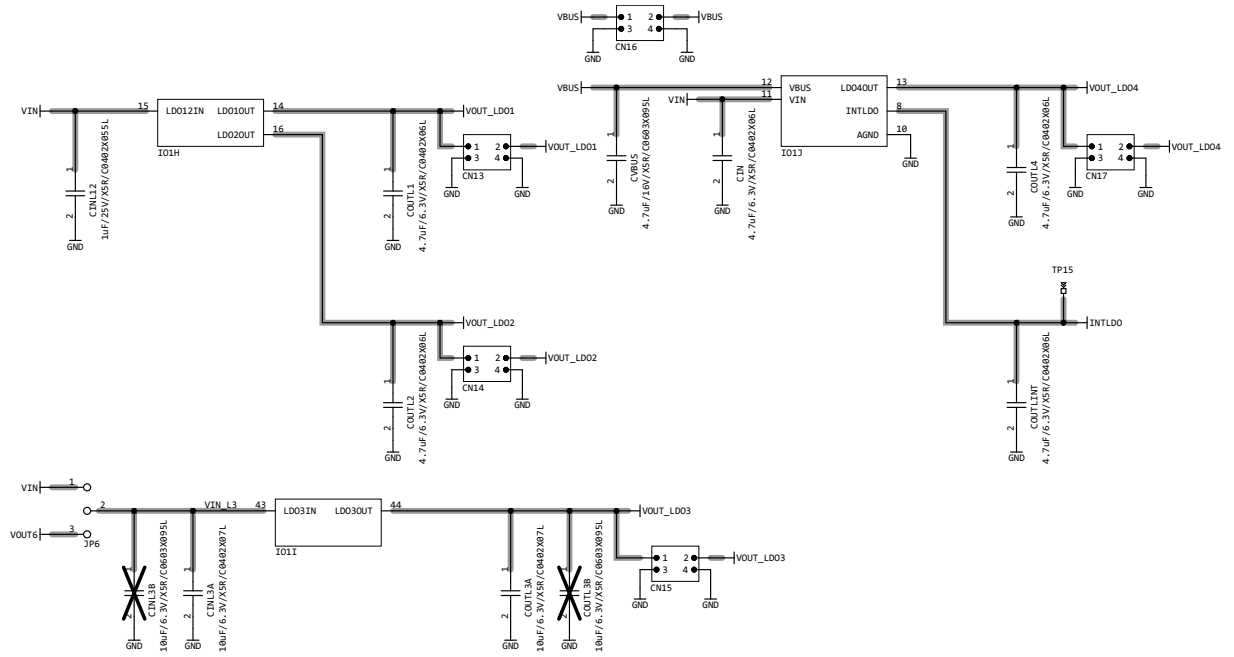


Figure 4. STEVAL-PMIC25M1 circuit schematic (4 of 5)

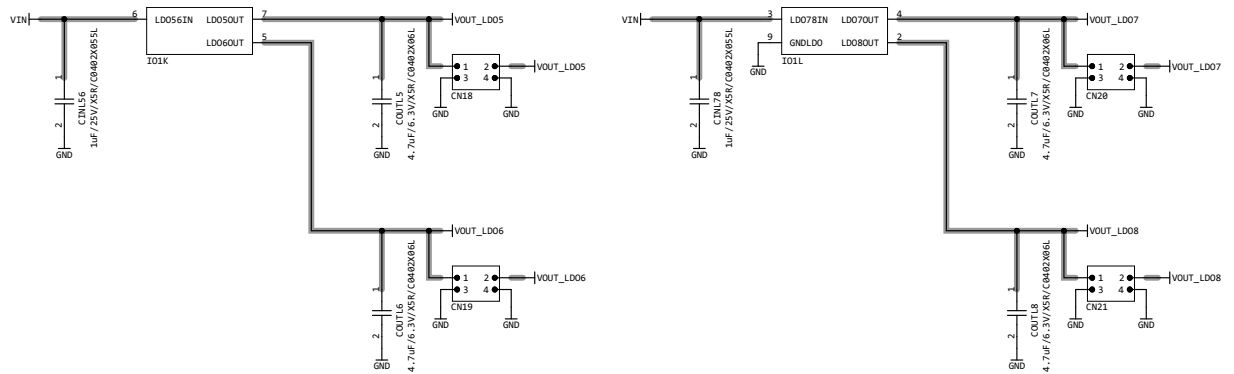
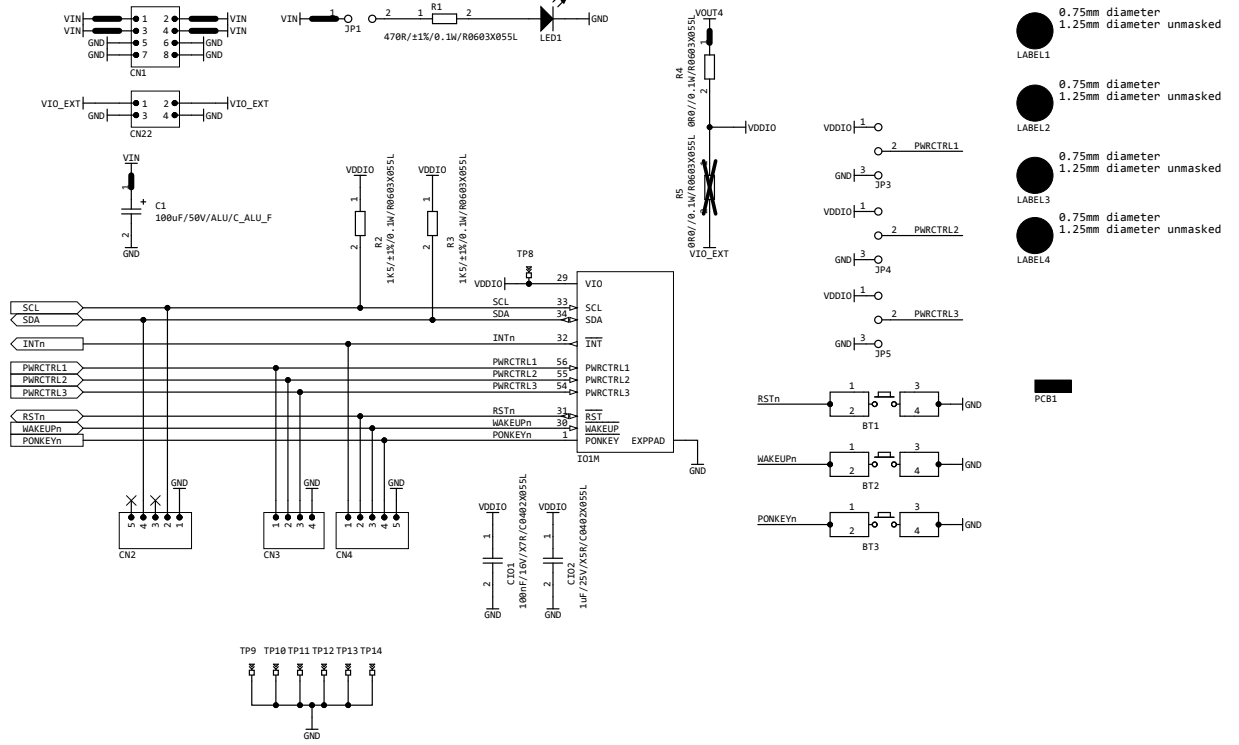


Figure 5. STEVAL-PMIC25M1 circuit schematic (5 of 5)



2 Kit versions

Table 1. STEVAL-SPMIC25V1 versions

Finished good	Schematic diagrams	Bill of materials
STEVALSPMIC25V1A ⁽¹⁾	STEVALSPMIC25V1A schematic diagrams	STEVALSPMIC25V1A bill of materials

- This code identifies the STEVAL-PMIC25V1 evaluation kit first version. The kit consists of the STEVAL-PMIC25M1 expansion board whose version is identified by the code STEVAL\$PMIC25M1A and the STEVAL-USBDNGV1 expansion board whose version is identified by the code STEVAL\$USBDNGV1A.*

Revision history

Table 2. Document revision history

Date	Revision	Changes
26-Jun-2024	1	Initial release.

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