

ST1VAFE3BX biosensor evaluation kit

Features

- Complete ST1VAFE3BX pinout for a standard DIL 24 socket
- Fully compatible with STEVAL-MKI109V3 and STEVAL-MKI109D motherboards
- ECG monitoring
- RoHS compliant

Description

The **STEVAL-MKI250KA** demonstration board is a kit made up of an ad hoc PCB, mounting: the **ST1VAFE3BX**, a biosensor with vertical analog front-end (vAFE) for biopotential signals and ultralow power accelerometer with AI and antialiasing.

The kit is composed by the **STEVAL-MKI250A** board containing the complete **ST1VAFE3BX** pinout and the required decoupling capacitors on VDD and VDDIO power supply lines, **STEVAL-MKE006A**, and **STEVAL-MKE007A** electrode boards.

An ECG cable with 3.5 mm phone jack can be plugged when the **STEVAL-MKE007A** electrode board is used.

The kit allows you to show the functionalities of the biopotential device as, for example, the ECG signal.

The **STEVAL-MKI250KA** kit is compatible with the **STEVAL-MKI109V3** and **STEVAL-MKI109D** mother boards.

The kit includes a high-performance 32-bit microcontroller functioning as a bridge between the sensor and a PC, on which it is possible to use the downloadable graphical user interface (**MEMS Studio**), or dedicated software routines for customized applications.

The kit can also be plugged in to other boards like **STEVAL-MKBOXPRO** and **X-NUCLEO-IKS4A1**.

Product summary	
ST1VAFE3BX biosensor evaluation kit	STEVAL-MKI250KA
Biosensor with vAFE (vertical analog front-end) for biopotential signals and ultralow-power accelerometer with AI and antialiasing	ST1VAFE3BX
ST MEMS adapters motherboard based on the STM32H563ZI	STEVAL-MKI109D
SensorTile.box PRO with multi-sensors and wireless connectivity for any intelligent IoT node	STEVAL-MKBOXPRO
Applications	Remote patient monitoring

1 Schematic diagrams

Figure 1. STEVAL-MKE006A circuit schematic

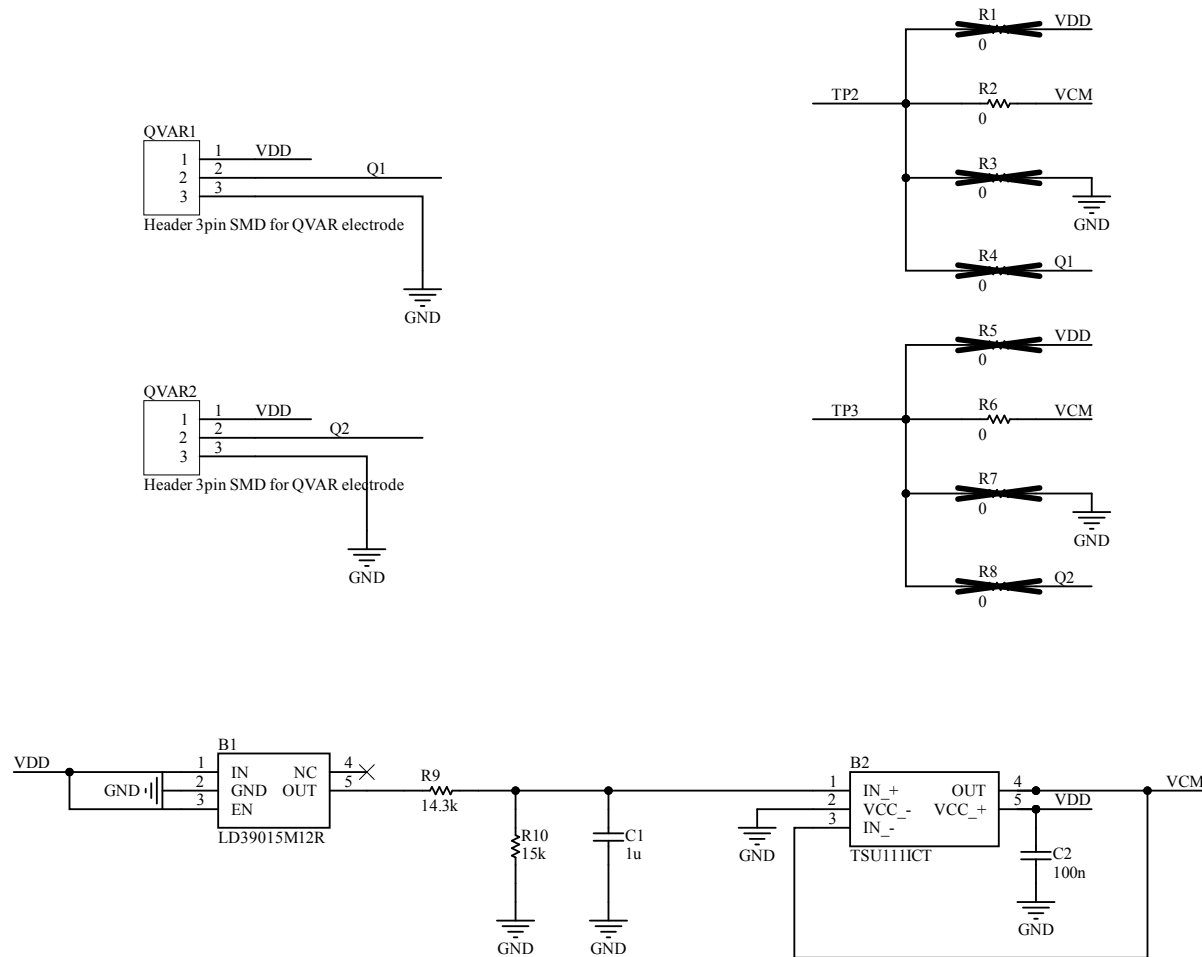


Figure 2. STEVAL-MKE007A circuit schematic

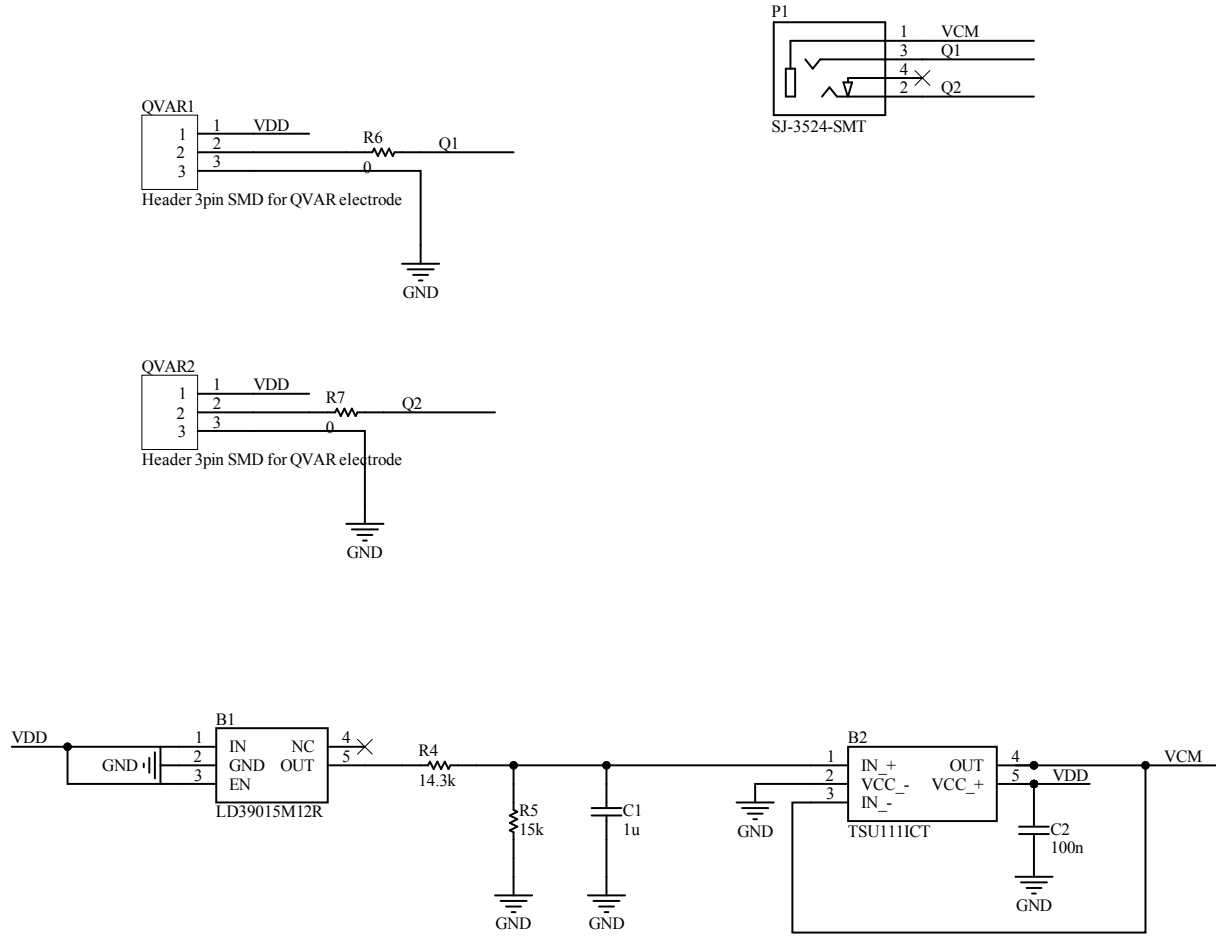
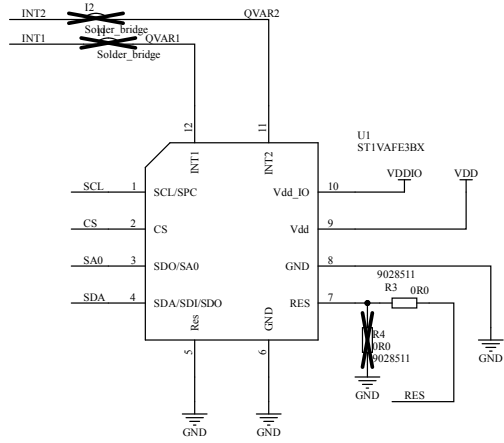
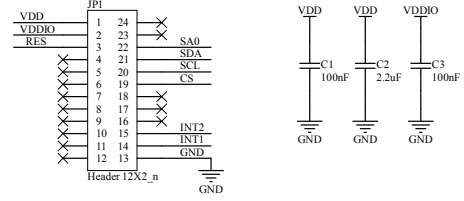
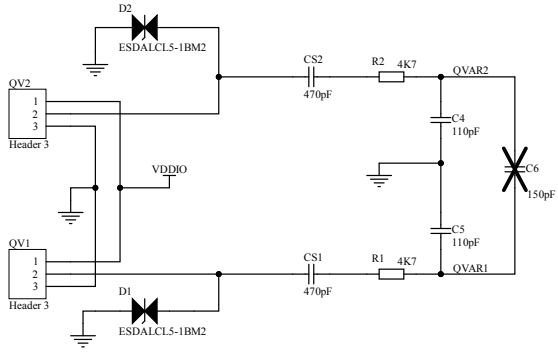


Figure 3. STEVAL-MKI250A circuit schematic



2 Kit versions

Table 1. STEVAL-MKI250KA versions

PCB version	Schematic diagrams	Bill of materials
STEVAL\$MKI250KAA ⁽¹⁾	STEVAL\$MKI250KAA schematic diagrams	STEVAL\$MKI250KAA bill of materials

- This code identifies the STEVAL-MKI250KA evaluation kit first version. The kit consists of a STEVAL-MKI250A whose version is identified by the code STEVAL\$MKI250AA, a STEVAL-MKE006A whose version is identified by the code STEVAL\$MKE006AA and a STEVAL-MKE007A whose version is identified by the code STEVAL\$MKE007AA.*

Revision history

Table 2. Document revision history

Date	Revision	Changes
12-Sep-2024	1	Initial release.

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