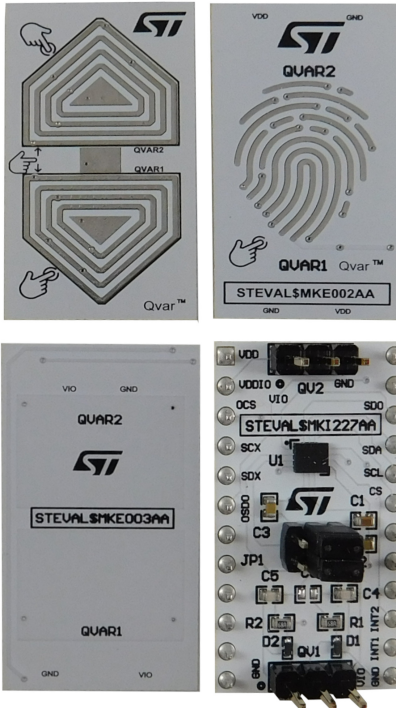


3-axis accelerometer and 3-axis gyroscope evaluation kit with Qvar functionality based on LSM6DSV16X



Features

- User-friendly [LSM6DSV16X](#) board
- Complete [LSM6DSV16X](#) pinout for a standard DIL24 socket
- Fully compatible with the [STEVAL-MKI109V3](#) motherboard
- RoHS compliant

Description

The [STEVAL-MKI227KA](#) evaluation kit is based on the [LSM6DSV16X](#) 6-axis IMU (inertial measurement unit) with a Qvar electrostatic sensor and three different electrodes (swipe, finger, and generic).

It is possible to configure the [LSM6DSV16X](#) by changing the position of the jumper.

The kit provides the complete [LSM6DSV16X](#) pinout and comes ready-to-use with the required decoupling capacitors on the VDD power supply line.

The [STEVAL-MKE00xAA](#) can be plugged into the [STEVAL-MKI227A](#) board.

This adapter is supported by the [STEVAL-MKI109V3](#) motherboard that 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 [MEMS Studio](#) downloadable graphical user interface or dedicated software routines for customized applications.

The [STEVAL-MKI227A](#) adapter board can also be plugged into other boards like the [X-NUCLEO-IKS01A3](#) expansion board.

Product summary	
3-axis accelerometer and 3-axis gyroscope evaluation kit with Qvar functionality based on LSM6DSV16X	STEVAL-MKI227KA
6-axis inertial measurement unit (IMU) and AI sensor with embedded sensor fusion, Qvar for high-end applications	LSM6DSV16X
MEMS adapter motherboard based on the STM32F401VE	STEVAL-MKI109V3
Motion MEMS and environmental sensor expansion board for STM32 Nucleo	X-NUCLEO-IKS01A3
Applications	Smart glasses (AR)

Figure 1. STEVAL-MKE001A circuit schematic

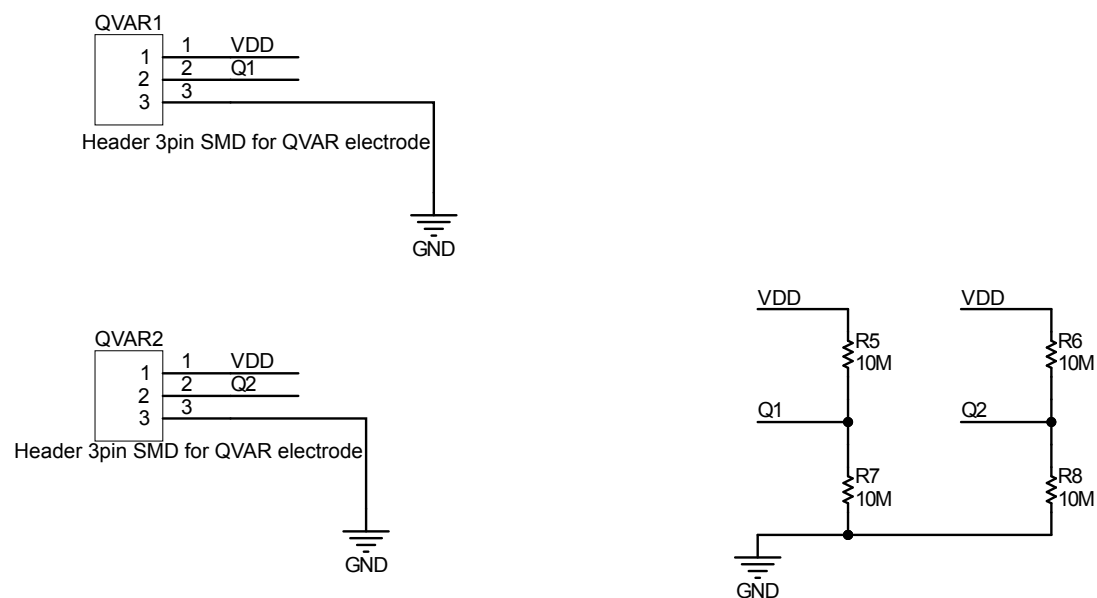
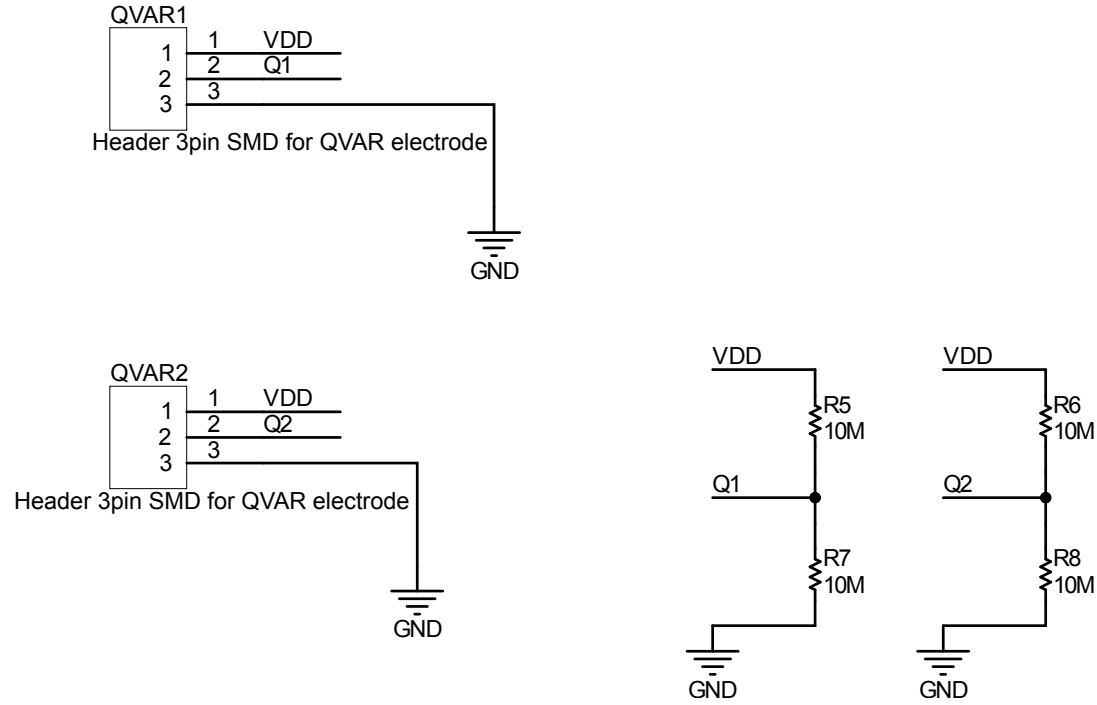


Figure 2. STEVAL-MKE002A circuit schematic



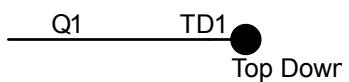
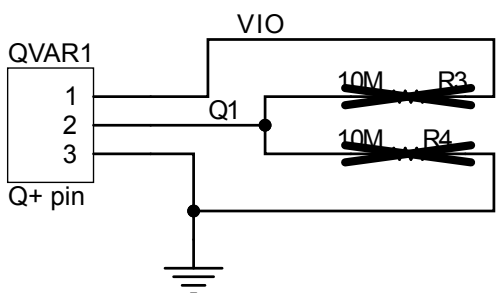
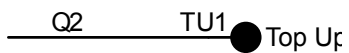
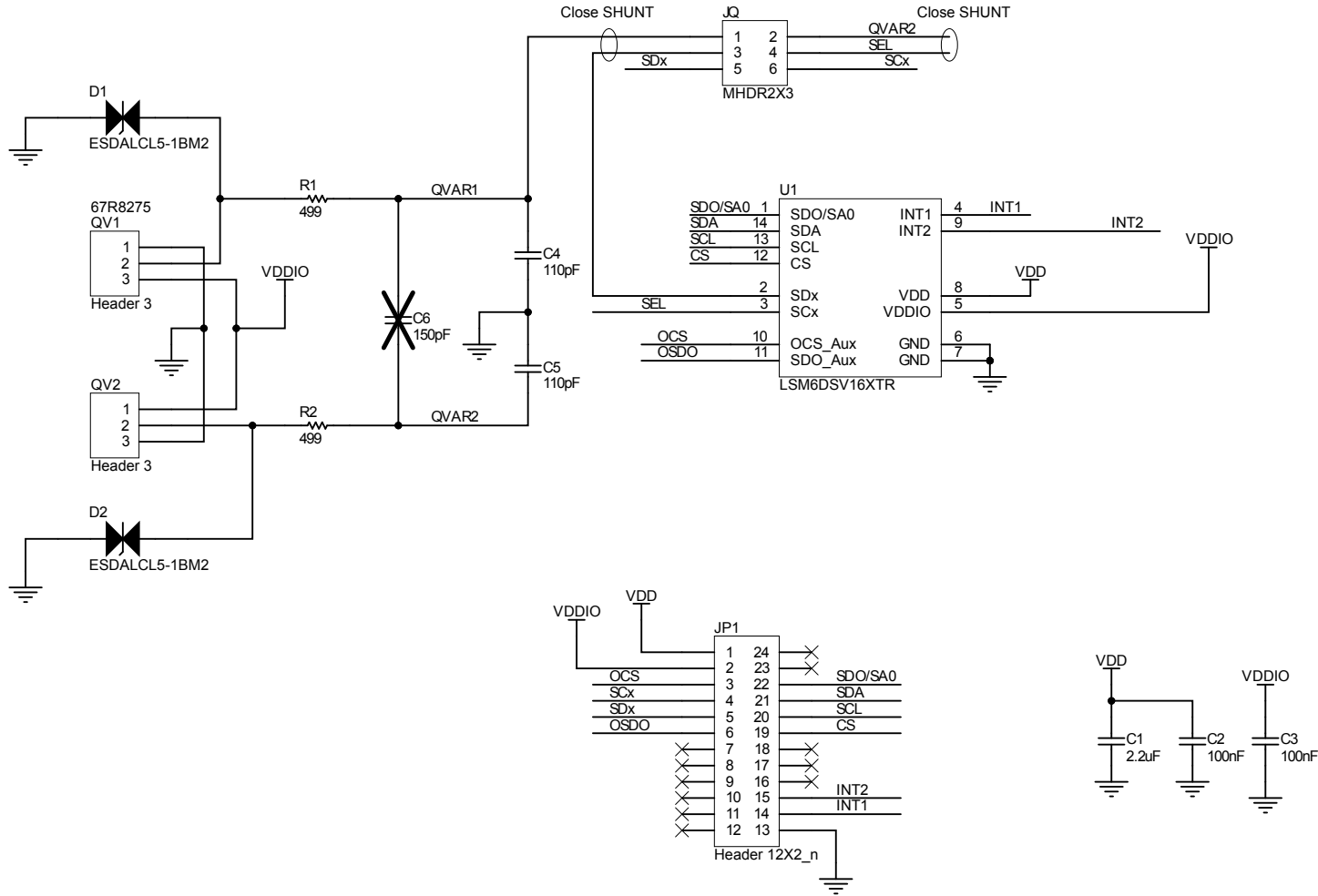


Figure 4. STEVAL-MKI227A circuit schematic



2 Kit versions

Table 1. STEVAL-MKI227KA versions

PCB version	Schematic diagrams	Bill of materials
STEVAL\$MKI227KAA ⁽¹⁾	STEVAL\$MKI227KAA schematic diagrams	STEVAL\$MKI227KAA bill of materials

1. This code identifies the first version of the STEVAL-MKI227KA evaluation kit. The kit consists of STEVAL-MKI227AA whose version is identified by the code STEVAL\$MKI227AAA, STEVAL-MKE001A whose version is identified by the code STEVAL\$MKE001AA, STEVAL-MKE002A whose version is identified by the code STEVAL\$MKE002AA, and STEVAL-MKE003A whose version is identified by the code STEVAL\$MKE003AA.

Revision history

Table 2. Document revision history

Date	Revision	Changes
07-Nov-2022	1	Initial release
27-Aug-2024	2	Updated Description to include MEMS Studio software solution Minor textual updates

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