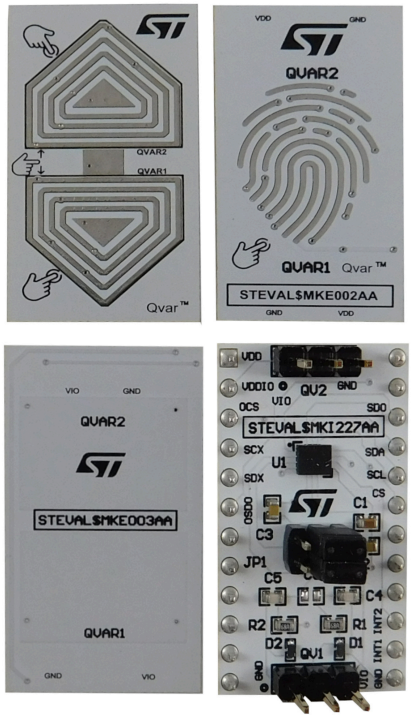
STEVAL-MKI227KA

Data brief

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)

1 Schematic diagrams

Figure 1. **STEVAL-MKE001A circuit schematic**

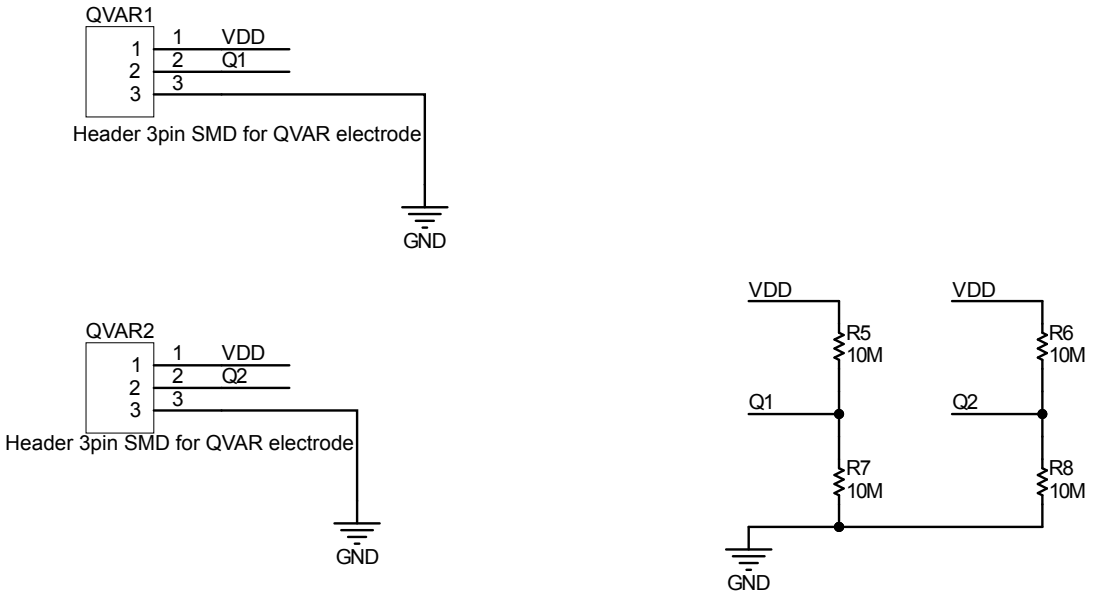


Figure 2. **STEVAL-MKE002A circuit schematic**

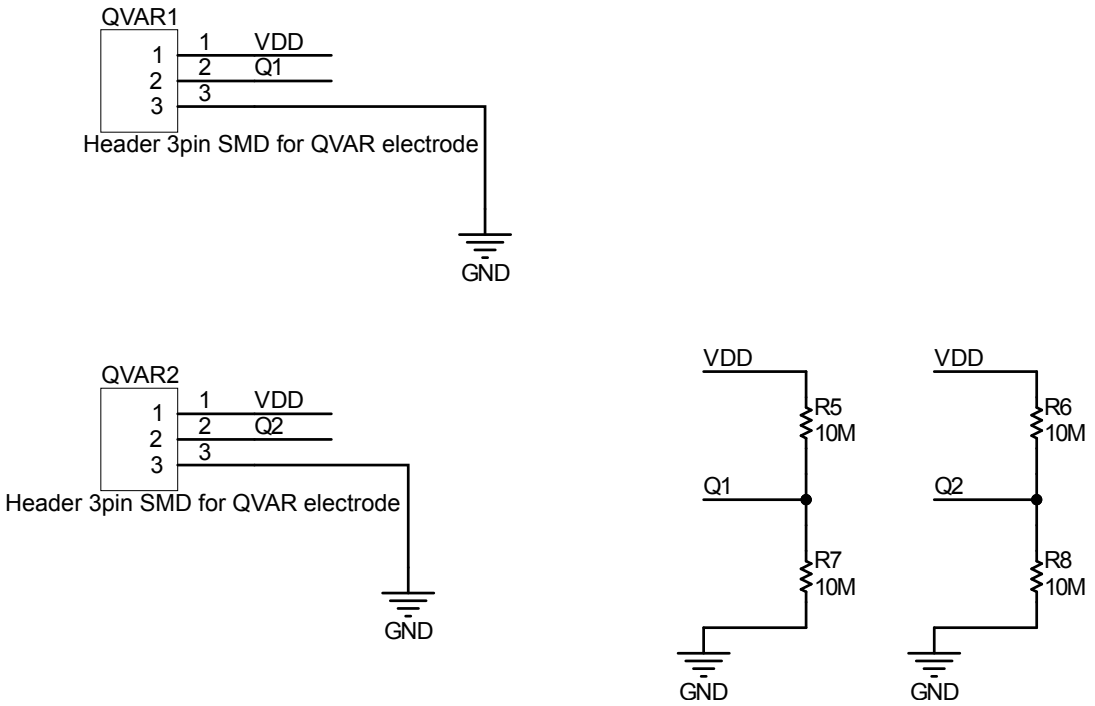


Figure 3. **STEVAL-MKE003A circuit schematic**

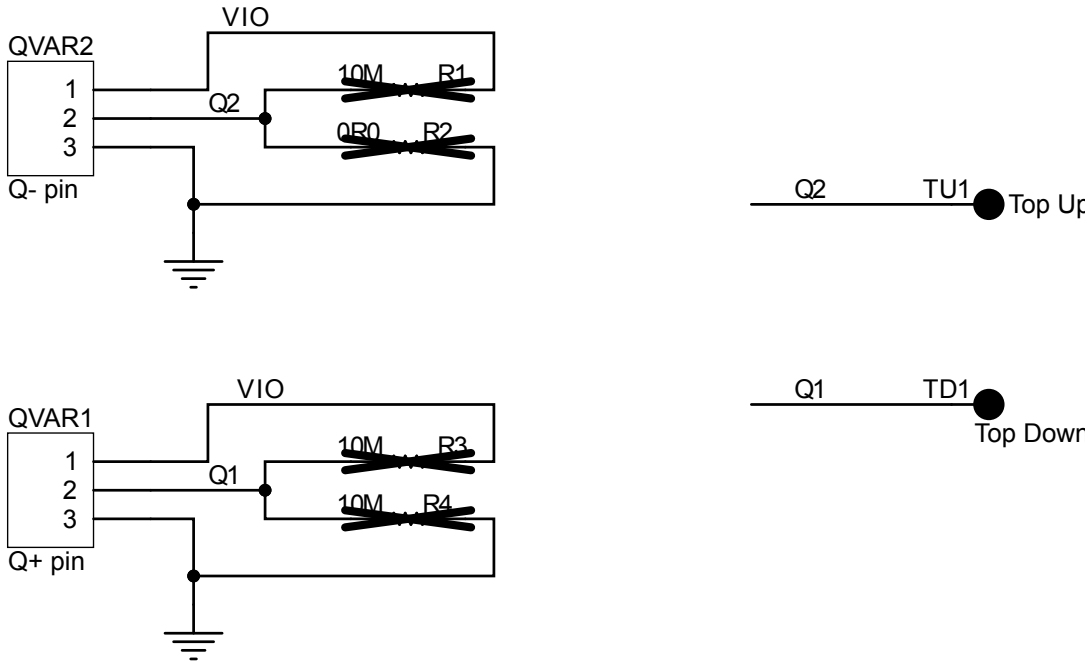
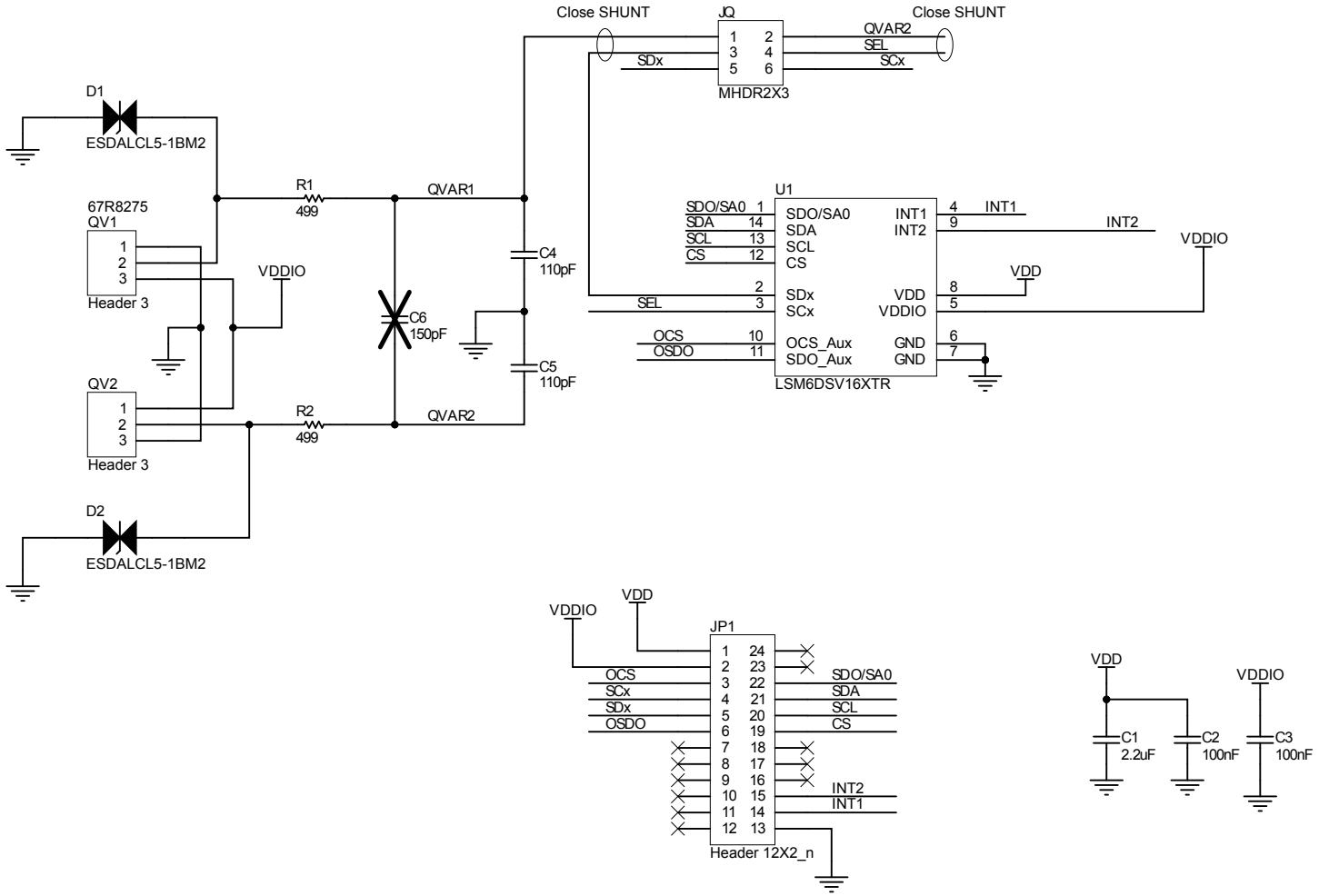


Figure 4. STEVAL-MKI227A circuit schematic



2 Kit versions

Table 1. STEVAL-MKI234KA 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