

LIS2DUXS12 adapter kit for a standard DIL24 socket with Qvar functionality



Features

- User-friendly LIS2DUXS12 board
- Complete LIS2DUXS12 pinout for a standard DIL24 socket
- Fully compatible with the STEVAL-MKI109D evaluation platform
- RoHS compliant

Description

The STEVAL-MKI235KA evaluation kit is based on the LIS2DUXS12 smart accelerometer with a Qvar electrostatic sensor and three different electrodes (swipe, finger, and generic) to make it compatible with the STEVAL-MKI109D. The kit provides the complete LIS2DUXS12 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-MKI235A board.

This adapter is supported by the STEVAL-MKI109D evaluation platform, which 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 MEMS Studio graphical user interface or dedicated software routines for customized applications.

Product summary

LIS2DUXS12 adapter kit for standard DIL24 socket with Qvar functionality	STEVAL-MKI235KA
Ultralow-power 3-axis smart accelerometer with Qvar, AI, antialiasing filter, and advanced digital features	LIS2DUXS12
Professional MEMS tool: evaluation board for all ST MEMS sensors	STEVAL-MKI109D
Applications	Smart glasses (AR)

Figure 1. STEVAL-MKE001A circuit schematic

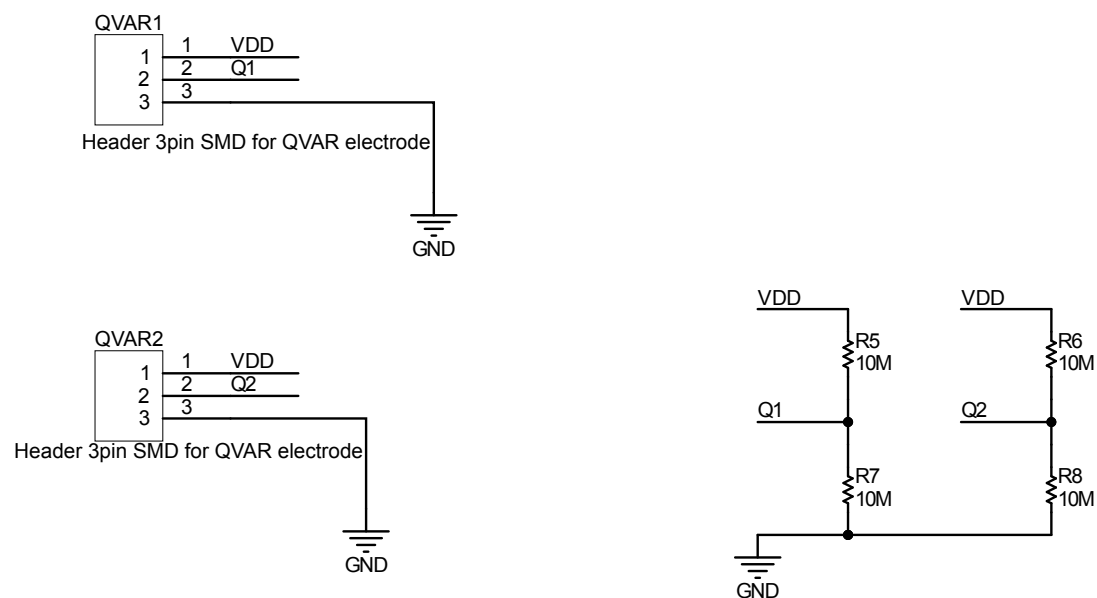
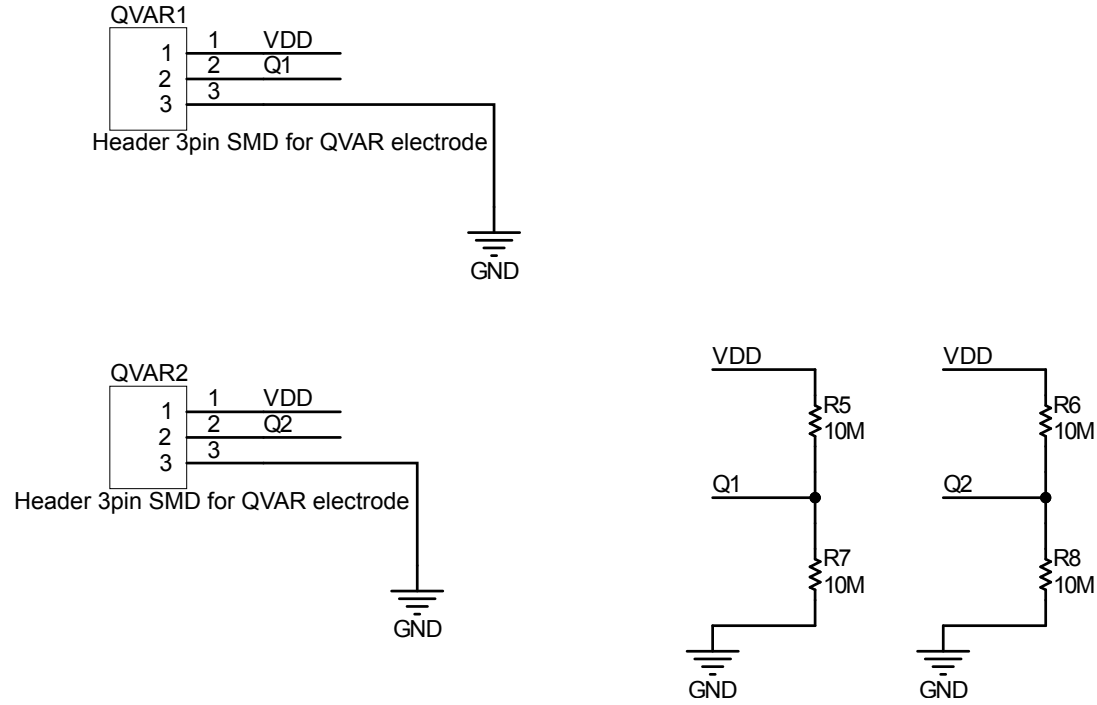


Figure 2. STEVAL-MKE002A circuit schematic

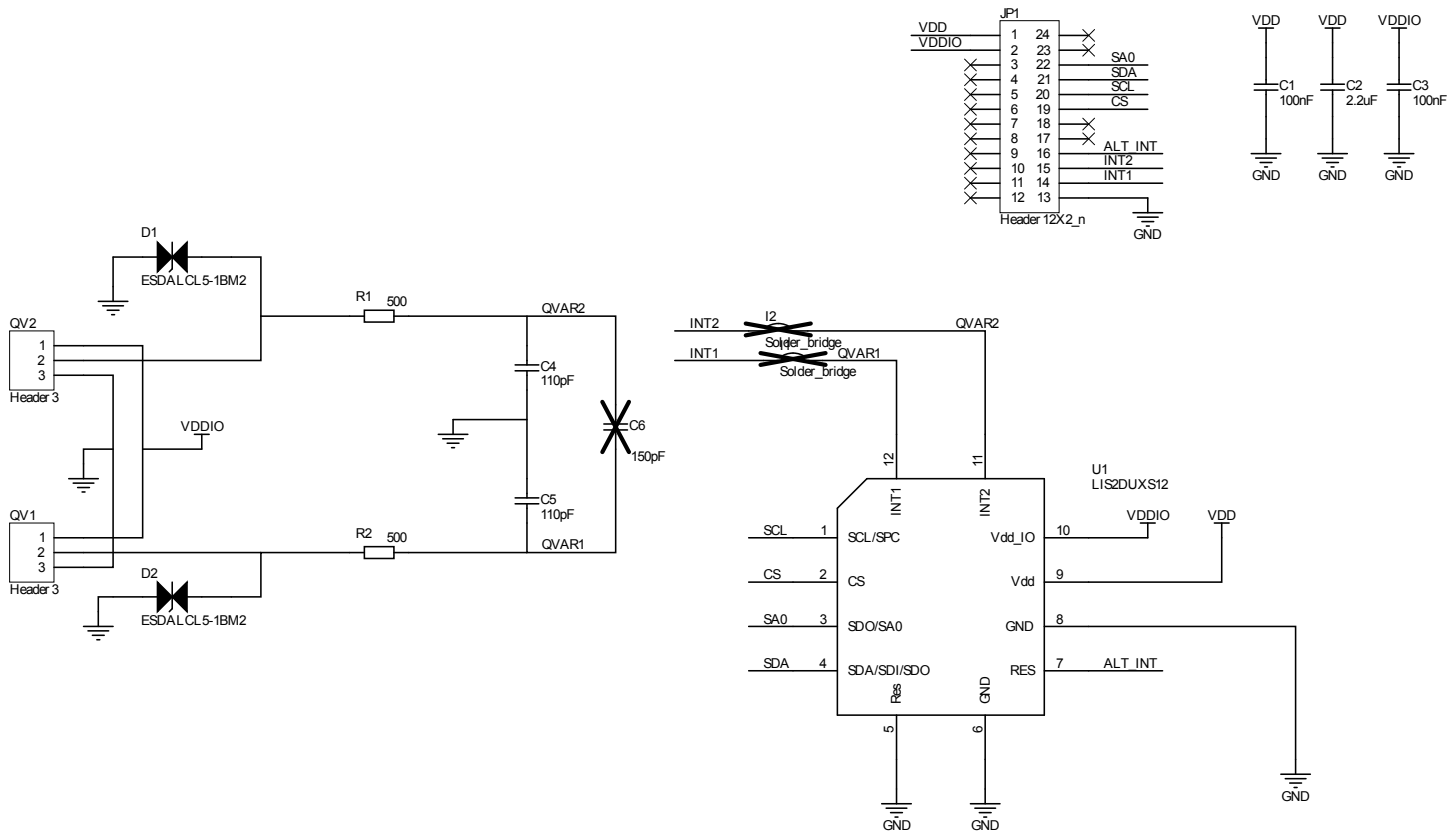


The top diagram shows the internal structure of the QVAR2 component. It has three pins: 1, 2, and 3. Pin 1 is connected to VIO. Pin 2 is connected to Q2. Pin 3 is connected to ground. Inside the component, there are two resistors, R1 and R2, both labeled 10M. R1 is connected between VIO and Q2. R2 is connected between Q2 and ground. The label QVAR2 is at the top left, and Q- pin is at the bottom left.

The bottom diagram shows the internal structure of the QVAR1 component. It has three pins: 1, 2, and 3. Pin 1 is connected to VIO. Pin 2 is connected to Q1. Pin 3 is connected to ground. Inside the component, there are two resistors, R3 and R4, both labeled 10M. R3 is connected between VIO and Q1. R4 is connected between Q1 and ground. The label QVAR1 is at the top left, and Q+ pin is at the bottom left.

On the right side, there are two horizontal lines representing connections. The top line is labeled Q2 and TU1, with a black dot at the connection point labeled Top Up. The bottom line is labeled Q1 and TD1, with a black dot at the connection point labeled Top Down.

Figure 4. STEVAL-MKI235A circuit schematic



2 Kit versions

Table 1. STEVAL-MKI235KA versions

PCB version	Schematic diagrams	Bill of materials
STEVAL\$MKI235KAA ⁽¹⁾	STEVAL\$MKI235KAA schematic diagrams	STEVAL\$MKI235KAA bill of materials

1. This code identifies the first version of the STEVAL-MKI235KA evaluation kit. The kit consists of the STEVAL-MKI235A whose version is identified by the code STEVAL\$MKI235AA, the STEVAL-MKE001A whose version is identified by the code STEVAL\$MKE001AA, the STEVAL-MKE002A whose version is identified by the code STEVAL\$MKE002AA, and the STEVAL-MKE003A whose version is identified by the code STEVAL\$MKE003AA.

Revision history

Table 2. Document revision history

Date	Revision	Changes
17-Jan-2023	1	Initial release
13-Jun-2024	2	Updated Description to include MEMS Studio software solution Minor textual updates
25-Jun-2025	3	Added STEVAL-MKI109D evaluation platform

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