

Accelerometer

**Kionix™ Technology**



**KX132ACR-EVK-001 Manual**

KX132ACR-EVK-001 is an evaluation board for KX132ACR-LBZ accelerometer. This User's Guide shows the board reference information.

Photo

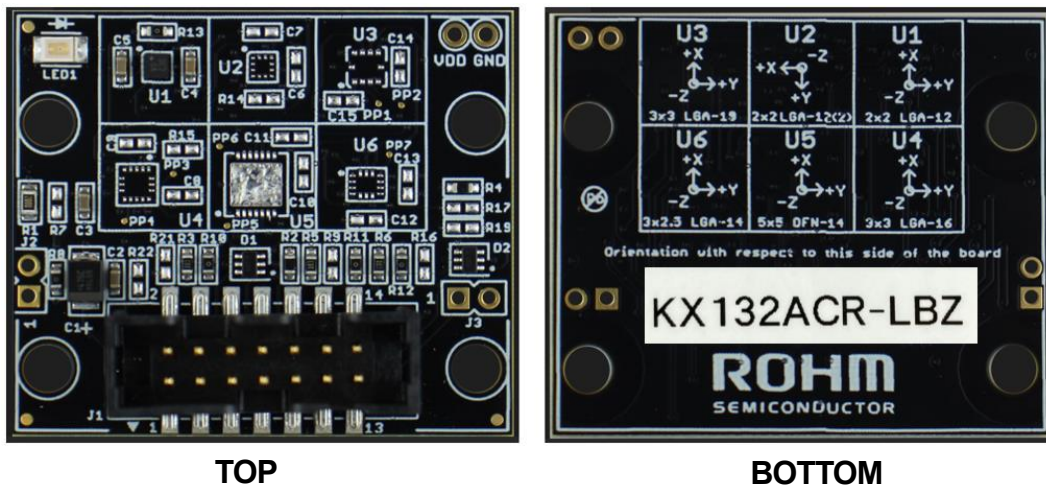
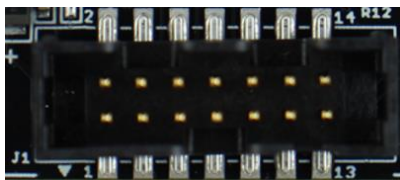


Figure 1: KX132ACR-EVK-001 Photo

KX132ACR-LBZ is mounted on U1. 14 pin MIL connector is mounted on J1.

**J1 Connector Pin Assignment**



Pin No.	2	4	6	8	10	12	14
Function	nCS	-	IO_VDD	GND	TRIG*1	INT2	-
Function	VDD	-	SCLK /SCL	SDI /SDA	SDO /ADDR*2	INT1	-
Pin No.	1	3	5	7	9	11	13

Figure 2: J1 Connector Pin Assignment

\*1: Connect to GND when not using external trigger option. 10 pin is pulled down with R6.

\*2: 9 pin is pulled up with R5. I2C address is 1F.

Kionix™ is a trademark or a registered trademark of ROHM Co., Ltd.

Schematic

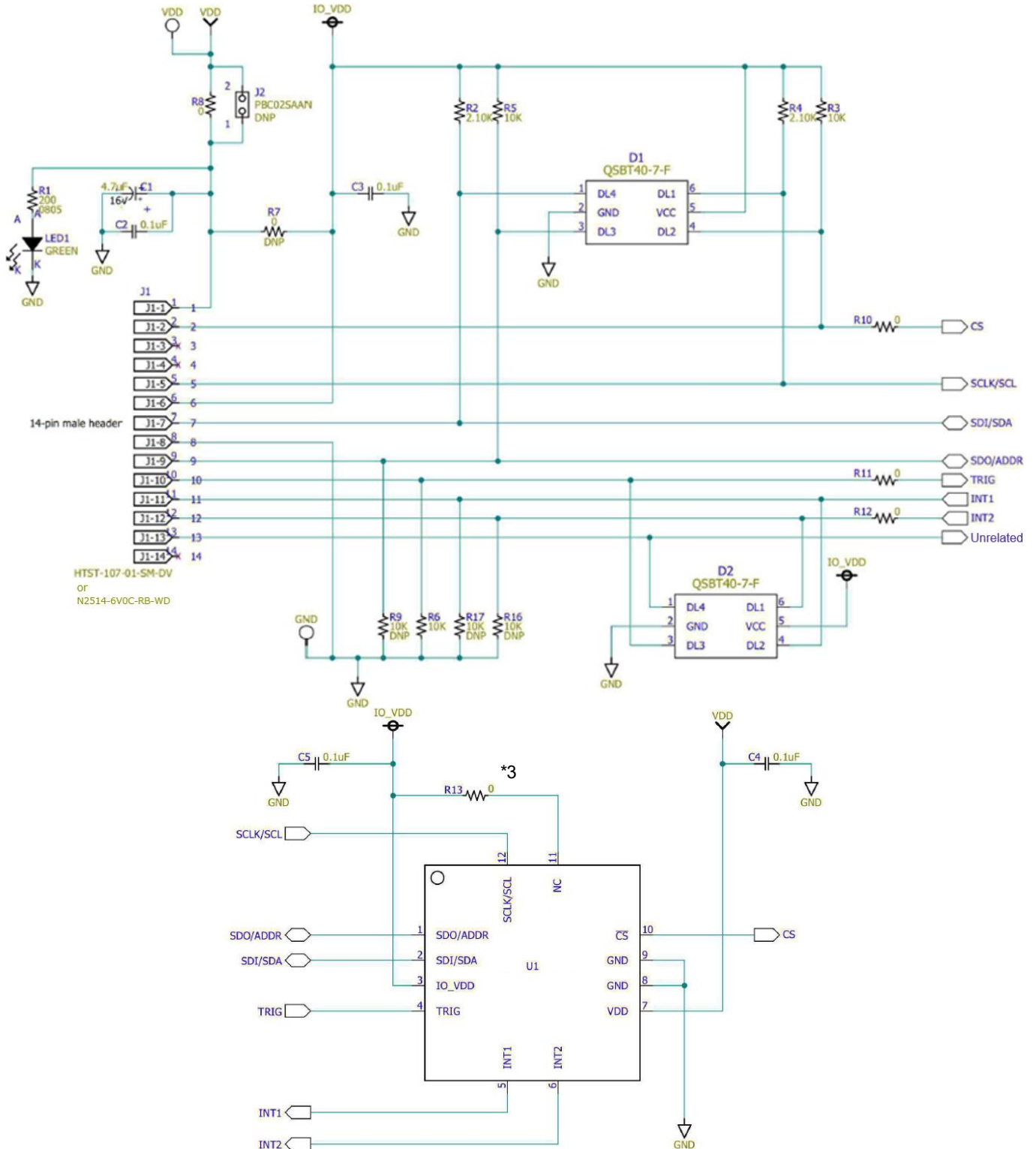


Figure 3: Schematic

\*3: It depends on the PCB production lot whether R13 is mounted or not. R13 has no effect on operation.

Bill of materials

Part No.	Description / Function
U1	KX132ACR-LBZ Accelerometer
C1	Bulk capacitor for VDD (4.7μF)
C2	Noise decoupling capacitor for VDD (0.1μF)
C3	Noise decoupling capacitor for IO_VDD (0.1μF)
C4	U1 bypass capacitor for VDD (0.1μF)
C5	U1 bypass capacitor for IO_VDD (0.1μF)
D1	Clamp diode for I/O signals
D2	Clamp diode for I/O signals
LED1	VDD power LED (green)
R1	LED1 current limiting resistor (200Ω)
R2	Pull-up resistor for SDI/SDA (2.1kΩ)
R3	Pull-up resistor for nCS (10kΩ)
R4	Pull-up resistor for SCLK/SCL (2.1kΩ)
R5	Pull-up resistor for SDO/ADDR (10kΩ)
R6	Pull-down resistor for TRIG (10kΩ)
R8	0Ω jumper for VDD
R10	0Ω jumper for nCS
R11	0Ω jumper for TRIG
R12	0Ω jumper for INT2
R13	0Ω jumper for NC

Figure 4: Bill of materials

Evaluation Kit

RKX-EVK-001 is Evaluation Kit for ROHM accelerometer. Connecting KX132ACR-EVK-001 to RKX-EVK-001 is one of the options to evaluate KX132ACR-LBZ. ROHM EVK GUI SW is software for RKX-EVK-001 and the following functions are available.

- Showing acceleration waveform
- Changing accelerometer register
- Recording acceleration output
- Wake-up and Back-to-sleep demo

For more information, refer to the following link.

[Accelerometer Evaluation Kit \(rohm.com\)](https://www.rohm.com/accelerometer-evaluation-kit)

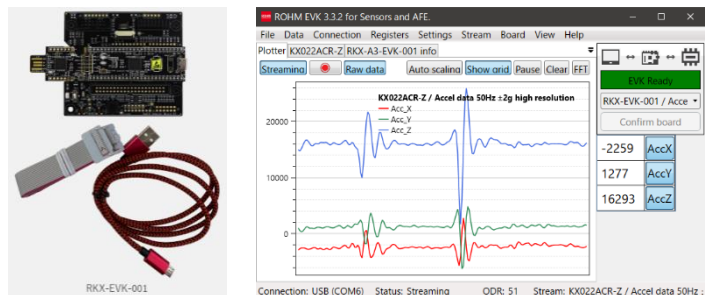


Figure 5: RKX-EVK-001 and ROHM EVK GUI SW

### Notice

- 1) The information contained in this document is intended to introduce ROHM Group (hereafter referred to as ROHM) products. When using ROHM products, please verify the latest specifications or datasheets before use.
- 2) ROHM products are designed and manufactured for use in general electronic equipment and applications (such as Audio Visual equipment, Office Automation equipment, telecommunication equipment, home appliances, amusement devices, etc.) or specified in the datasheets. Therefore, please contact the ROHM sales representative before using ROHM products in equipment or devices requiring extremely high reliability and whose failure or malfunction may cause danger or injury to human life or body or other serious damage (such as medical equipment, transportation, traffic, aircraft, spacecraft, nuclear power controllers, fuel control, automotive equipment including car accessories, etc. hereafter referred to as Specific Applications). Unless otherwise agreed in writing by ROHM in advance, ROHM shall not be in any way responsible or liable for any damages, expenses, or losses incurred by you or third parties arising from the use of ROHM Products for Specific Applications.
- 3) Electronic components, including semiconductors, can fail or malfunction at a certain rate. Please be sure to implement, at your own responsibilities, adequate safety measures including but not limited to fail-safe design against physical injury, and damage to any property, which a failure or malfunction of products may cause.
- 4) The information contained in this document, including application circuit examples and their constants, is intended to explain the standard operation and usage of ROHM products, and is not intended to guarantee, either explicitly or implicitly, the operation of the product in the actual equipment it will be used. As a result, you are solely responsible for it, and you must exercise your own independent verification and judgment in the use of such information contained in this document. ROHM shall not be in any way responsible or liable for any damages, expenses, or losses incurred by you or third parties arising from the use of such information.
- 5) When exporting ROHM products or technologies described in this document to other countries, you must abide by the procedures and provisions stipulated in all applicable export laws and regulations, such as the Foreign Exchange and Foreign Trade Act and the US Export Administration Regulations, and follow the necessary procedures in accordance with these provisions.
- 6) The technical information and data described in this document, including typical application circuits, are examples only and are not intended to guarantee to be free from infringement of third parties intellectual property or other rights. ROHM does not grant any license, express or implied, to implement, use, or exploit any intellectual property or other rights owned or controlled by ROHM or any third parties with respect to the information contained herein.
- 7) No part of this document may be reprinted or reproduced in any form by any means without the prior written consent of ROHM.
- 8) All information contained in this document is current as of the date of publication and subject to change without notice. Before purchasing or using ROHM products, please confirm the latest information with the ROHM sales representative.
- 9) ROHM does not warrant that the information contained herein is error-free. ROHM shall not be in any way responsible or liable for any damages, expenses, or losses incurred by you or third parties resulting from errors contained in this document.



Thank you for your accessing to ROHM product informations.  
More detail product informations and catalogs are available, please contact us.

## ROHM Customer Support System

<https://www.rohm.com/contactus>