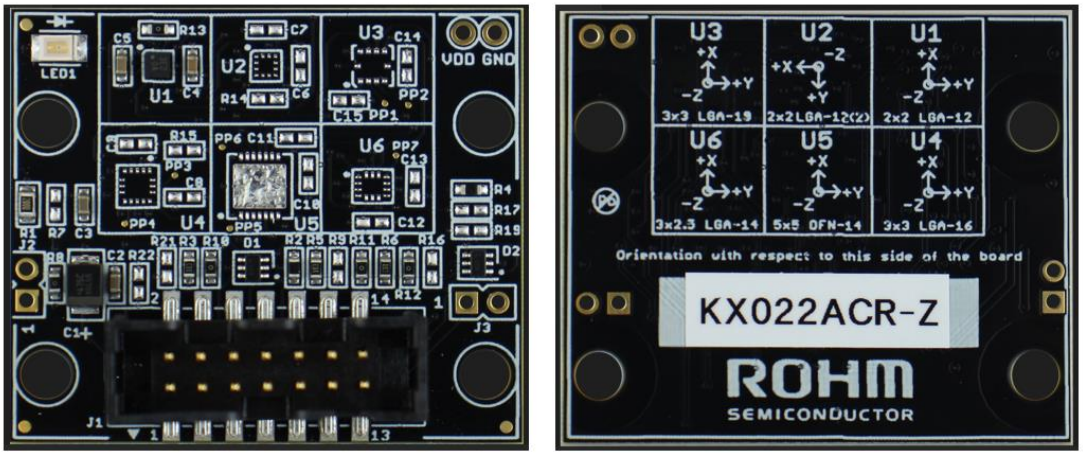
Accelerometer

Kionix™ Technology

KX022ACR-EVK-001 Manual

KX022ACR-EVK-001 is an evaluation board for KX022ACR-Z accelerometer. This User's Guide shows the board reference information.

Photo

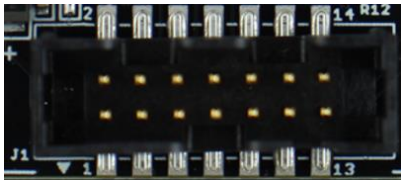


TOP BOTTOM

Figure 1: KX022ACR-EVK-001 Photo

KX022ACR-Z 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.

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Schematic

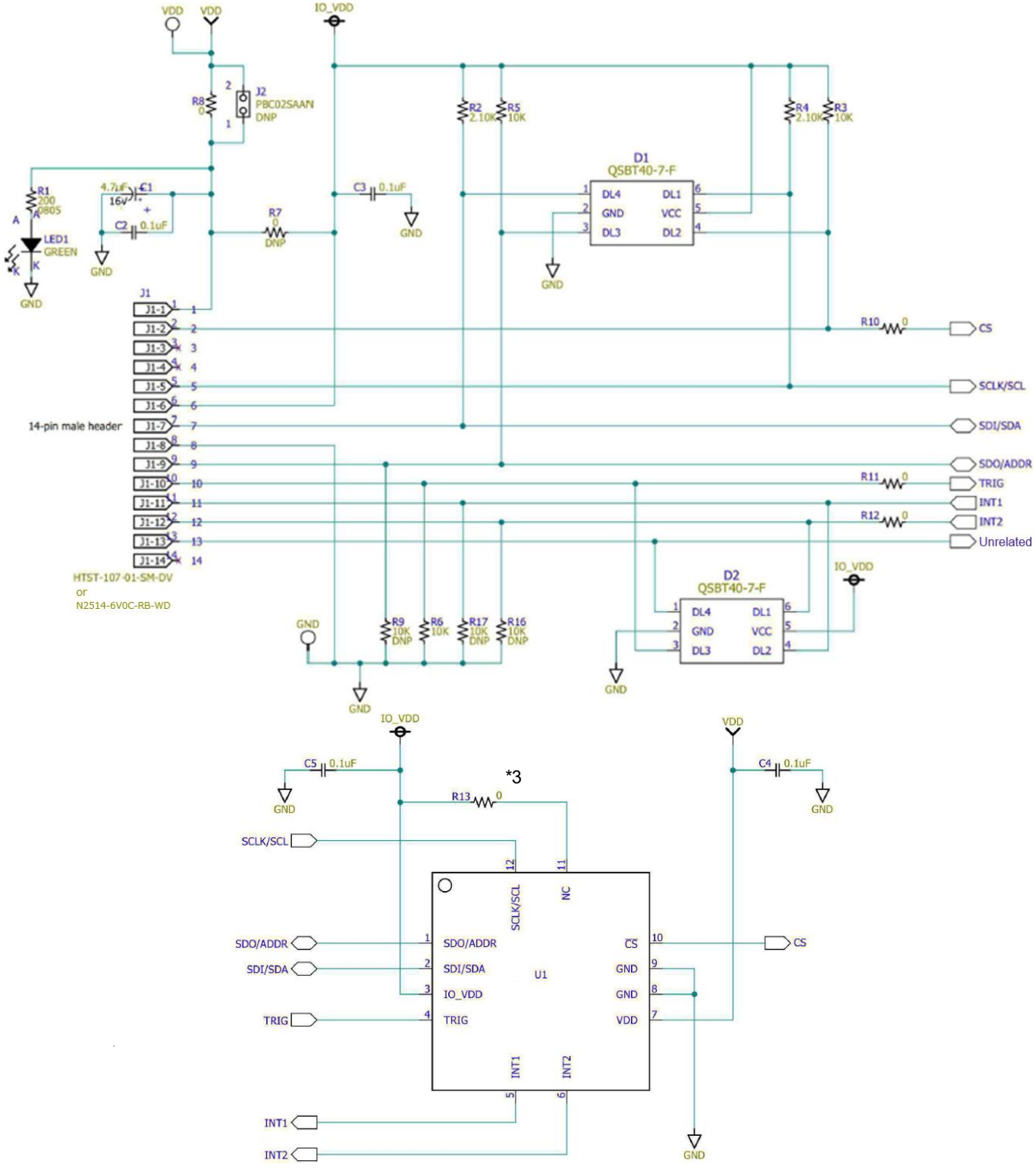


Figure 3: Schematic

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

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Bill of materials

Part No.	Description / Function
U1	KX022ACR-Z 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 KX022ACR-EVK-001 to RKX-EVK-001 is one of the options to evaluate KX022ACR-Z. 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)

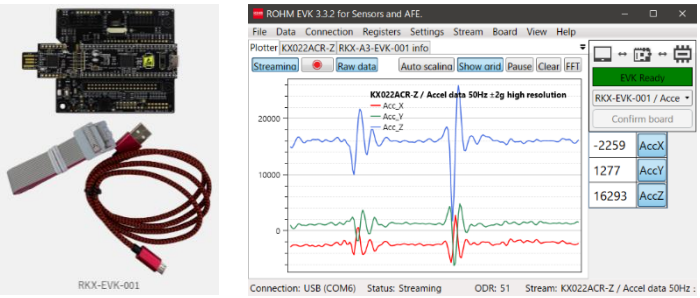


Figure 5: RKX-EVK-001 and ROHM EVK GUI SW

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