

Ultralow Power, $\pm 2\text{ g}/\pm 4\text{ g}/\pm 8\text{ g}$ Digital Accelerometer Breakout Board

FEATURES

- 2 sets of spaced vias for population of 5-pin headers
- Easily attached to prototyping board or PCB
- Small size and board stiffness minimize impact on the system and acceleration measurements

EQUIPMENT NEEDED

External host processor

DOCUMENTS NEEDED

[ADXL362](#) data sheet

GENERAL DESCRIPTION

The [EVAL-ADXL362Z](#) is a simple evaluation board that allows quick evaluation of the performance of the [ADXL362](#) ultralow power, 3-axis, digital output MEMS accelerometer. The [EVAL-ADXL362Z](#) is ideal for evaluation of the [ADXL362](#) in an existing system because the stiffness and the small size of the evaluation board minimize the effect of the board on both the system and acceleration measurements.

PRINTED CIRCUIT BOARD LAYOUT

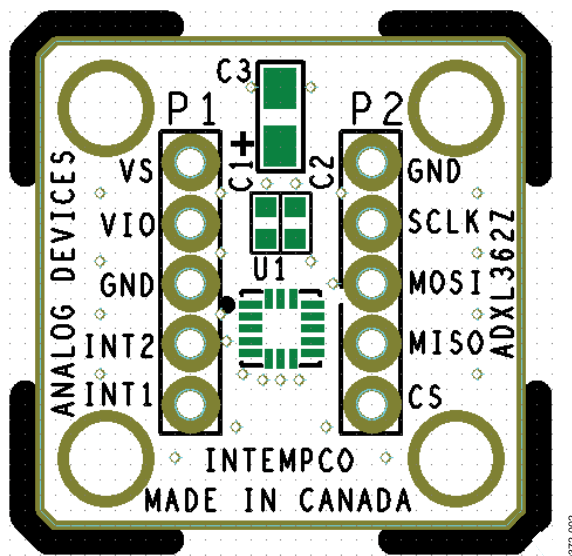


Figure 1.

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REVISION HISTORY

9/12—Revision 0: Initial Version

EVALUATION BOARD HARDWARE

The [EVAL-ADXL362Z](#) has two sets of 0.1 inch spaced vias for population of 5-pin headers to provide access to all power and signal lines. The vias or headers allow the evaluation board to be attached either to a prototyping board (breadboard) or to a printed circuit board (PCB) in an existing system. Four holes are provided in the corners of the board for mechanical attachment of the [EVAL-ADXL362Z](#) to the application. An external host processor is required for communication to the part.

The dimensions of the [EVAL-ADXL362Z](#) are 20 mm × 20 mm. The four mounting holes are set 15 mm × 15 mm at the corners of the PCB.

CIRCUIT DESCRIPTION

The PCB layout of the [EVAL-ADXL362Z](#) is shown in Figure 1. The [EVAL-ADXL362Z](#) is equipped with three factory installed capacitors for bypass: two 0.1 μF capacitors (C1 and C2) and a 10 μF capacitor (C3). C2 and C3 are VS bypass capacitors for

reducing analog supply noise and C1 (located between VDDIO and GND) is for reducing digital clocking noise.

The schematic of the [EVAL-ADXL362Z](#) is shown in Figure 2. See the [ADXL362](#) data sheet for information on configuring the accelerometer following its connection to the application host processor.

HANDLING CONSIDERATIONS

The [EVAL-ADXL362Z](#) is not reverse polarity protected. Reversing the VS or VDDIO supply and GND pins can cause damage to the [ADXL362](#).

Dropping the [EVAL-ADXL362Z](#) on a hard surface can generate several thousand g of acceleration, which may exceed the data sheet absolute maximum limits. See the [ADXL362](#) data sheet for more information.

EVALUATION BOARD SCHEMATICS AND ARTWORK

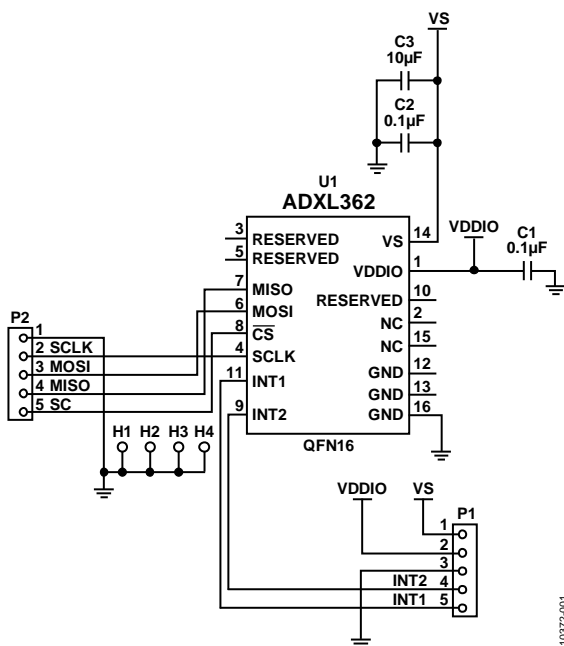


Figure 2. EVAL-ADXL362Z Schematic

10372-001

ORDERING INFORMATION

BILL OF MATERIALS

Table 1.

Item	Qty	Reference Designator	Description	Manufacturer	Part Number
1	1	U1	Ultralow power MEMS accelerometer	Analog Devices, Inc.	ADXL362BCCZ-ENG
2	2	C1, C2	0.1 μ F ceramic capacitor, 50 V, 10%, X7R	CAL-CHIP	GMC10X7R104K50NTLF
3	1	C3	10 μ F tantalum capacitor, 10 V, 10%	CAL-CHIP	TCKIA106ATL

RELATED LINKS

Resource	Description
ADXL362	Product page, ADXL362
EVAL-ADXL362Z	ADXL362 breakout board page
EVAL-ADXL362Z-M	Ultralow power inertial sensor evaluation board page

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**ESD Caution**

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

Legal Terms and Conditions

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