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3-Axis, $\pm 200\text{ g}$ Digital Accelerometer Evaluation Board

GENERAL DESCRIPTION

The [EVAL-ADXL375Z](#) is a simple evaluation board that allows quick evaluation of the performance of the [ADXL375](#) 3-axis digital accelerometer. The [EVAL-ADXL375Z](#) has two sets of 0.1 inch spaced vias, for population of a 4-pin and 5-pin header, for access to all power and signal lines. The vias or headers allow the evaluation board to be attached to a prototyping board (breadboard) or attached to the PCB in an existing system. Four holes are provided for mechanical attachment of the [EVAL-ADXL375Z](#) to the application. An external host processor is required for communication to the part.

The dimensions of the [EVAL-ADXL375Z](#) are 20 mm \times 20 mm with mounting holes set 15 mm \times 15 mm at the corners of the printed circuit board (PCB).

CIRCUIT DESCRIPTION

The schematic of the [EVAL-ADXL375Z](#) is shown in Figure 2. See the [ADXL375](#) data sheet for configuration of the accelerometer after it is connected to the application host processor.

The PCB layout of the [EVAL-ADXL375Z](#) is shown in Figure 1. The [EVAL-ADXL375Z](#) has three factory installed capacitors for bypass: two 100 nF capacitors and a 10 μF capacitor. C1 and C2 are V_S bypass capacitors to reduce analog supply noise and C3, located between $V_{DD/I/O}$ and GND, is provided to reduce digital clocking noise.

HANDLING CONSIDERATIONS

The [EVAL-ADXL375Z](#) is not reverse polarity protected. Reversing the V_S or $V_{DD/I/O}$ supply and GND pins can cause damage to the [ADXL375](#).

Dropping the [EVAL-ADXL375Z](#) on a hard surface can generate several thousand g 's of acceleration, which may exceed the data sheet absolute maximum limits. See the [ADXL375](#) data sheet for more information.

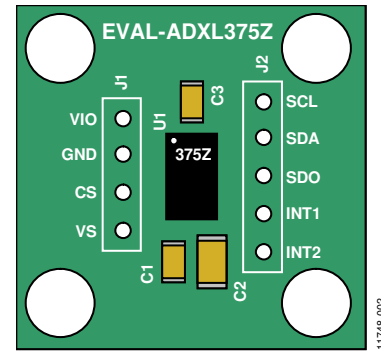


Figure 1. Physical Layout

EVALUATION BOARD SCHEMATIC

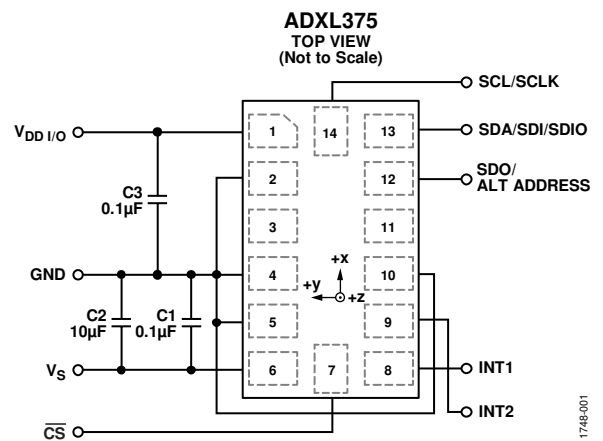


Figure 2. Schematic

NOTES

**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.

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