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Three-Axis Accelerometer Evaluation Board

Preliminary Technical Data

DESCRIPTION

The EVAL-ADXL325Z is a simple evaluation board that allows quick evaluation of the performance of the ADXL325 three-axis accelerometer. The EVAL-ADXL325Z has a 6-pin, 0.1 inch spaced header for access to all power and signal lines that the user can attach to a prototyping board (breadboard) or wire using a standard plug. Four holes are provided for mechanical attachment of the EVAL-ADXL325Z to the ADXL325.

The dimensions of the EVAL-ADXL325Z 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-ADXL325Z is shown in Figure 1. Analog bandwidth can be set by changing the C2, C3, and C4 capacitors. See the ADXL325 data sheet for a complete description of the operation of the accelerometer.

The part layout of the EVAL-ADXL325Z is shown in Figure 2. The EVAL-ADXL325Z has four factory installed 100 nF capacitors. C1 at Vs is a bypass capacitor to reduce supply noise. C2, C3, and C4 at X_{OUT}, Y_{OUT}, and Z_{OUT} are filter capacitors to set the bandwidth to 50 Hz (see Figure 1). Many applications require a different bandwidth, in which case the user can change C2, C3, and C4 as appropriate.

SPECIAL NOTES ON HANDLING

The EVAL-ADXL325Z is not reverse polarity protected. Reversing the +V supply and ground pins can cause damage to the ADXL325.

Dropping the EVAL-ADXL325Z on a hard surface can generate acceleration greater than 1000 g, which may exceed the data sheet absolute maximum limits. See the ADXL325 data sheet for more information.



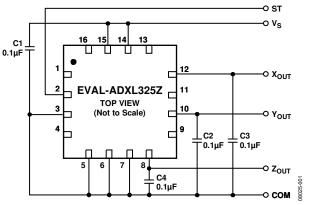


Figure 1. Schematic

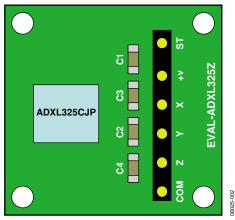


Figure 2. Physical Layout

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EVAL-ADXL325Z

NOTES

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