

# Three-Axis Accelerometer Evaluation Board

## Preliminary Technical Data

## EVAL-ADXL327Z

#### DESCRIPTION

The EVAL-ADXL327Z is a simple evaluation board that allows quick evaluation of the performance of the ADXL327 three-axis accelerometer. The EVAL-ADXL327Z 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-ADXL327Z to the ADXL327.

The dimensions of the EVAL-ADXL327Z 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-ADXL327Z is shown in Figure 1. Analog bandwidth can be set by changing the C2, C3, and C4 capacitors. See the ADXL327 data sheet for a complete description of the operation of the accelerometer.

The part layout of the EVAL-ADXL327Z is shown in Figure 2. The EVAL-ADXL327Z has four factory installed 100 nF capacitors. C1 at V<sub>s</sub> is a bypass capacitor to reduce supply noise. C2, C3, and C4 at X<sub>OUT</sub>, Y<sub>OUT</sub>, and Z<sub>OUT</sub> 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-ADXL327Z is not reverse polarity protected. Reversing the +V supply and ground pins can cause damage to the ADXL327.

Dropping the EVAL-ADXL327Z on a hard surface can generate acceleration greater than 1000 *g*, which may exceed the data sheet absolute maximum limits. See the ADXL327 data sheet for more information.

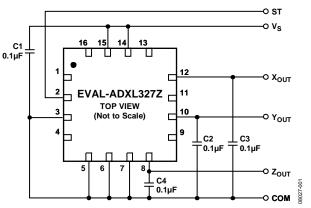


Figure 1. Schematic

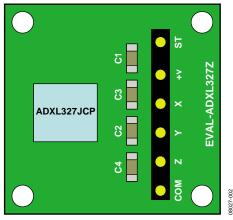


Figure 2. Physical Layout

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### NOTES

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