High Performance, Wide Bandwidth Accelerometer Evaluation Board

EVAL-ADXL001

GENERAL DESCRIPTION

The EVAL-ADXL001 is a simple evaluation board that allows users to quickly evaluate the performance of the ADXL001 vibration sensor. The EVAL-ADXL001 is specifically designed to mount on to a mechanical shaker and is constructed of an extra thick PCB, measuring 0.8 inches square. Screw holes are supplied for rigid mounting to the shaker block. This design allows users to easily evaluate the full performance range of the ADXL001 vibration sensor without having to solder the device to a separate test board. Solder pads are included that allow users to implement their own application-specific low-pass filter on the output of the device.

CIRCUIT DESCRIPTION

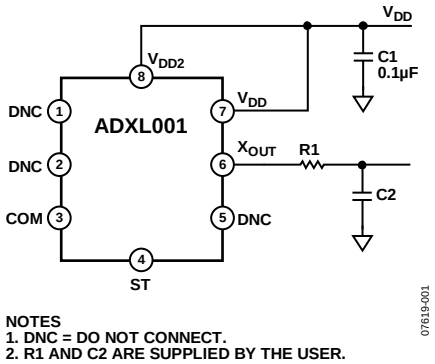
The schematic for the EVAL-ADXL001 is shown in Figure 1. This circuit was designed to allow for a user-configurable low-pass filter on the device output. When no low-pass filter is needed, users must short the R1 solder pads together, and it is recommended that a bypass capacitor (22 nF) be placed on C2 for improved EMI rejection.

V_{DD} and V_{DD2} are shorted together internally on the PCB. This is consistent with normal device operation.

The board layout of the EVAL-ADXL001 is shown in Figure 2 and the parts list for the EVAL-ADXL001 is shown in Table 1. As delivered, there is no bandwidth limit set for the ADXL001. It is recommended that a ~75 kHz low-pass filter be added to mitigate high frequency noise outside of the vibration band of interest.

SPECIAL NOTES ON HANDLING

The EVAL-ADXL001 is not reverse polarity protected. Reversing the power supply or applying inappropriate voltages to any pin may damage the EVAL-ADXL001.



NOTES
1. DNC = DO NOT CONNECT.
2. R1 AND C2 ARE SUPPLIED BY THE USER.

Figure 1. EVAL-ADXL001 Schematic

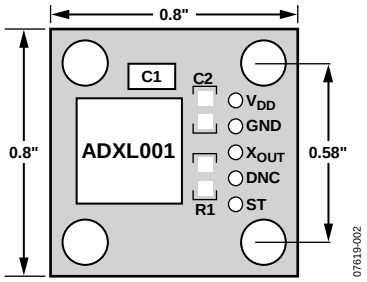


Figure 2. EVAL-ADXL001 Board Layout

Table 1. EVAL-ADXL001 Parts List

Component	Value (nF)
C1	100
C2	Not included
R1	Not included

Rev. 0

Evaluation boards are only intended for device evaluation and not for production purposes. Evaluation boards are supplied "as is" and without warranties of any kind, express, implied, or statutory including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. No license is granted by implication or otherwise under any patents or other intellectual property by application or use of evaluation boards. Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Analog Devices reserves the right to change devices or specifications at any time without notice. Trademarks and registered trademarks are the property of their respective owners. Evaluation boards are not authorized to be used in life support devices or systems.

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
Tel: 781.329.4700 **www.analog.com**
Fax: 781.461.3113 **©2009 Analog Devices, Inc. All rights reserved.**

ORDERING INFORMATION

ORDERING GUIDE

Model	Package Description
EVAL-ADXL001-70Z[1]	Evaluation Board
EVAL-ADXL001-250Z[1]	Evaluation Board
EVAL-ADXL001-500Z[1]	Evaluation Board

[1] Z = RoHS Compliant Part.

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.

©2009 Analog Devices, Inc. All rights reserved. Trademarks and registered trademarks are the property of their respective owners.
EB07619-0-1/09(0)