3-Axis, ±200 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 × 20 mm with mounting holes set 15 mm × 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 VS bypass capacitors to reduce analog supply noise and C3, located between VDD I/O and GND, is provided to reduce digital clocking noise.

HANDLING CONSIDERATIONS
The EVAL-ADXL375Z is not reverse polarity protected. Reversing the VS or VDD 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.
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.

Legal Terms and Conditions
By using the evaluation board discussed herein (together with any tools, components documentation or support materials, the “Evaluation Board”), you are agreeing to be bound by the terms and conditions set forth below (“Agreement”) unless you have purchased the Evaluation Board, in which case the Analog Devices Standard Terms and Conditions of Sale shall govern. Do not use the Evaluation Board until you have read and agreed to the Agreement. Your use of the Evaluation Board shall signify your acceptance of the Agreement.  Do not use the Evaluation Board until you have read and agreed to the Agreement. Your use of the Evaluation Board shall signify your acceptance of the Agreement.

This Agreement and the Evaluation Board shall all be considered the confidential and proprietary information of ADI. Customer may not disclose or transfer any portion of the Evaluation Board to any other party for any reason. Upon discontinuation of use of the Evaluation Board or termination of this Agreement, Customer agrees to promptly return the Evaluation Board to ADI. ADDITIONAL RESTRICTIONS. Customer may not disassemble, decompile or reverse engineer chips on the Evaluation Board. Customer shall inform ADI of any occurred damages or any modifications or alterations it makes to the Evaluation Board, including but not limited to soldering or any other activity that affects the material content of the Evaluation Board. Modifications to the Evaluation Board must comply with applicable law, including but not limited to the RoHS Directive. TERMINATION. ADI may terminate this Agreement at any time upon giving written notice to Customer. Customer agrees to return to ADI the Evaluation Board at that time. LIMITATION OF LIABILITY. THE EVALUATION BOARD PROVIDED HEREUNDER IS PROVIDED “AS IS” AND ADI MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND WITH RESPECT TO IT. ADI SPECIFICALLY DISCLAIMS ANY REPRESENTATIONS, ENDORSEMENTS, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, RELATED TO THE EVALUATION BOARD INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, TITLE, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. IN NO EVENT WILL ADI AND ITS LICENSORS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM CUSTOMER’S POSSESSION OR USE OF THE EVALUATION BOARD, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DELAY COSTS, LABOR COSTS OR LOSS OF GOODWILL. ADI’S TOTAL LIABILITY FROM ANY AND ALL CAUSES SHALL BE LIMITED TO THE AMOUNT OF ONE HUNDRED US DOLLARS ($100.00). EXPORT. Customer agrees that it will not directly or indirectly export the Evaluation Board to another country, and that it will comply with all applicable United States federal laws and regulations relating to exports. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the substantive laws of the Commonwealth of Massachusetts (excluding conflict of law rules). Any legal action regarding this Agreement will be heard in the state or federal courts having jurisdiction in Suffolk County, Massachusetts, and Customer hereby submits to the personal jurisdiction and venue of such courts. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement and is expressly disclaimed.