**Evaluation Board User Guide**

**UG-245**

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**Evaluation Board for the ±300°/sec, Single-Axis Digital Output Rate Gyroscope**

**GENERAL DESCRIPTION**

The EVAL-ADXRS450Z-V is a simple breakout board that facilitates quick evaluation of the performance of the ADXRS450 ±300°/sec digital output single-axis rate gyroscope in an SMT-compatible vertical mount package.

The EVAL-ADXRS450Z-V has two sets of 5-lead, 0.1-inch pin spacing headers that allow electrical connections to be made between the ADXRS450 and the existing system. Four mounting holes are also provided for mechanical attachment of the EVAL-ADXRS450Z-V to the application. An external host processor is required for communication to the ADXRS450 gyroscope.

The dimensions of the EVAL-ADXRS450Z-V are 1.3 inch × 1.3 inch (33 mm × 33 mm) with two sets of mounting holes. The outer set of holes is 0.125 inch (3.175 mm) in diameter and arranged in a 0.945 inch × 0.945 inch (24 mm × 24 mm) square around the center of the printed circuit board (PCB). The inner set of mounting holes are 0.120 inch (3.05 mm) in diameter and arranged in a 0.575 inch × 0.575 inch (14.6 mm × 14.6 mm) square around the center of the PCB.

**CIRCUIT DESCRIPTION**

The board layout and schematic of the EVAL-ADXRS450Z-V are shown in Figure 1 and Figure 2, respectively. A list of parts that are populated on the board is shown in Table 1.

Pin names are indicated on the schematics and board layout, as well as on the board itself, for easy identification. For additional information, refer to the ADXRS450 data sheet.

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[Image of EVAL-ADXRS450Z-V Board Layout]

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**Figure 1.**

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PLEASE SEE THE LAST PAGE FOR AN IMPORTANT WARNING AND LEGAL TERMS AND CONDITIONS.
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REVISION HISTORY
3/11—Revision 0: Initial Version
EVALUATION BOARD SCHEMATIC

Figure 2. EVAL-ADXRS450Z-V Schematic
COMPONENTS LISTING

See Table 1 for the parts list for the EVAL-ADXRS450Z-V. Note that these parts are factory-installed.

SPECIAL NOTES ON HANDLING

Note that the EVAL-ADXRS450Z-V is not reverse polarity-protected. Reversing the power supply or applying inappropriate voltages to any pin (outside the Absolute Maximum Ratings listed in the ADXRS450 data sheet) may damage the EVAL-ADXRS450Z-V.

Table 1. EVAL-ADXRS450Z-V Parts List

<table>
<thead>
<tr>
<th>Reference Designator</th>
<th>Value</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>U1</td>
<td>ADXRS450BEYZ</td>
<td>LCC_V</td>
</tr>
<tr>
<td>C1</td>
<td>0.1 μF</td>
<td>0603</td>
</tr>
<tr>
<td>C2</td>
<td>1 μF</td>
<td>0603</td>
</tr>
<tr>
<td>C3</td>
<td>1 μF</td>
<td>0603</td>
</tr>
<tr>
<td>C4</td>
<td>1 μF</td>
<td>0603</td>
</tr>
<tr>
<td>L1</td>
<td>470 μH</td>
<td>1210</td>
</tr>
<tr>
<td>D1</td>
<td>MMSD4148T1</td>
<td>SOD-123</td>
</tr>
</tbody>
</table>

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. Proper ESD precautions should be taken to avoid performance degradation or loss of functionality.