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# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









# Evaluation Board for the ±50°/sec, Single Chip Rate Gyro

# **EVAL-ADXRS614**

## **GENERAL DESCRIPTION**

The EVAL-ADXRS614 is a simple evaluation board that allows quick evaluation of the performance of the ADXRS614  $\pm 50^{\circ}$ /sec yaw rate gyro. No additional external components are required for operation. The EVAL-ADXRS614 has a 20-lead, dual in-line (0.3-inch width  $\times$  0.1-inch pin spacing) interface that allows easy prototyping of products without BGA soldering.

#### CIRCUIT DESCRIPTION

The schematic of the EVAL-ADXRS614 is shown in Figure 1. The numbers that appear in squares correspond to the pins on the evaluation board. It is identical to the suggested application shown in the ADXRS614 data sheet.

The analog and power grounds (AGND and PGND) have separate power planes in this evaluation board to accommodate application-specific grounding schemes. If the user requires only a single ground plane, these nodes can be shorted together. Both AGND and PGND must be grounded for the evaluation board to operate properly.

Note that the analog supply voltage and charge pump supply voltage (AV $_{\rm CC}$  and V $_{\rm DD}$ ) are not connected on the EVAL-ADXRS614 and that users may connect these as appropriate to their application.

The parts layout of the EVAL-ADXRS614 is shown in Figure 2 and the parts list for the EVAL-ADXRS614 is shown in Table 1. As delivered, the EVAL-ADXRS614 is set to 10 Hz bandwidth ( $C_{\text{OUT}} = 100 \text{ nF}$ ). The user may add an external capacitor to further reduce the bandwidth and improve the noise floor.

## **SPECIAL NOTES ON HANDLING**

Note that the EVAL-ADXRS614 is not reverse polarity protected. Reversing the power supply or applying inappropriate voltages to any pin (outside the Absolute Maximum Ratings listed in the ADXRS614 data sheet) may damage the EVAL-ADXRS614.

# **SCHEMATICS AND PARTS LIST/LAYOUT**

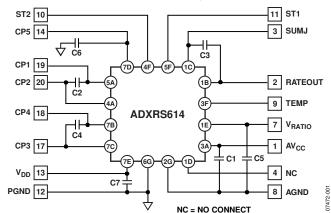


Figure 1. EVAL-ADXRS614 Schematic

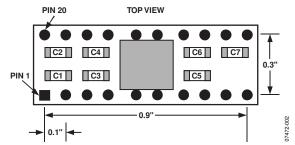


Figure 2. EVAL-ADXRS614 Parts Layout

#### Table 1. EVAL-ADXRS614 Parts List

Component	Value (nF)	
C1	100	
C2	22	
C3	100	
C4	22	
C5	100	
C6	100	
C7	100	

#### Rev. A

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# **EVAL-ADXRS614**

## **REVISION HISTORY**

6/08—Revision 0: Initial Version

## **ORDERING GUIDE**

Model <sup>1</sup>	Package Description
EVAL-ADXRS614Z	Evaluation Board

 $<sup>^{1}</sup>$  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.