

Description

The ADXRS401EB-i is a simple evaluation board that allows the user to quickly evaluate the performance of the ADXRS401ABG yaw rate gyro. No additional external components are required for operation. The ADXRS401EB-i has a 20-lead dual-in-line (0.3 inch width by 0.1 inch pin spacing) interface that allows the user to easily prototype products without having to deal with BGA soldering. The 0.4 square inch outline of the ADXRS401EB-i is still among the smallest gyros available today.

Circuit Description

The schematic of the ADXRS401EB-i is shown in Figure 1. It is identical to the suggested application shown in the ADXRS401ABG data sheet.

The analog and power grounds (AGND and PGND) have separate ground planes and are joined at one point. The user may cut this trace if separate ground schemes are desired.

Note that the analog supply voltage and charge pump supply voltage (AVCC and PDD) are not connected on the ADXRS401EB-i, and the user must connect these as appropriate to the application.

The parts layout of the ADXRS401EB-i is shown in Figure 2, and the part list for the ADXRS401EB-i is shown in Table I. As delivered, the ADXRS401EB-i is set for 40Hz bandwidth ($C_{OUT} = 22\text{ nF}$). The user may add an additional external capacitor to further reduce the bandwidth and improve the noise floor.

Special Notes on Handling

Note that the ADXRS401EB-i is not reverse polarity protected. Reversing the power supply or applying inappropriate voltages to any pin (outside the data sheet's Absolute Maximum Ratings) may damage the ADXRS401EB-i.

Application / Process Notes

- Vehicle chassis rollover sensing
- Inertial measurement units
- Platform stabilization
- Image stabilization

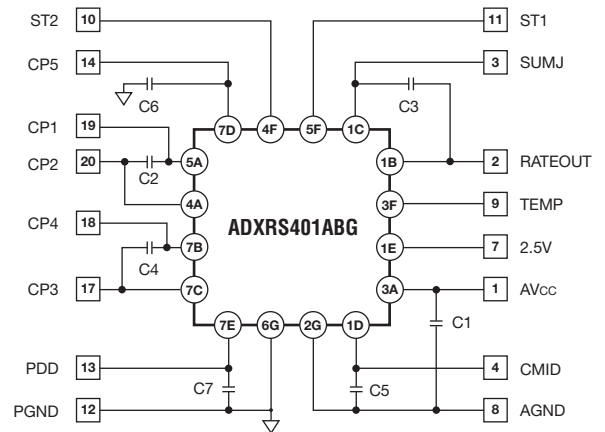
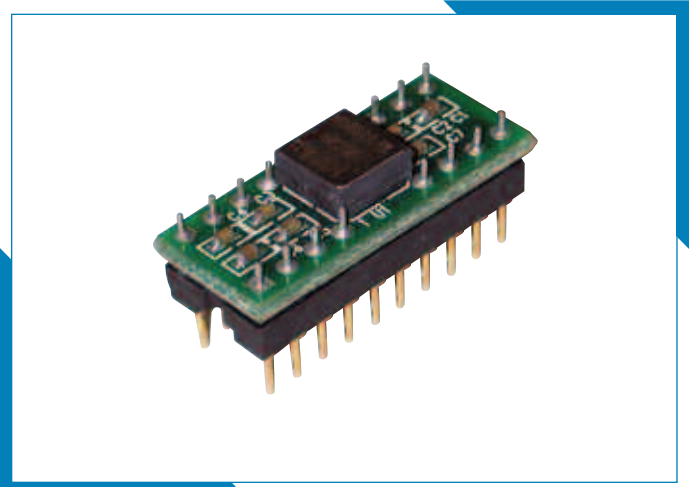


Figure 1 : ADXRS401EB-i Schematic

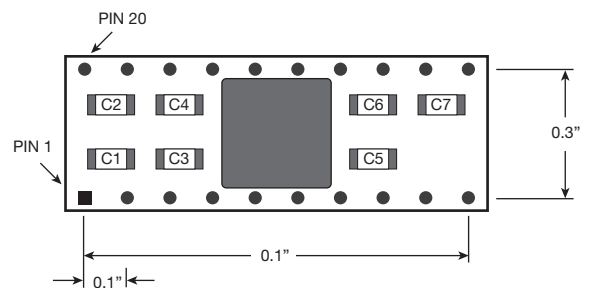


Figure 2 : ADXRS401EB-i Parts Layout

Table I. ADXRS401EB-i Parts List

Component	Value (nF)
C1	100
C2	22
C3	22
C4	22
C5	100
C6	47
C7	100

Ordering Information

Model	Package Description
ADXRS401EB-i	Evaluation Board