

ADXRS300EB

GENERAL DESCRIPTION

The ADXRS300EB is a simple evaluation board that allows the user to quickly evaluate the performance of the ADXRS300ABG yaw rate gyro. No additional external components are required for operation. The ADXRS300EB 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 ADXRS300EB is still among the smallest gyros available today.

CIRCUIT DESCRIPTION

The schematic of the ADXRS300EB is shown in Figure 1. It is identical to the suggested application shown in the ADXRS300ABG 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 ADXRS300EB, and the user must connect these as appropriate to the application.

The parts layout of the ADXRS300EB is shown in Figure 2, and the part list for the ADXRS300EB is shown in Table I. As delivered, the ADXRS300EB is set for 40 Hz 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 ADXRS300EB is not reverse polarity protected. Reversing the power supply, or applying inappropriate voltages to any pin (outside the ADXRS300 data sheet's Absolute Maximum Ratings), may damage the ADXRS300EB.

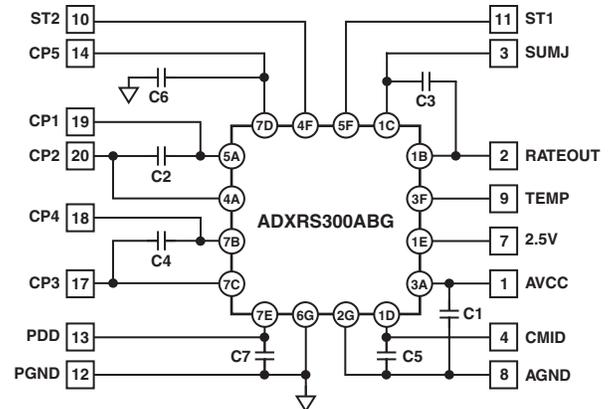


Figure 1. ADXRS300EB Schematic

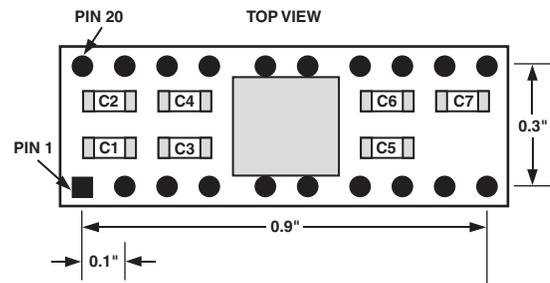


Figure 2. ADXRS300EB Parts Layout

Table I. ADXRS300EB Component Values

| Component | Values (nF) |
|-----------|-------------|
| C1 | 100 |
| C2 | 22 |
| C3 | 22 |
| C4 | 22 |
| C5 | 100 |
| C6 | 47 |
| C7 | 100 |

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