

Rollover Detection In-Plane Gyroscope

Data Sheet

ADXRS910

FEATURES

High performance, in-plane roll rate gyroscope Temperature compensated, high precision offset and sensitivity performance 2°/sec rms maximum gyroscope noise Serial port interface (SPI) digital output with 16-bit data word <20 mA guiescent current consumption 3.3 V and 5 V operation -40°C to +105°C temperature range 16-lead SOIC_CAV surface-mount package for in-plane roll rate sensing **Qualified for automotive applications**

APPLICATIONS

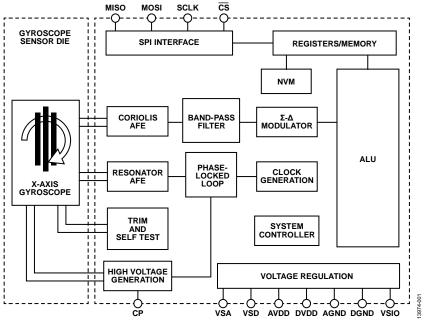
Rollover detection

GENERAL DESCRIPTION

The ADXRS910 is a high performance in-plane gyroscope, designed for automotive rollover detection applications. The ADXRS910 also has an internal temperature sensor that is used to compensate offset and sensitivity performance, providing excellent stability over the -40°C to +105°C temperature range.

The gyroscope provides a full-scale range of $\pm 300^{\circ}$ /sec with a sensitivity of 80 LSB/°/sec. Its resonating disk sensor structure enables angular rate measurement around an in-plane axis. The -3 dB filter corner frequency can be selected to be 24.6 Hz, 49 Hz, 102 Hz, or 201 Hz. The sensor data output from the device is a 16-bit, twos complement word contained in a 32-bit SPI transaction. SPI communications are compatible up to 10 MHz.

The ADXRS910 is available in a 16-lead inverted SOIC package. The ADXRS910 is specified to operate at 3.3 V and 5 V, with less than 20 mA of current consumption. Its specifications are valid over the -40°C to +105°C temperature range.



FUNCTIONAL BLOCK DIAGRAM

Figure 1.

For more information about the ADXRS910, contact the Analog Devices, Inc., Customer Interaction Center at www.analog.com/technical_support to connect with a technical support specialist.

Rev. Sp0

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DOCUMENTATION

Data Sheet

 ADXRS910: Rollover Detection In-Plane Gyroscope Data Sheet

DESIGN RESOURCES

- ADXRS910 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

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SAMPLE AND BUY

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NOTES

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Rev. Sp0 | Page 2 of 2