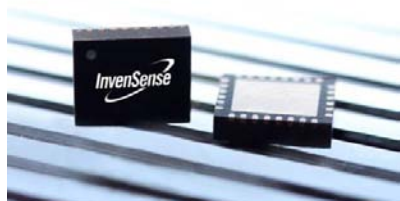


IDG-1123

Integrated Dual-Axis MEMS Gyroscopes



GENERAL DESCRIPTION



The IDG-1123 is an integrated X- and Y-axis angular rate gyroscope. It uses InvenSense's proprietary MEMS technology with vertically driven vibrating masses to produce a functionally complete, low-cost motion sensor. All required conditioning electronics are integrated into a single chip measuring 4 x 5 x 1.2mm. It incorporates X- and Y-axis low-pass filters and an EEPROM for on-chip factory calibration of the sensor. Factory trimmed scale factors eliminate the need for external active components and end-user calibration. The product is lead-free and Green Compliant.

FEATURES

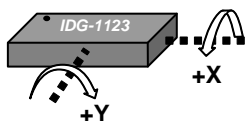
- Integrated X- and Y-axis gyros on a single chip
- 43°/s full scale range
- 23 mV/°/s sensitivity
- Integrated amplifiers and low-pass filters
- High vibration rejection over a wide frequency range
- High cross-axis isolation by proprietary MEMS design
- 3V single supply operation
- Hermetically sealed for temp and humidity resistance
- 10,000 g shock tolerant
- Smallest dual axis gyro package at 4 x 5 x 1.2mm
- RoHS and Green Compliant

APPLICATIONS

- Optical Image Stabilization
- GPS Navigation Devices
- Inertial Measurement Units
- Platform Stabilization

SENSOR ORIENTATION DIAGRAM

The diagram below shows the orientation of the axes of sensitivity and the polarity of rotation.



SPECIFICATIONS

Parameter	Specifications	Unit
Full-Scale Range	± 43	°/sec
Sensitivity	23	mV/°/sec
Cross Axis Sensitivity	± 1	%
Non-linearity	< 1	% of FSR
Supply Voltage	3.0 \pm 0.3	V
Supply Current	7	mA
Operating Temperature	-20 to +85	°C
On Time	50	ms
Shock Tolerance	10,000	g

ABOUT INVENSENSE

InvenSense is the leading provider of motion sensing solutions for mobile applications, with proven technology and millions of units shipped to major OEMs worldwide. The company's patented motion sensing technology and its novel Nasiri-Fabrication address many emerging mass-market applications such as gaming, image stabilization, and smart user interfaces that use hand motion and gesture-based commands for mobile applications, such as, smart phones, digital cameras, 3D remote control devices and more. InvenSense's corporate offices are located in Sunnyvale, California.

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