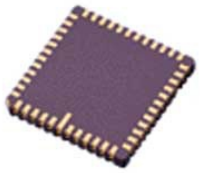
ADXL355BEZ-RL7

Data Sheet

Low Noise, Low Drift, Low Power 3-Axis Accelerometer with digital output

Manufacturers	Analog Devices, Inc
Package/Case	14-Lead LCC (6mm x 6mm)
Product Type	Motion & Position Sensors
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADXL355BEZ-RL7 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADXL355 is part of a new family of low noise density, low 0 g offset drift, low power, 3-axis MEMS accelerometers with selectable measurement ranges. The ADXL355 supports the ±2.048 g, ±4.096 g, and ±8.192 g ranges, and offers industry leading noise, offset drift over temperature, and long term stability, enabling precision applications with minimal calibration and with very low power consumption.

The ADXL355 and ADXL354 (analog output. See ADXL354 Product Page) perform high resolution vibration measurement with very low noise to enable the early detection of structural defects via wireless sensor networks. The low power consumption of the new ADXL354 and ADXL355 accelerometers lengthens battery life and allows extended product usage by reducing the time between battery changes. The low noise performance of the ADXL354 and ADXL355 with low power consumption makes it now possible to cost-effectively enable low level vibration measurement applications such as Structural Health Monitoring (SHM). Additionally, the tilt stability of ADXL354 and ADXL355 accelerometers delivers excellent repeatability over temperature and time, which is ideal for orientation and navigation systems in unmanned aerial vehicles using Inertial Measurement Units (IMUs) and inclinometers. By providing repeatable tilt measurement under all conditions, the new accelerometers enable minimal tilt error without extensive calibration in harsh environments.

The ADXL354 and ADXL355 accelerometers offer guaranteed temperature stability with null offset coefficients of 0.15mg/C (max). The stability minimizes resource and expense associated with calibration and testing effort, helping to achieve higher throughput for device OEMs. In addition, the hermetic package helps ensure that the end product conforms to its repeatability and stability specifications long after they leave the factory.

With output of ±2g to ±8g full scale range (FSR), selectable digital filtering from 1 Hz to 1 kHz, and low noise density of 25μ/√Hz at less than 200μA current consumption,ADXL355 MEMS accelerometer offers performance level comparable to much more expensive devices with less power consumption and BOM cost.

Features

Hermetic package offers excellent long-term stability

0 g offset vs. temperature (all axes): 0.15 mg/°C maximum

Low power, VSUPPLY (LDO enabled)

200 µA in measurement mode (digital)

21 µA in standby mode

Digital output features

Digital serial peripheral interface (SPI)/I2C interfaces

20-bit analog-to-digital converter (ADC)

Data interpolation routine for synchronous sampling

Programmable high- and low-pass digital filters

Electromechanical self-test

Integrated temperature sensor

Voltage range options

VSUPPLY with internal regulators: 2.25 V to 3.6 V

V1P8ANA, V1P8DIG with internal low dropout regulator (LDO) bypassed: 1.8 V typical ± 10%

Operating temperature range: -40°C to 125°C

14-terminal, 6 mm × 6 mm × 2.1 mm, LCC package, 0.26 grams

Application

Inertial measurement units (IMUs)/altitude and heading reference systems (AHRS)

Platform stabilization systems

Structural health monitoring

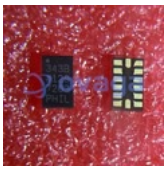
Seismic imaging

Tilt sensing

Robotics

Condition Monitoring

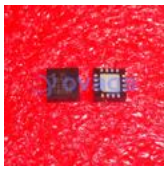
Related Products



ADXL343BCCZ

Analog Devices, Inc

LGA-14



ADXL335BCPZ-RL7

Analog Devices, Inc

LFCSP16

ADXL103CE

Analog Devices, Inc

CLCC-8

ADIS16488BMLZ

Analog Devices, Inc

MSM24

[ADXRS642BBGZ]

Analog Devices, Inc

CBGA-32

[ADXL357BEZ]

Analog Devices, Inc

LCC-14

[ADXL346ACCZ-RL7]

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LGA16

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LGA-14