Accelerometer Triple ±200g 2.5V 16-Pin LGA T/R

Manufacturers	<u>Analog Devices, Inc</u>
Package/Case	
Product Type	Motion & Position Sensors
RoHS	
Lifecycle	

Images are for reference only

Please submit RFQ for ADXL372BCCZ-RL7 or <u>Email to us: sales@ovaga.com</u> We will contact you in 12 hours.　　　　**RFQ**

General Description

The ADXL372 is an ultralow power, 3-axis, ±200 g MEMS accelerometer that consumes 22 µA at a 3200 Hz output data rate (ODR). The ADXL372 does not power cycle its front end to achieve its low power operation and therefore does not run the risk of aliasing the output of the sensor.

In addition to its ultralow power consumption, the ADXL372 has many features to enable impact detection while providing system level power reduction. The device includes a deep multimode output first in, first out (FIFO), several activity detection modes, and a method for capturing only the peak acceleration of over threshold events.

Two additional lower power modes with interrupt driven, wake-up features are available for monitoring motion during periods of inactivity. In wake-up mode, acceleration data can be averaged to obtain a low enough output noise to trigger on low g thresholds. In instant on mode, the ADXL372 consumes 1.4 µA while continuously monitoring the environment for impacts. When an impact event that exceeds the internally set threshold is detected, the device switches to normal operating mode fast enough to record the event.

High g applications tend to experience acceleration content over a wide range of frequencies. The ADXL372 includes a 4-pole low-pass antialiasing filter to attenuate out of band signals that are common in high g applications. The ADXL372 also incorporates a high-pass filter to eliminate initial and slow changing errors, such as ambient temperature drift.

The ADXL372 provides 12-bit output data at 100 mg/LSB scale factor. The user can access configuration and data registers via the serial peripheral interface (SPI) or limited I2C protocol. The ADXL372 operates over a wide supply voltage range and is available in a 3 mm × 3.25 mm × 1.06 mm package.

Multifunction pin names may be referenced by their relevant function only.

Features

200 Hz to 3200 Hz user-selectable bandwidth with 4-pole anti-aliasing filter

Selectable over-sampling ratio

Adjustable high-pass filter

Ultralow power

Power can be derived from a coin cell battery

22 μA @ 3200 Hz ODR, 2.5 V supply

Low power, wake-up mode for low g activity detection

1.4 μA instant on mode with adjustable threshold

Built-in features for system-level power savings

Autonomous interrupt processing without processor intervention

Deep embedded FIFO to minimize host processor load

Ultralow power event monitoring detects impacts and wakes up fast enough to capture the transient events

Ability to capture and store peak acceleration values of events

Adjustable, low g threshold activity/inactivity detection

Wide supply range: 1.6 V to 3.5 V

Acceleration sample synchronization via external trigger

SPI digital interface and limited I2C interface format support

12-bit output at 100 mg/LSB scale factor

Wide temperature range: −40°C to 105°C

Small, thin, 3 mm × 3.25 mm × 1.06 mm package

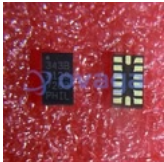# Application

Impact and shock detection

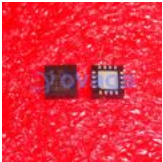Asset health assessment

Portable Internet of Things (IoT) edge nodes

Concussion and head trauma detection

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

Analog Devices, Inc

LGA16

ADXL345BCCZ-RL7

Analog Devices, Inc

LGA-14