ADXL313WACPZ-RL7

Data Sheet

MEMS Accelerometer, I2C, SPI, Digital, X, Y, Z, ± 0.5g, ± 1 g, ± 2 g, ± 4 g, 2 V, 3.6 V, LFCSP

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP32
Product Type	Motion & Position Sensors
RoHS	
Lifecycle	

Images are for reference only

Please submit RFQ for ADXL313WACPZ-RL7 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADXL313 is a small, thin, low power, 3-axis accelerometer with high resolution (13-bit) measurement up to ±4g. Digital output data is formatted as 16-bit twos complement and is accessible through either a serial port interface (SPI) (3-wire or 4-wire) or I2C digital interface.

The ADXL313 is well suited for car alarm or black box applications. It measures the static acceleration of gravity in tilt-sensing applications, as well as dynamic acceleration resulting from motion or shock. Its high resolution (1024 LSB/g) and low noise (150 µg/√Hz) enable resolution of inclination changes of as little as 0.1°. A built-in FIFO facilitates using oversampling techniques to improve resolution to as little as 0.025° of inclination.

Several built-in sensing functions are provided. Activity and inactivity sensing detects the presence or absence of motion and whether the acceleration on any axis exceeds a user-set level. These functions can be mapped to interrupt output pins. An integrated 32-level FIFO can be used to store data to minimize host processor intervention, resulting in reduced system power consumption.

Low power modes enable intelligent motion-based power management with threshold sensing and active acceleration measurement at extremely low power dissipation.

The ADXL313 is supplied in a small, thin 5 mm × 5 mm × 1.45 mm, 32-lead LFCSP package and is pin compatible with the ADXL312 accelerometer device.

Features

Ultralow power (scales automatically with data rate)

As low as 30 µA in measurement mode>

As low as 0.1 µA in standby mode>

Low noise performance

150 µg/√Hz typical for X- and Y-axes

250 µg/√Hz typical for the Z-axis

Embedded, patent pending FIFO technology minimizes host processor load

User-selectable resolution

Fixed 10-bit resolution for any g range

Fixed 1024 LSB/g sensitivity for any g range

Resolution scales from 10-bit at ±0.5 g to 13-bit at ±4 g

Built-in motion detection functions for activity/inactivity monitoring

Supply and I/O voltage range: 2.0 V to 3.6 V

See data sheet for additional features

Application

Car alarms

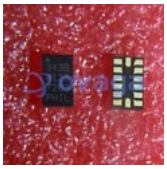
Hill start aid (HSA) systems

Electronic parking brakes

Data recorders (black boxes)


COUNTRY OF ASSEMBLY: PHILIPPINES
COUNTRY OF DIFFUSION: USA
(Q)QTY: 1000
(9D)DATE CODE: 2116
(1T)LOT NUMBER: AU38255.20
(1P)MFG NO: ADXL313WACPZ-RL7
RoHS Exempt
2015/863/EU
MSL 3
PPBT=260°C
e3 BOX 8 OF 8
Caution
This bag contains
MOISTURE-SENSITIVE DEVICES
LEVEL
3
1. Calculated shelf life is sealed bag 60 months at <40 °C and <90% relative humidity (RH)
2. Peak package body temperature: 260°C
3. After bag is opened, devices that will be subjected to reflow solder or other high temperature process must be
a) Mounted within 168 hours of factory conditions <= 30°C / 60% RH, or
b) Stored per J-STD-033
4. Devices require bake, before mounting, if
a) Humidity Indicator Card reads > 10% for level 2a-5a devices or > 60% for level 2 devices when read at 23 +/- 5°C

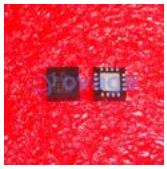
Related Products



[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