

# ADXL345TCCZ-EP-RL7

Images are for reference only

Data Sheet

Accelerometers - Board Mount Digital Output Three-Axis Enhanced RL7

Manufacturers <u>Analog Devices, Inc</u>

Package/Case LGA

Product Type Motion & Position Sensors

RoHS Rohs

Lifecycle



**RFO** 

### **General Description**

The ADXL345 is a small, thin, low power, 3-axis accelerometer with high resolution (13-bit) measurement at up to  $\pm 16g$ . Digital output data is formatted as 16-bit twos complement and is accessible through either a SPI (3- or 4-wire) or I2C digital interface.

The ADXL345 is well suited for mobile device 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 (4 mg/LSB) enables measurement of inclination changes less than 1.0°.

Several special sensing functions are provided. Activity and inactivity sensing detect the presence or lack of motion and if the acceleration on any axis exceeds a user-set level. Tap sensing detects single and double taps. Free-fall sensing detects if the device is falling. These functions can be mapped to one of two interrupt output pins. An integrated, patent pending 32-level first in, first out (FIFO) buffer can be used to store data to minimize host processor intervention.

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

The ADXL345 is supplied in a small, thin, 3 mm × 5 mm × 1 mm, 14-lead, plastic package.

ADXL345-EP Supports defense and aerospace applications (AQEC)

#### **Features**

Ultralow power: as low as 23  $\mu$ A in measurement mode and 0.1  $\mu$ A in standby mode at>

Power consumption scales automatically with bandwidth

User-selectable resolution

Fixed 10-bit resolution

Full resolution, where resolution increases with g range, up to 13-bit resolution at  $\pm 16$  g (maintaining 4 mg/LSB scale factor in all g ranges)

See data sheet for additional features.

ADXL345-EP supports defense and aerospace applications (AQEC standard)

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Extended industrial temperature range: (-55°C to +105°C)

Controlled manufacturing baseline

One assembly/test site

One fabrication site

Enhanced product change notification

Qualification data available on request

V62/12657 DSCC Drawing Number

## **Application**

ADXL345-EP Supports defense and aerospace applications (AQEC)

Handsets

Medical instrumentation

Gaming and pointing devices

Industrial instrumentation

Personal navigation devices

Hard disk drive (HDD) protection

### **Related Products**



ADXL343BCCZ
Analog Devices, Inc
LGA-14



Analog Devices, Inc

ADXL103CE



ADXRS642BBGZ
Analog Devices, Inc
CBGA-32



ADXL335BCPZ-RL7

Analog Devices, Inc

LFCSP16



Analog Devices, Inc MSM24

ADIS16488BMLZ



ADXL357BEZ
Analog Devices, Inc
LCC-14



ADXL346ACCZ-RL7
Analog Devices, Inc
LGA16



ADXL345BCCZ-RL7

Analog Devices, Inc

LGA-14