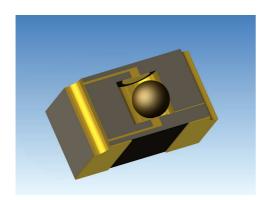


Data Sheet Micro Vibration Sensor MVS0608.02 (omnidirectional) Version: V 2.1



Properties

- Size 2.45 mm x 2.85 mm x 1.7 mm
- Lead free
- R On < 100 Ohm
- noiseless
- protected against environmental stress
- automated SMD-mounting

Applications

- motion detection
- system wake-up low power

Description

The micro vibration switch detects vibrations by means of a micro ball (d=0.8 mm).

The ball bridges two contacts reducing the resistance between the two external

connection pads from several mega ohms (>30MOhm) to below 100 ohms.

Material

Package

PCB laminate material (FR4, epoxy glass compound)

Inner contact material

Gold plated

Ball

Stainless steel, gold plated

Characteristic values

operational temperature*

-20℃ - +70℃

Operating voltage

Max. +15 V

Current

Max. 2 mA

Reaction point

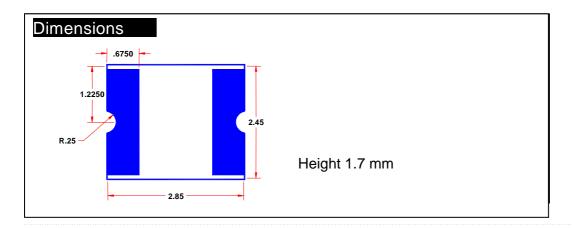
approx. 50 mg

Soldering

Reflow Process 260℃, 10 s

Standard package

Reels with 1000 or 2000 pcs





RoHS compliance

The micro vibrations sensor is compliant to RoHS 2002/95/EG.

Qualification

High temperature and high humidity storage

Test time: 48h Test temperature: 50° C Humidity: 90%

without condensation

no evidence of internal corrosion after the test.

High humidity storage

Test time: 96 h
Test temperature: 40℃
Test humidity: 95%

no evidence of internal corrosion after the test.

no shape distortion

Temperature cycle storage

Test cycle: 8 cycles, T1 = 65°C for 6h, T2 = -20°C for 6h,

temperature change rate = 3K/min

no evidence of internal corrosion after the test.

no shape distortion

Non Operation Half Sine Shock

Test cycle: Acceleration 25g at 6msec pulse width

1000 cycles pos. 1000cycles neg.; 1Shock/s; 3 axis: X, Y, Z

Non Operational Vibration Test

Test cycle: Sinus 10 ... 300Hz; Elongation 0.25mm / 0.25g; 5 cycles; 1 axis

Frequency area A: 10 – 22.28Hz, amplitude in A:0.25 mm Frequency area B: 22.28 - 300Hz, acceleration in B: 0.25g

Sweep speed: 1 Octave/min, Cycles: 10

Time per Sweep: 4.9 min

Non Operational Vibration Test

Test cycle: Sinus 10 ... 500Hz; Elongation 3.0mm / 1.5g; 5 cycles; 1 axis

Frequency area A: 10 – 15.76Hz, Amplitude in A: 3.0mm Frequency area B: 15.76 - 500Hz, Acceleration in B: 1.5 g Sweep speed: 1 Oktave/min, Number of sweeps: 10

Time per Sweep: 5.62 min



