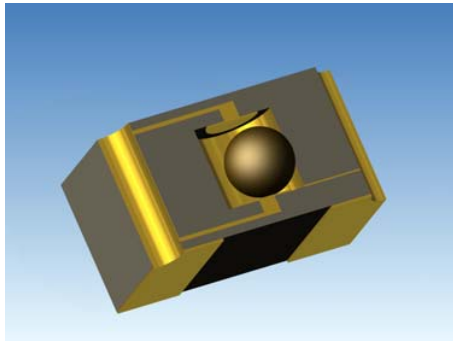


## Data Sheet Micro Vibration Sensor MVS 0608.02 (omnidirectional)

Version: V 2.0



The ball bridges two contacts reducing the resistance between the two external connection pads from several mega ohms (>30M $\Omega$ ) to below 100 ohms.

### Material

#### Package

PCB laminate material (FR4, epoxy glass compound)

#### Inner contact material

Gold plated

#### Ball

Stainless steel, gold plated

### Properties

- Size 2.45 mm x 2.85 mm x 1.7 mm
- Lead free
- R<sub>On</sub> < 100  $\Omega$
- noiseless
- protected against environmental stress
- automated SMD-mounting

### Characteristic values

#### operational temperatur

-20°C – 70°C

#### Operating voltage

Max. +15 V

#### Reaction point

approx. 50 mg

### Applications

- motion detection
- system wake-up – low power

### Soldering

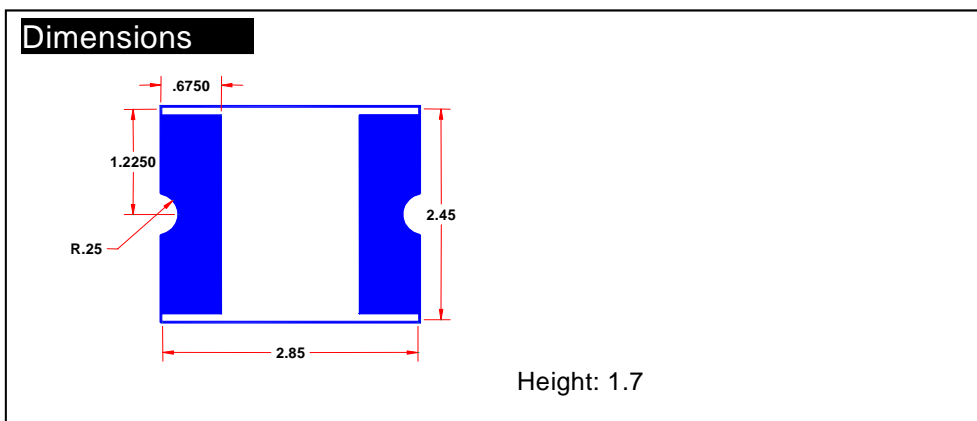
Reflow Process 260°C, 10 s

### Description

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

### 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°C  
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

