# BXXBM9

## IEPE Single-Axis Modal Testing Accelerometer

### DETAILS

The BXXBM9 series of miniature accelerometers incorporate a built-in micro-impedance converter that transforms charge signals generated during vibration into voltage signals. These sensors exhibit exceptional long-term stability and repeatability. Featuring a laser-welded titanium alloy housing, they offer compact dimensions and lightweight construction.

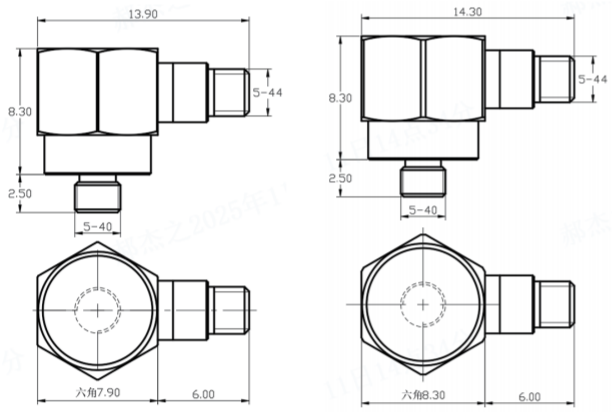
### FEATURES

- Micro-miniature built-in integrated circuits
- Compact size, lightweight
- High frequency response characteristics

### TYPICAL APPLICATIONS

- PC board testing
- ESS
- Space-constrained vibration measurements

***Fig_1*** Dimensions of BXXBM9




B02BM9 B06BM9

BXXBM9

***Fig_2*** Typical Temperature Response

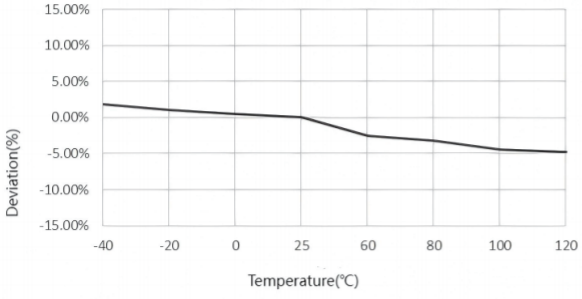
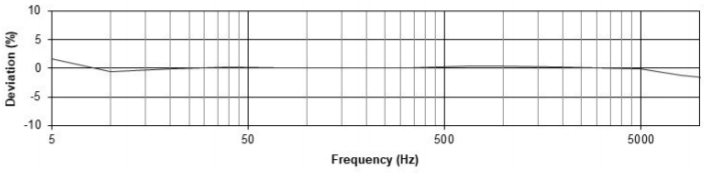



***Fig_3*** Typical Frequency Response



## Specifications-BXXBM9

| MODEL NUMBER | | UNIT | B02BM9 | B06BM9 |
|---|---|---|---|---|
| **PERFORMANCE** | | | | |
| Sensitivity [1] | | mV/g | 10 | 100 |
| | | mV/(m/s²) | 1 | 10 |
| Measurement Range | | g | ±500 | ±50 |
| Broadband Resolution [2] | | g rms | 0.001 | 0.0001 |
| Non-Linearity [3] | | % | 1 | |
| Frequency Range | ± 5% | Hz | 1-10k | 1-9k |
| | ±10% | | 0.5-18k | 0.5-10k |
| Resonance Frequency [2] | | Hz | ≥50k | ≥35k |
| Discharge Time Constant [2] | | s | ≤1 | |
| Transverse Sensitivity | | % | ≤5 | |
| **ELECTRICAL** | | | | |
| Excitation Voltage | | VDC | 20-30 | |
| Constant Current Excitation | | mA | 2-20 | |
| Output Impedance | | Ω | ≤100 | |
| Output Bias Voltage | | V | 8-12 | |
| Electrical Isolation | | Ω | - | |
| Spectral Noise [2] | 10Hz | μg/√Hz | 150 | 15 |
| | 100Hz | | 40 | 4 |
| | 1000Hz | | 20 | 2 |
| **ENVIRONMENTAL** | | | | |
| Sinusoidal Vibration Limit [4] | | g rms | 2000 | 400 |
| Shock Limit [4] | | g pk | 5000 | 1000 |
| Temperature Range | | ℃ | -50~120 | |
| | | ℉ | -58~248 | |
| Temperature Response [2] | | - | See typical curve | |
| **PHYSICAL** | | | | |
| Sealing | | - | Laser welding IP68 | |
| Sensing Element | | - | Piezoelectric ceramics | |
| Housing Material | | - | Titanium alloy | |
| Size | | mm | HEX 7.9×8.3×13.9 | HEX 8.3×8.3×14.3 |
| | | in | HEX 0.311×0.327×0.547 | HEX 0.327×0.327×0.563 |
| Electrical Connector | | - | 5-44 Side | |
| Mounting Thread | | - | 5-40 | |
| Weight [2] | | g | 1.8 | 2 |
| | | oz | 0.063 | 0.071 |
| TEDS Optional [5] | | - | No | |

## Additional Information

### Note:

1. @ 160Hz, 24VDC, 4mA conditions
2. Typical values
3. JBT 6822-2018 7.12.1 Vibration Testing Method
4. References the mechanical structure of the sensor not being damaged in a non powered state, rather than in a working state
5. Some products may have changes in size after adding TEDS

### BXXBM9

Supplied Accessories:

- Product Verification Report
- Install Screws

**COMPLIANCE WITH STANDARDS**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