# B02A14 B02B14

## Micro Type Accelerometer

### DETAILS

The B02A14 B02B14 Single-Axis Accelerometer Features a piezoelectric ceramic shear structure with wide-band frequency response. High-quality piezo-electric ceramic ensures long-term stability for years of precise measurement. Internal low-impedance circuitry delivers low noise, excellent sensitivity, and favorable temperature response. Titanium alloy laser-welded housing provides exceptional sealing integrity and strength, with an M5 mounting thread at the base.

### FEATURES

- Integrated Microminiature Circuits
- Small size and light weight
- Memory alloy fastener, shear structure, stable and reliable

### TYPICAL APPLICATIONS

- Modal analysis
- Vibration control
- Universal vibration monitoring.

***Fig_1*** Dimensions of B02X14

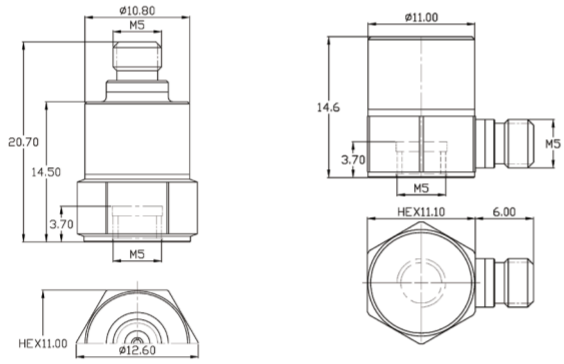


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***Fig_2*** Typical Temperature Response

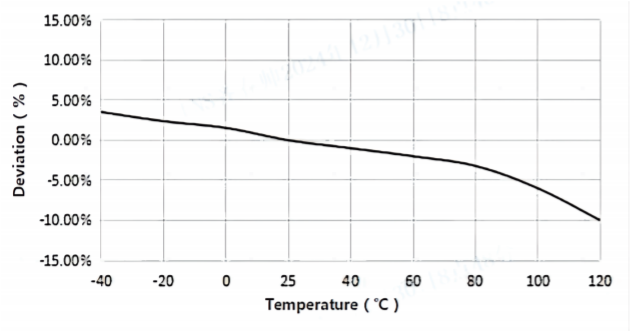
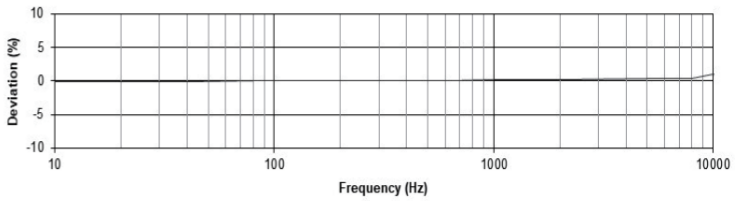



***Fig_3*** Typical Frequency Response



## Specifications-B02A14 B02B14

| MODEL NUMBER | | UNIT | B02A14 | B02B14 |
|---|---|---|---|---|
| **PERFORMANCE** | | | | |
| Sensitivity [1] | | mV/g | 10 | |
| | | mV/(m/s²) | 1 | |
| Measurement Range | | g | ±500 | |
| Broadband Resolution [2] | | g rms | 0.001 | |
| Non-Linearity [3] | | % | 1 | |
| Frequency Range | ± 5% | Hz | 1-10k | |
| | ±10% | | 0.5-12k | |
| Resonance Frequency [2] | | Hz | ≥65k | |
| 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 | |
| | 100Hz | | 40 | |
| | 1000Hz | | 20 | |
| **ENVIRONMENTAL** | | | | |
| Sinusoidal Vibration Limit [4] | | g rms | 3000 | |
| Shock Limit [4] | | g pk | 8000 | |
| Temperature Range | | °C | -40~120 | |
| | | °F | -40~248 | |
| Temperature Response [2] | | - | See typical curve | |
| **PHYSICAL** | | | | |
| Sealing | | - | Laser welding IP68 | |
| Sensing Element | | - | Piezoelectric ceramics | |
| Housing Material | | - | Titanium Alloy | |
| Size | | mm | HEX 11×20.7 | HEX 11.1×14.6 |
| | | in | HEX 0.433×0.815 | HEX 0.437×0.575 |
| Electrical Connector | | - | M5 Top (Opt. 10-32) | M5 Side (Opt. 10-32) |
| Mounting Thread | | - | M5 | |
| Weight [2] | | g | 4.7 | 4.5 |
| | | oz | 0.010 | 0.010 |
| TEDS Optional [5] | | - | Yes | |

## 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

### B02X14

Supplied Accessories:

- Product Verification Report
- Install Screws

### OPTIONALVERSIONS

-A: 10-32 Output Connector
-E: 10-32 Mounting Threads
-T: TEDS

**COMPLIANCE WITH STANDARDS**

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