

Model Number  
**353B11**

# ICP® ACCELEROMETER

Revision: J  
ECN #: 26810

## Performance

Sensitivity(± 10 %)  
Measurement Range  
Frequency Range(± 5 %)  
Frequency Range(± 10 %)  
Frequency Range(± 3 dB)  
Resonant Frequency

Broadband Resolution(1 to 10,000 Hz)

Non-Linearity  
Transverse Sensitivity

## Environmental

Overload Limit(Shock)  
Temperature Range(Operating)  
Temperature Response  
Base Strain Sensitivity

## Electrical

Excitation Voltage  
Constant Current Excitation  
Output Impedance  
Output Bias Voltage  
Discharge Time Constant  
Settling Time(within 10% of bias)  
Spectral Noise(1 Hz)  
Spectral Noise(10 Hz)  
Spectral Noise(100 Hz)  
Spectral Noise(1 kHz)

## Physical

Sensing Element  
Sensing Geometry  
Housing Material  
Sealing  
Size (Hex x Height)  
Weight  
Electrical Connector  
Electrical Connection Position  
Mounting Thread  
Mounting Torque

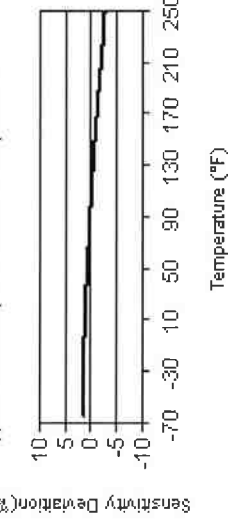
## SI

0.51 mV/(m/s<sup>2</sup>)  
± 9810 m/s<sup>2</sup> pk  
1 to 10,000 Hz  
0.7 to 18,000 Hz  
0.35 to 30,000 Hz  
≥ 70 kHz  
0.1 m/s<sup>2</sup> rms  
≤ 1 %  
≤ 5 %  
± 10,000 g pk  
-65 to +250 °F  
See Graph  
≤ 0.005 g/μe

18 to 30 VDC  
2 to 20 mA  
≤ 100 ohm  
8 to 12 VDC  
0.5 to 2.0 sec  
<5 sec  
62,784 (μm/s<sup>2</sup>)/√Hz  
13,734 (μm/s<sup>2</sup>)/√Hz  
3532 (μm/s<sup>2</sup>)/√Hz  
1256 (μm/s<sup>2</sup>)/√Hz

Quartz  
Shear  
Titanium  
Hermetic  
7.9 mm x 10.9 mm  
2.0 gm  
5-44 Coaxial  
Side  
5-40 Male  
8 to 12 in-lb  
90 to 135 N-cm

Typical Sensitivity Deviation vs Temperature



[4]

## OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

**A - Adhesive Mount** [5]  
Supplied Accessory : Model 080A90 Quick Bonding Gel (1)

**B - Low bias electronics**  
Output Bias Voltage 4.5 to 7.5 VDC  
Excitation Voltage 12 to 30 VDC  
Constant Current Excitation 1 to 20 mA  
Measurement Range ± 600 g pk ± 5886 m/s<sup>2</sup> pk

**J - Ground Isolated**  
Frequency Range(± 5 %) 1 to 8000 Hz  
Frequency Range(± 10 %) 0.7 to 15,000 Hz  
Resonant Frequency ≥ 56 kHz  
Electrical Isolation(Base) ≥ 10<sup>8</sup> ohm  
Size - Hex x Height 9.5 mm x 14.5 mm  
Weight 0.11 oz 3.2 gm

**M - Metric Mount**  
Mounting Thread M3 x 0.50 Male  
Supplied Accessory : Model M080A15 Adhesive Mounting Base (1) replaces Model 080A15

**Q - Extended discharge time constant** [6]  
Frequency Range(± 5 %) 0.15 to 10,000 Hz  
Frequency Range(± 10 %) 0.1 to 20,000 Hz  
Discharge Time Constant >5 sec  
Settling Time(within 10% of bias) <45 sec  
Supplied Accessory : Model ACS-4 Single-axis, low frequency phase and amplitude response calibration. (1)

**W - Water Resistant Cable**  
Electrical Connector Sealed Integral Cable  
Electrical Connection Position Side Sealed Integral Cable

## NOTES:

- [1] Typical
- [2] Zero-based, least-squares, straight line method.
- [3] Transverse sensitivity is typically ≤ 3%.
- [4] See PCB Declaration of Conformance PS023 for details.
- [5] Adhesive mounting base is not required. "Quick Bonding Gel" has maximum temperature range of 180 ° F (82°C).
- [6] ACS-4 starts at 1 Hz for sensitivities <20 mV/g.

## SUPPLIED ACCESSORIES:

Model 080A109 Petro Wax (1)  
Model 080A15 Adhesive Mounting Base (1)  
Model ACS-1 NIST traceable frequency response (10 Hz to upper 5% point). (1)

Entered: <b>BJS</b>	Engineer: <b>BAM</b>	Sales: <b>WDC</b>	Approved: <b>EB</b>	Spec Number:
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All specifications are at room temperature unless otherwise specified.  
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