

Model Number

353B52

## ICP® ACCELEROMETER

Revision: D

ECN #: 20839

## Performance

	ENGLISH	SI	
Sensitivity (± 5 %)	500 mV/g	51.0 mV/(m/s <sup>2</sup> )	
Measurement Range	± 10 g pk	± 98.1 m/s <sup>2</sup> pk	
Frequency Range (± 5 %)	1 to 2000 Hz	1 to 2000 Hz	
Frequency Range (± 10 %)	0.7 to 4000 Hz	0.7 to 4000 Hz	
Frequency Range (± 3 dB)	0.35 to 7000 Hz	0.35 to 7000 Hz	
Resonant Frequency	≥ 14 kHz	≥ 14 kHz	
Broadband Resolution	0.0004 g rms	0.004 m/s <sup>2</sup> rms	[1]
Non-Linearity	≤ 1 %	≤ 1 %	[2]
Transverse Sensitivity	≤ 5 %	≤ 5 %	[3]

## Environmental

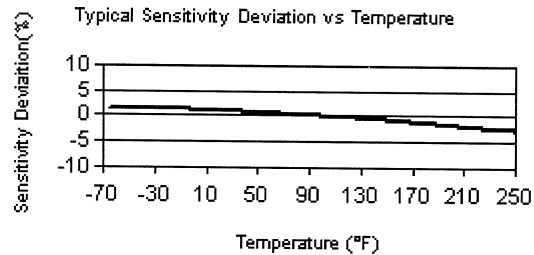
Overload Limit (Shock)	± 4000 g pk	± 39,240 m/s <sup>2</sup> pk	
Temperature Range	-65 to +250 °F	-54 to +121 °C	
Temperature Response	See Graph	See Graph	
Base Strain Sensitivity	0.0002 g/με	0.002 (m/s <sup>2</sup> )/με	[1]

## Electrical

Excitation Voltage	23 to 30 VDC	23 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	≤ 100 ohm	≤ 100 ohm	
Output Bias Voltage	11 to 16 VDC	11 to 16 VDC	
Discharge Time Constant	0.5 to 2.0 sec	0.5 to 2.0 sec	
Settling Time (within 10% of bias)	<15 sec	<15 sec	
Spectral Noise (1 Hz)	200 μg/√Hz	1962 (μm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (10 Hz)	16 μg/√Hz	157 (μm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (100 Hz)	5 μg/√Hz	49 (μm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (1 kHz)	1 μg/√Hz	10 (μm/s <sup>2</sup> )/√Hz	[1]
Electrical Isolation	None (Optional) ohm	None (Optional) ohm	

## Physical

Sensing Element	Quartz	Quartz	
Sensing Geometry	Shear	Shear	
Housing Material	Titanium	Titanium	
Sealing	Welded Hermetic	Welded Hermetic	
Size (Hex x Height)	0.75 in x 1.18 in	19.1 mm x 29.9 mm	
Weight	1.1 oz	32 gm	[1]
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connection Position	Top	Top	
Mounting Thread	10-32 Female	10-32 Female	



[4]

All specifications are at room temperature unless otherwise specified.  
In the interest of constant product improvement, we reserve the right to change specifications without notice.

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## 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.

## J - Ground Isolated

Frequency Range (+5 %)	2 kHz	2 kHz
Frequency Range (+10 %)	4 kHz	4 kHz
Resonant Frequency	≥ 12 kHz	≥ 12 kHz
Electrical Isolation (Base)	>10 <sup>8</sup> ohm	>10 <sup>8</sup> ohm
Size - Hex x Height	0.75 in x 1.23 in	19.1 mm x 31.2 mm

## Q - Extended discharge time constant

Temperature Range	-65 to +180 °F	-54 to +82 °C
Sensitivity (± 10 %)	500 mV/g	51.0 mV/(m/s <sup>2</sup> )
Frequency Range (-5 %)	0.1 Hz	0.1 Hz
Frequency Range (-10 %)	0.07 Hz	0.07 Hz
Discharge Time Constant	≥ 10 sec	≥ 10 sec
Settling Time (within 10% of bias)	45 sec	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	Sealed Integral Cable
Electrical Connection Position	Top	Top

## 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.

## SUPPLIED ACCESSORIES:

Model 080A109 Petro Wax (1)  
Model 080A12 Adhesive Mounting Base (1)  
Model 081B05 Mounting Stud (10-32 to 10-32) (1)  
Model ACS-1 NIST traceable frequency response (10 Hz to upper 5% point). (1)  
Model M081B05 Mounting Stud 10-32 to M6 X 0.75 (1)

Entered: BLS	Engineer: JMO	Sales: WX	Approved: [Signature]	Spec Number:
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