

Model Number  
351B42

# ICP® ACCELEROMETER

Revision: F  
ECN #: 14901

	ENGLISH	SI	
<b>Performance</b>			
Sensitivity (±10 %)	100 mV/g	10.2 mV/(m/s <sup>2</sup> )	
Measurement Range	±15 g pk	± 147 m/s <sup>2</sup> pk	
Frequency Range (±5 %)	1 to 2000 Hz	1 to 2000 Hz	
Frequency Range (±10 %)	0.7 to 3500 Hz	0.7 to 3500 Hz	
Frequency Range (±3 dB)	0.35 to 5000 Hz	0.35 to 5000 Hz	
Resonant Frequency	≥15 kHz	≥15 kHz	
Broadband Resolution	0.0005 g rms	0.005 m/s <sup>2</sup> rms	[1]
Non-Linearity	≤1 %	≤1 %	[2]
Transverse Sensitivity	≤5 %	≤5 %	[3]
<b>Environmental</b>			
Overload Limit	±1000 g pk	± 9810 m/s <sup>2</sup> pk	
Temperature Range (Operating)	-320 to +250 °F	-196 to +121 °C	
Base Strain Sensitivity	<0.0005 g/με	< 0.005 (m/s <sup>2</sup> )/με	[1]
<b>Electrical</b>			
Excitation Voltage	20 to 30 VDC	20 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	≤100 ohms	≤100 ohms	
Output Bias Voltage	3 to 10 VDC	3 to 10 VDC	
Discharge Time Constant	>0.5 sec	>0.5 sec	
Settling Time (within 10% of bias)	<10 sec	<10 sec	
Spectral Noise (1 Hz)	100 μg/√Hz	980 (μm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (10 Hz)	22 μg/√Hz	216 (μm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (100 Hz)	6 μg/√Hz	58.9 (μm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (1 kHz)	1.6 μg/√Hz	15.7 (μm/s <sup>2</sup> )/√Hz	[1]
Electrical Isolation	None (Optional) ohms	None (Optional) ohms	
<b>Physical</b>			
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 30.0 mm	
Weight	1.4 oz	40 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	

**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.

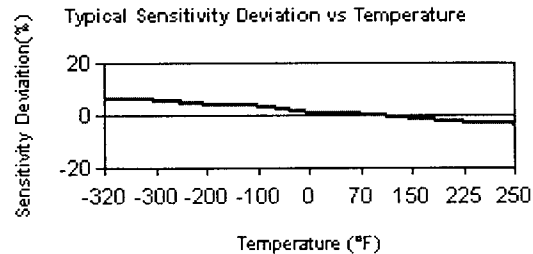
J - Ground Isolated		
Frequency Range (+5 %)	2 kHz	2 kHz
Frequency Range (+10 %)	3.5 kHz	3.5 kHz
Resonant Frequency	≥13 kHz	≥ 13 kHz
Electrical Isolation (Base)	>10 <sup>8</sup> ohms	>10 <sup>8</sup> ohms
Size (Hex x Height)	0.75 in x 1.23 in	19.1 mm x 31.2 mm

**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 081B05 Mounting Stud (10-32 to 10-32) (1)
- Model ACS-1 NIST traceable frequency response (10 Hz to +5% point). (1)
- Model M081B05 Mounting Stud 10-32 to M6 X 0.75 (1)



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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