

Model Number  
351B41

# ICP® ACCELEROMETER

Revision: E  
ECN #: 14901

	ENGLISH	SI	
<b>Performance</b>			
Sensitivity ( $\pm 10\%$ )	100 mV/g	10.2 mV/(m/s <sup>2</sup> )	
Measurement Range	$\pm 15$ g pk	$\pm 147$ m/s <sup>2</sup> pk	
Frequency Range ( $\pm 5\%$ )	1 to 2000 Hz	1 to 2000 Hz	
Frequency Range ( $\pm 10\%$ )	0.7 to 3500 Hz	0.7 to 3500 Hz	
Frequency Range ( $\pm 3$ dB)	0.35 to 5000 Hz	0.35 to 5000 Hz	
Resonant Frequency	$\geq 15$ kHz	$\geq 15$ kHz	
Broadband Resolution	0.0005 g rms	0.005 m/s <sup>2</sup> rms	[1]
Non-Linearity	$\leq 1\%$	$\leq 1\%$	[2]
Transverse Sensitivity	$\leq 5\%$	$\leq 5\%$	[3]
<b>Environmental</b>			
Overload Limit	$\pm 1000$ g pk	$\pm 9810$ m/s <sup>2</sup> pk	
Temperature Range (Operating)	-320 to +250 °F	-196 to +121 °C	
Base Strain Sensitivity	$< 0.0005$ g/ $\mu\epsilon$	$< 0.005$ (m/s <sup>2</sup> )/ $\mu\epsilon$	[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	$\leq 100$ ohms	$\leq 100$ 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)	$< 5$ sec	$< 5$ sec	
Spectral Noise (1 Hz)	100 $\mu\text{g}/\sqrt{\text{Hz}}$	980 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (10 Hz)	22 $\mu\text{g}/\sqrt{\text{Hz}}$	216 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (100 Hz)	6 $\mu\text{g}/\sqrt{\text{Hz}}$	58.9 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (1 kHz)	1.6 $\mu\text{g}/\sqrt{\text{Hz}}$	15.7 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[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 0.85 in	19.1 mm x 21.6 mm	
Weight	1.4 oz	40 gm	[1]
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connection Position	Side	Side	
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**

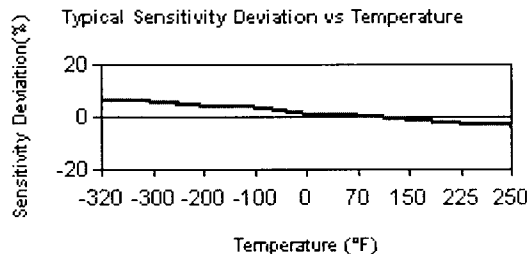
Frequency Range (5 %)	2 kHz	2 kHz
Frequency Range (10 %)	3.5 kHz	3.5 kHz
Resonant Frequency	$\geq 13$ kHz	$\geq 13$ kHz
Electrical Isolation (Base)	$> 10^8$ ohms	$> 10^8$ ohms
Size (Hex x Height)	0.75 in x 0.90 in	19.1 mm x 22.9 mm

**NOTES:**

- [1] Typical.
- [2] Zero-based, least-squares, straight line method.
- [3] Transverse sensitivity is typically  $\leq 3\%$ .
- [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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Entered: <i>(Signature)</i>	Engineer: <i>DJS</i>	Sales: <i>WJD</i>	Approved: <i>(Signature)</i>	Spec Number:
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