Model	Number
353	R34

## **ICP® ACCELEROMETER**

Revision: N ECN #: 53702

[1]

Performance	ENGLISH	SI	
Sensitivity(± 5 %)	100 mV/g	10.19 mV/(m/s²)	[1]
Measurement Range	± 50 g pk	± 491 m/s² pk	
Frequency Range(± 5 %)	1 to 4,000 Hz	1 to 4,000 Hz	
Frequency Range(± 10 %)	0.7 to 7,000 Hz	0.7 to 7,000 Hz	
Frequency Range(± 3 dB)	0.35 to 12,000 Hz	0.35 to 12,000 Hz	
Resonant Frequency	≥ 22 kHz	≥ 22 kHz	
Broadband Resolution(1 to 10,000 Hz)	0.0005 g rms	0.005 m/s <sup>2</sup> rms	[2]
Non-Linearity	≤ 1 %	≤ 1 %	[3]
Transverse Sensitivity	≤ 5 %	≤ 5 %	[4]
Environmental			
Overload Limit(Shock)	± 10,000 g pk	± 98,100 m/s² pk	
Temperature Range(Operating)	-65 to +250 °F	-54 to +121 ℃	
Temperature Response	See Graph	See Graph	[2]
Base Strain Sensitivity	0.0002 g/με	0.002 (m/s²)/με	[2]
Electrical			
Excitation Voltage	20 to 30 VDC	20 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	≤ 100 Ohm	≤ 100 Ohm	
Output Bias Voltage	7.5 to 12.0 VDC	7.5 to 12.0 VDC	
Discharge Time Constant	0.5 to 2.0 sec	0.5 to 2.0 sec	
Settling Time(within 10% of bias)	< 25 sec	< 25 sec	
Spectral Noise(1 Hz)	320 µg/√Hz	3,139 (µm/sec <sup>2</sup> )/√Hz	[2]
Spectral Noise(10 Hz)	70 μg/√Hz	687 (µm/sec <sup>2</sup> )/√Hz	[2]
Spectral Noise(100 Hz)	18 μg/√Hz	177 (µm/sec <sup>2</sup> )/√Hz	[2]
Spectral Noise(1 kHz)	6.4 μg/√Hz	63 (µm/sec <sup>2</sup> )/√Hz	[2]
Physical			
Size (Height x Hex)	1.26 in x 0.75 in	32.0 mm x 19.1 mm	
Weight	0.96 oz	27 gm	[2]
Sensing Element	Quartz	Quartz	
Sensing Geometry	Shear	Shear	
Housing Material	Titanium	Titanium	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connection Position	Тор	Тор	
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.

<b>B</b> - Low bias electronics Output Bias Voltage Excitation Voltage Constant Current Excitation Measurement Range	4.5 to 7.5 VDC 12 to 30 VDC 1 to 20 mA ± 30 g pk	4.5 to 7.5 VDC 12 to 30 VDC 1 to 20 mA ± 294 m/s <sup>2</sup> pk
I - Ground Isolated		

Frequency Range± 5 % Frequency Range± 10 % Resonant Frequency	1 to 4,000 Hz 0.7 to 6,000 Hz ≥ 18 kHz	1 to 4,000 Hz 0.7 to 6,000 Hz ≥ 18 kHz
Electrical Isolation(Base)	≥ 10 <sup>8</sup> Ohm	≥ 10 <sup>8</sup> Ohm
Size - Hex Size - Height	0.75 in 1.23 in	19.1 mm 31.2 mm

			L -
<ul> <li>Extended discharge time consta</li> </ul>	nt		
Frequency Range ± 5 %	0.1 to 4,000 Hz	0.1 to 4,000 Hz	
Frequency Range ± 10 %	0.07 to 7,000 Hz	0.07 to 7,000 Hz	
Dischargé Time Constant	≥ 10 sec	≥ 10 sec	
Settling Time (within 10% of	< 120 sec	< 120 sec	
bias) `			
Supplied Accessory: Model ACS-4 Si	ngle axis, low frequency phase	and amplitude response cal fr	om

0.5 to 10 Hz (1)	- Single axis, low frequency phase and amplicade response currien

W - Water Resistant Cable		
W - Water Resistant Cable Electrical Connector	Sealed Integral Cable	Sealed Integral Cable
Electrical Connection Position	Top	Top

#### NOTES:

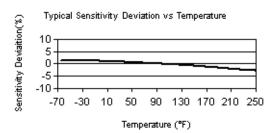
[1]B and Q options supplied with a sensitivity tolerance of  $\pm$  10 %.

[2]Typical.

[3]Zero-based, least-squares, straight line method.

[4]Transverse sensitivity is typically ≤ 3%.
[5]See PCB Declaration of Conformance PS023 for details.

# CE



### **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 ACS-4 Single axis, low frequency phase and amplitude response cal from 0.5 to 10 Hz (1) Model M081B05 Mounting Stud 10-32 to M6 X 0.75 (1)

Entered: ND	Engineer: NJF	Sales: KK	Approved: NJF	Spec Number:
Date: 03/10/2023	Date: 03/10/2023	Date: 03/10/2023	Date: 03/10/2023	353-2340-80



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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. ICP® is a registered trademark of PCB Piezotronics, Inc.