

Model Number

352M138

ICP<sup>®</sup> ACCELEROMETER

Revision: B

ECN #: 17059

## Performance

	ENGLISH	SI	
Sensitivity ( $\pm 10\%$ )	100 mV/g	10.2 mV/(m/s <sup>2</sup> )	
Measurement Range	$\pm 50$ g pk	$\pm 491$ m/s <sup>2</sup> pk	
Frequency Range (-5 %)	0.5 to 9500 Hz	0.5 to 9500 Hz	
Resonant Frequency	$\geq 35$ kHz	$\geq 35$ kHz	[1]
Broadband Resolution (1 to 10000 Hz)	0.0003 g rms	0.003 m/s <sup>2</sup> rms	[1]
Non-Linearity	$\leq 1\%$	$\leq 1\%$	[2]
Transverse Sensitivity	$\leq 5\%$	$\leq 5\%$	[3]

## Environmental

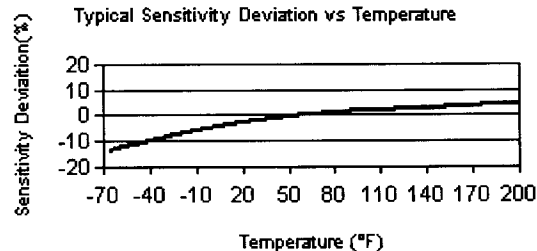
Overload Limit (Shock)	$\pm 5000$ g pk	$\pm 49050$ m/s <sup>2</sup> pk	
Temperature Range (Operating)	-65 to +200 °F	-54 to +93 °C	
Temperature Response	See Graph	See Graph	
Base Strain Sensitivity	$\leq 0.005$ g/ $\mu\epsilon$	$\leq 0.05$ (m/s <sup>2</sup> )/ $\mu\epsilon$	[1]

## Electrical

Excitation Voltage	18 to 30 VDC	18 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	$\leq 300$ ohms	$\leq 300$ ohms	
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	
Discharge Time Constant	0.8 to 2.4 sec	0.8 to 2.4 sec	
Settling Time (within 10% of bias)	<10 sec	<10 sec	
Spectral Noise (1 Hz)	120 $\mu\text{g}/\sqrt{\text{Hz}}$	1177 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (10 Hz)	32 $\mu\text{g}/\sqrt{\text{Hz}}$	313 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (100 Hz)	10 $\mu\text{g}/\sqrt{\text{Hz}}$	98 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (1 kHz)	3 $\mu\text{g}/\sqrt{\text{Hz}}$	30 ( $\mu\text{m}/\text{s}^2$ )/ $\sqrt{\text{Hz}}$	[1]

## Physical

Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	Titanium	Titanium	
Sealing	Welded Hermetic	Welded Hermetic	
Size (Hex x Height)	0.28 in x 0.66 in	7.1 mm x 16.8 mm	
Weight	0.070 oz	2.0 gm	[1]
Electrical Connector	5-44 Coaxial	5-44 Coaxial	
Electrical Connection Position	Top	Top	
Mounting Thread	5-40 Male	5-40 Male	
Mounting Torque	8 to 12 in-lb	90 to 135 N-cm	



[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.

## A - Adhesive Mount

Supplied Accessory: Model 080A90 Quick Bonding Gel (1) [5]

## J - Ground Isolated

Frequency Range (-5 %)	10 kHz	10 kHz
Resonant Frequency	$\geq 30$ kHz	$\geq 30$ kHz
Electrical Isolation (Base)	$> 10^8$ ohms	$> 10^8$ ohms
Size (Hex x Height)	0.37 in x 0.79 in	9.5 mm x 20.1 mm
Weight	0.1 oz	2.8 gm

## M - Metric Mount

Mounting Thread M3 x 0.50 Male M3 x 0.50 Male  
Supplied Accessory: Model M080A15 Adhesive Mounting Base (1)

## 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.  
[5] Mounting stud removed, adhesive mounting base not required.

## 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).

Entered: <i>DJS</i>	Engineer: <i>DJS</i>	Sales: <i>CSM</i>	Approved: <i>PM</i>	Spec Number:
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