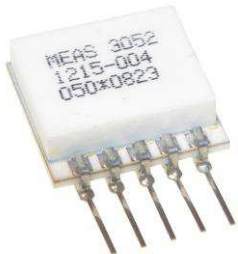


MODEL 3052A ACCELEROMETER



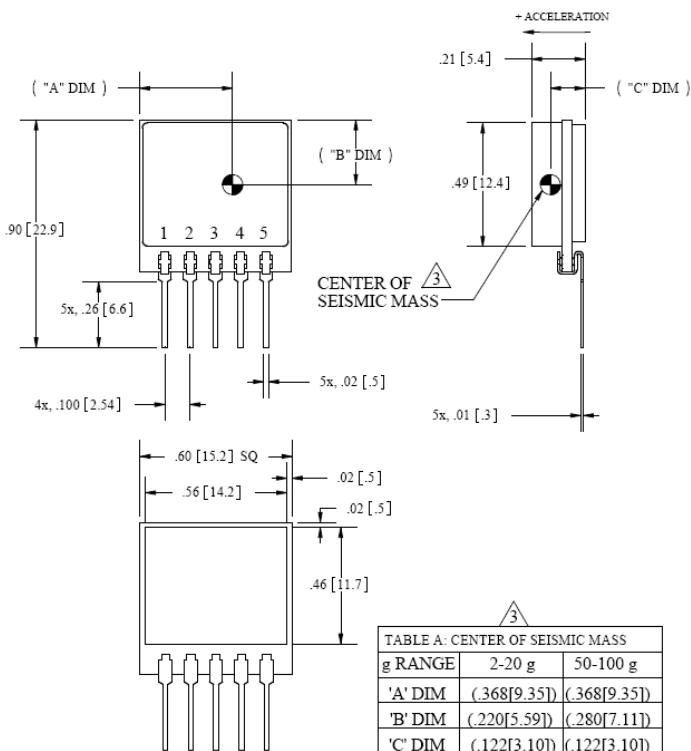
SPECIFICATIONS

- ◆ Piezoresistive MEMS
- ◆ DC Response, Gas Damped
- ◆ Circuit Board Mountable
- ◆ Integral Temp Compensation

The Model 3052A is a silicon MEMS accelerometer with integral temperature compensation. The accelerometer is packaged on a ceramic substrate with an epoxy sealed ceramic cover and is designed for adhesive mounting. The accelerometer is offered in ranges from $\pm 2g$ to $\pm 100g$ range and provides a flat frequency response to minimum 1500Hz. The silicon MEMS sensor is gas damped and incorporates over-range stops for high-g shock protection.

For a similar accelerometer designed for bolt mounting, see the model 3058A

dimensions

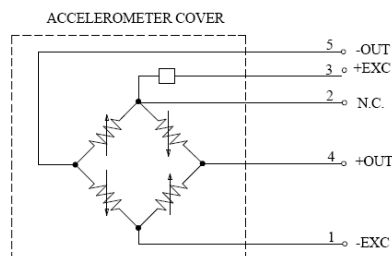


FEATURES

- ◆ Adhesive Mounted
- ◆ $\pm 1.0\%$ Non-Linearity
- ◆ 0 to $+50^{\circ}\text{C}$ Temp Compensation
- ◆ Built-in Over-range Stops
- ◆ Low Power Consumption

APPLICATIONS

- ◆ Vibration & Shock Monitoring
- ◆ Motion Control
- ◆ Impact & Shock Testing
- ◆ Transportation Measurements
- ◆ Embedded Applications
- ◆ Machinery



PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters								Notes
DYNAMIC								
Range (g)	±2	±5	±10	±20	±50	±100		
Sensitivity (mV/g) ¹	8.0-16.0	4.8-7.2	2.4-3.6	1.2-1.8	0.48-0.72	0.24-0.36		@5Vdc Excitation
Frequency Response (Hz)	0-150	0-250	0-350	0-550	0-1000	0-1300		±5%
Natural Frequency (Hz)	700	800	1000	1500	4000	6000		
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0		
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3		<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.6	0.5		
Shock Limit (g)	3000	3000	3000	3000	5000	5000		
ELECTRICAL								
Zero Acceleration Output (mV)	±2							Differential
Excitation Voltage (Vdc)	2.7 to 12							
Input Impedance (Ω)	1200-6500							
Output Impedance (Ω)	1200-6500							
Insulation Resistance (MΩ)	>100							@50Vdc
Residual Noise (µV RMS)	10							Maximum
Ground Isolation	Isolated from Mounting Surface							
ENVIRONMENTAL								
Thermal Zero Shift (%FSO/°C)	±0.060							0 to +50°C
Thermal Sensitivity Shift (%/°C)	±0.060							0 to +50°C
Operating Temperature (°C)	-40 to +125							
Compensated Temperature (°C)	0 to +50							
Storage Temperature (°C)	-40 to +125							
Humidity	Epoxy Sealed, IP61							
PHYSICAL								
Case Material	Ceramic							
Weight (grams)	3.1							
Mounting	Adhesive or solder							

¹ Output is ratiometric to excitation voltage

Calibration supplied: CS-SENS-0100 NIST Traceable Amplitude Calibration at 100Hz

Optional accessories: 121 Three Channel DC Signal Conditioner Amplifier
140A Auto-Zero Inline Amplifier

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ORDERING INFO

PART NUMBERING Model Number+Range+Electrical Connection

3052A-GGG-P

| | Electrical Connection (P=pins)
| Range (010 is 10g)

Example: 3052A-010-P
Model 3052A, 10g, Pins



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