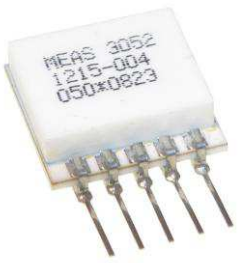
MODEL 3052A ACCELEROMETER



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 ±2g to ±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

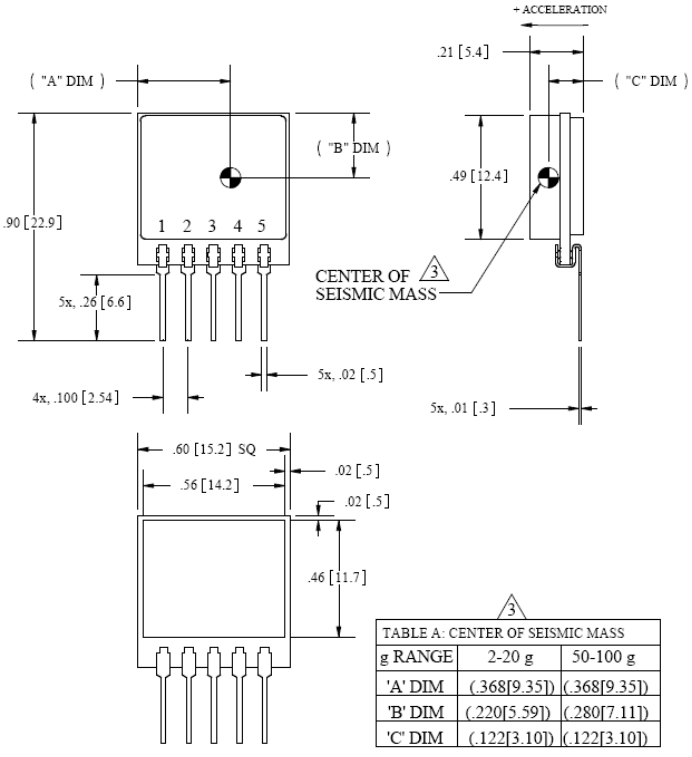
FEATURES

- **Adhesive Mounted**
- **±1.0% Non-Linearity**
- **0 to +50°C Temp Compensation**
- **Built-in Over-range Stops**
- **Low Power Consumption**

APPLICATIONS

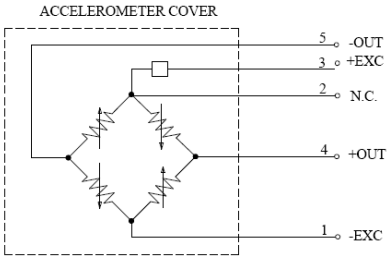
- **Vibration & Shock Monitoring**
- **Motion Control**
- **Impact & Shock Testing**
- **Transportation Measurements**
- **Embedded Applications**
- **Machinery**

dimensions



3

TABLE A: CENTER OF SEISMIC MASS		
g RANGE	2-20 g	50-100 g
'A' DIM	(.368[9.35])	(.368[9.35])
'B' DIM	(.220[5.59])	(.280[7.11])
'C' DIM	(.122[3.10])	(.122[3.10])



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							
DYNAMIC							**Notes**
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
I I_____Electrical Connection (P=pins)
I_____Range (010 is 10g)

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

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