

# Model 3255A Accelerometer



PC Board Mountable Accelerometer  
 Hermetically Sealed  
 Temperature Compensated  
 10,000g Over-Range Protection



The **Model 3255A** is a signal conditioned board mountable MEMS accelerometer. The package can be mounted in one of two orientations, allowing the measurement axis to be either parallel or perpendicular to the mounting surface without the use of costly brackets. The accelerometer incorporates integral temperature compensation and a frequency response from DC to 1500Hz. The gas damped accelerometer incorporates integral over-range stops making it ideal for measurements of static and dynamic vibrations after shock impacts.

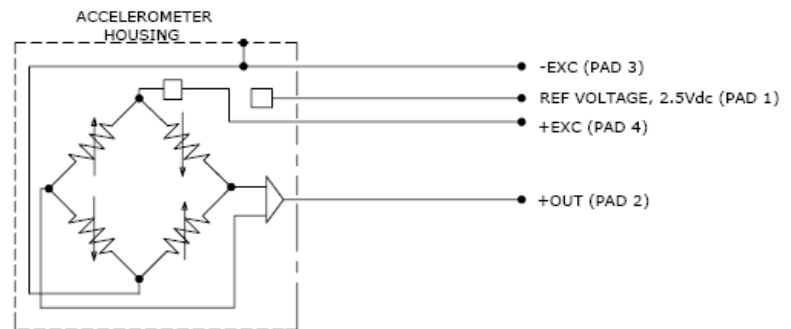
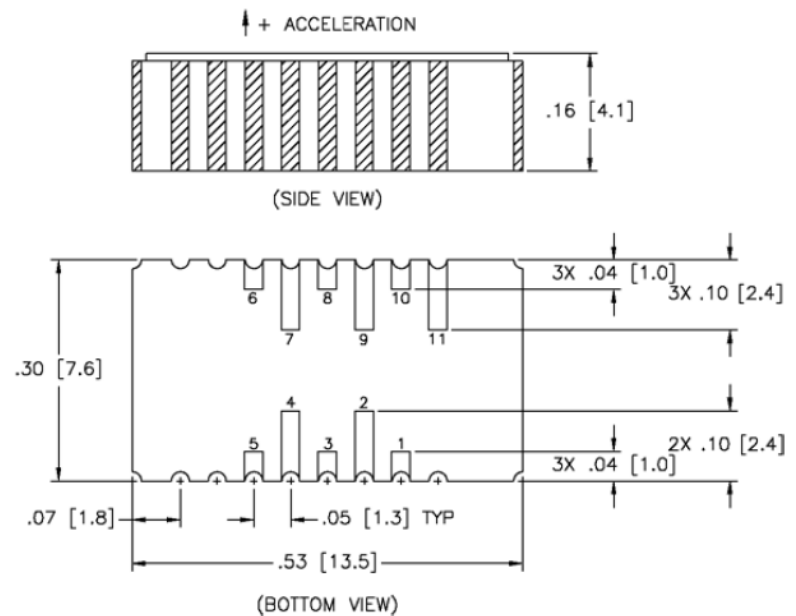
## FEATURES

- $\pm 25g$  to  $\pm 500g$  Ranges
- Three Axis Mounting Options
- Surface Mount Package
- DC Response, Gas Damping
- Hermetically Sealed

## APPLICATIONS

- Impact & Shock Testing
- Vibration & Shock Monitoring
- Crash Applications
- Transportation Measurements

## dimensions



**US Patents 5,103,667; 5,253,510; 5,445,006; 5,503,016; and 5,616,863 apply**

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## performance specifications

All values are typical at +24°C, 100Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

### Parameters

#### DYNAMIC

	±25	±50	±100	±250	±500	Notes
Range (g)	±25	±50	±100	±250	±500	
Sensitivity (mV/g) ±10%	80.0	40.0	20.0	8.0	4.0	@5Vdc Excitation ±5%
Frequency Response (Hz)	0-800	0-1000	0-1200	0-1500	0-1500	
Natural Frequency (Hz)	4000	4000	6000	8000	10000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.6	0.5	
Shock Limit (g)	10000	10000	10000	10000	10000	

#### ELECTRICAL

	2.5±0.10	2.5±0.10	2.5±0.10	2.5±0.10	2.5±0.10	Notes
Zero Acceleration Output (V)	2.5±0.10	2.5±0.10	2.5±0.10	2.5±0.10	2.5±0.10	Single-Ended
Excitation Voltage (Vdc) <sup>1</sup>	4.2 to 5.5	4.2 to 5.5	4.2 to 5.5	4.2 to 5.5	4.2 to 5.5	
Excitation Current (mA)	<10	<10	<10	<10	<10	
Bias Voltage (Vdc)	2.5	2.5	2.5	2.5	2.5	
Full Scale Output Voltage (Vdc)	±2.0	±2.0	±2.0	±2.0	±2.0	
Output Impedance (Ω)	<100	<100	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	@100Vdc Passband
Residual Noise (μV RMS)	800	400	400	400	400	
Ground Isolation	Isolated from Mounting Surface					

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.018	±0.018	±0.018	±0.018	±0.018
Thermal Sensitivity Shift (%/°C)	±0.021	±0.021	±0.021	±0.021	±0.021
Operating Temperature (°C)	-54 to +121				
Compensated Temperature (°C)	-40 to +100				
Storage Temperature (°C)	-54 to +121				

#### PHYSICAL

Case Material	Ceramic
Weight (grams)	1.5
Mounting	Solder

<sup>1</sup>Output is ratiometric with excitation voltage

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## ordering info

PART NUMBERING Model Number+Range

3255A-GGG

|  
| \_\_\_\_\_ Range (050 is 50 g)

Example: 3255A-050  
Model 3255A, 50g