

# MODEL 3038 Accelerometer



Miniature

Piezoresistive MEMS

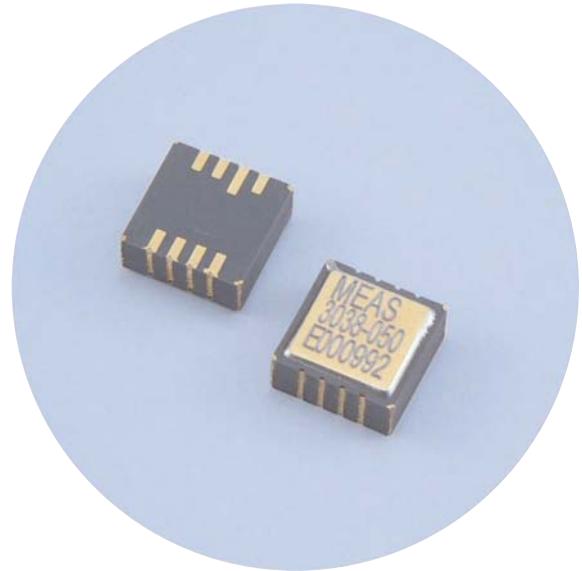
SMD Accelerometer

Hermetically Sealed

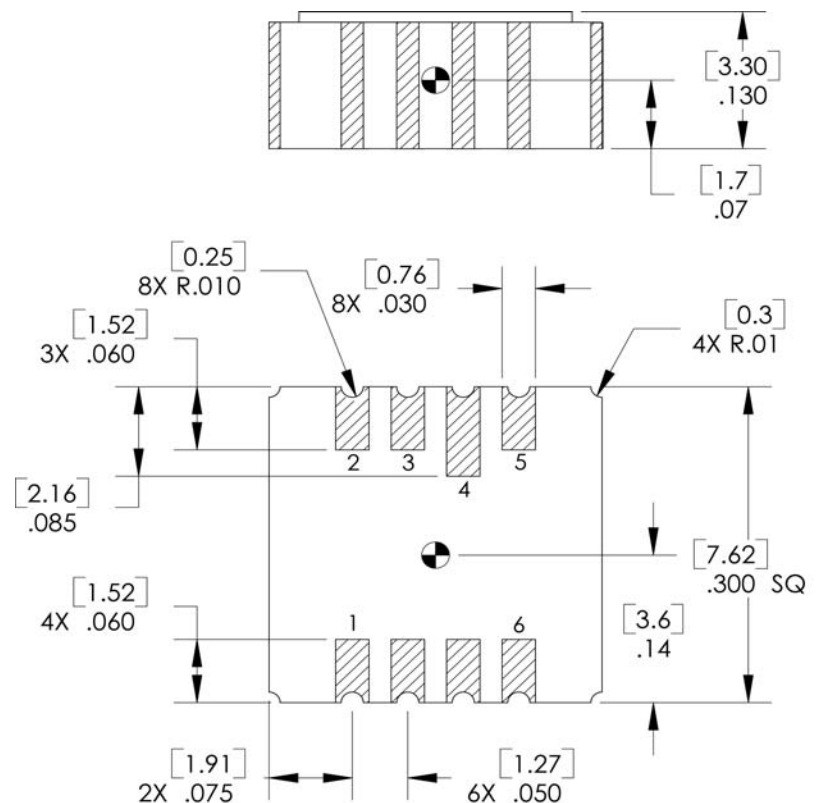
## DESCRIPTION

The Model 3038 is a hermetically sealed SMD accelerometer designed for high performance applications. The accelerometer incorporates a 2nd generation piezoresistive MEMS sensing element providing outstanding long-term stability. The model 3038 provides a millivolt output signal and features mechanical overload stops that provide shock protection to 10,000g.

Contact Measurement Specialties for availability of custom g-ranges.



## dimensions



## FEATURES

- ◆ 10,000 Shock Protection
- ◆ Board Mountable Accelerometer
- ◆ Low Power Consumption
- ◆ mV Output - Uncompensated
- ◆ ±50g to ±6000g Dynamic Range
- ◆ Optional Self-Test Feature

## APPLICATIONS

- ◆ Mil-Aero Applications
- ◆ Harsh Environments
- ◆ Vibration/Shock Monitoring
- ◆ Impact Testing
- ◆ OEM Applications

Vibration Sensors Technical Support:  
Tel: 949-716-5377  
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[US Patents 5,103,667; 5,253,510; 5,445,006 apply](#)



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## performance specifications

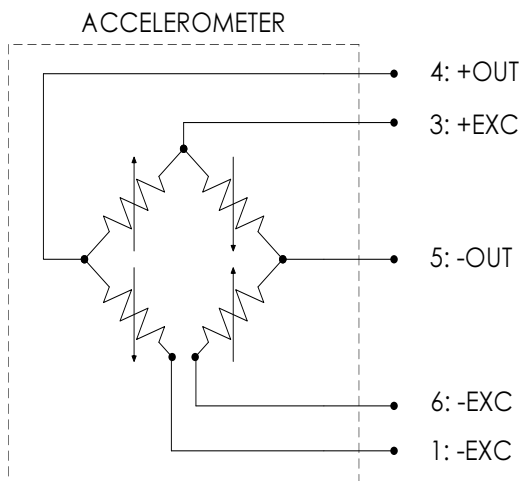
All values are typical at 25°C, 100Hz and 5Vdc excitation unless otherwise stated.

Measurement Specialties reserves the right to update and change these specifications without notice.

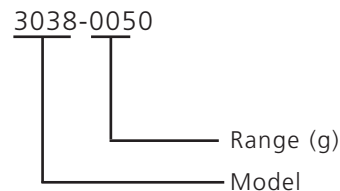
### PARAMETERS

DYNAMIC					
Range	+/-50	+/-100	+/-200	UNITS	NOTES
Sensitivity	1.1	0.45	0.22	mV/g	Typical
Frequency Response	0-1000	0-1500	0-2000	Hz	+/- 5%
Range	+/-500	+/-2000	+/-6000	UNITS	NOTES
Sensitivity	0.12	0.07	0.03	mV/g	Typical
Frequency Response	0-4000	0-5000	0-5000	Hz	+/- 5%
Non-Linearity		+/-1		% FSO	+/-2% FSO for +/-6000g
Transverse Sensitivity (Max)		+/-3		%	+/-1% Typical
Zero Acceleration Output		+/-25		mV	
Thermal Zero Shift		-0.09		%FSO/°C (-20C to +80C)	Typical
Thermal Sensitivity Shift		-0.15		%/°C (-20C to +80C)	Typical
Damping Ratio		0.70			Gas Damped
ELECTRICAL					
Excitation Voltage		2 to 10		Vdc	Ratiometric
Input Resistance		4000		Ω	Typical
Output Resistance		4000		Ω	Typical
Insulation Resistance (@ 50Vdc)		100		MΩ	Minimum
PHYSICAL					
Base and Lid Material		Ceramic			
Weight		0.6		grams	
Mounting		SMD			
ENVIRONMENTAL					
Shock Limit		10,000		g's	
Operating Temperature		-54 to +121		°C	
		Hermetically sealed			

### electrical schematic



### ordering information



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