

MODEL 3038 Accelerometer



Miniature

Piezoresistive MEMS

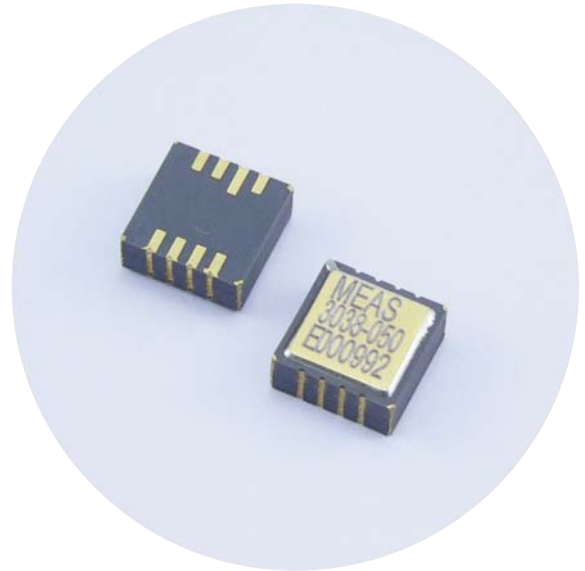
SMD Accelerometer

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.



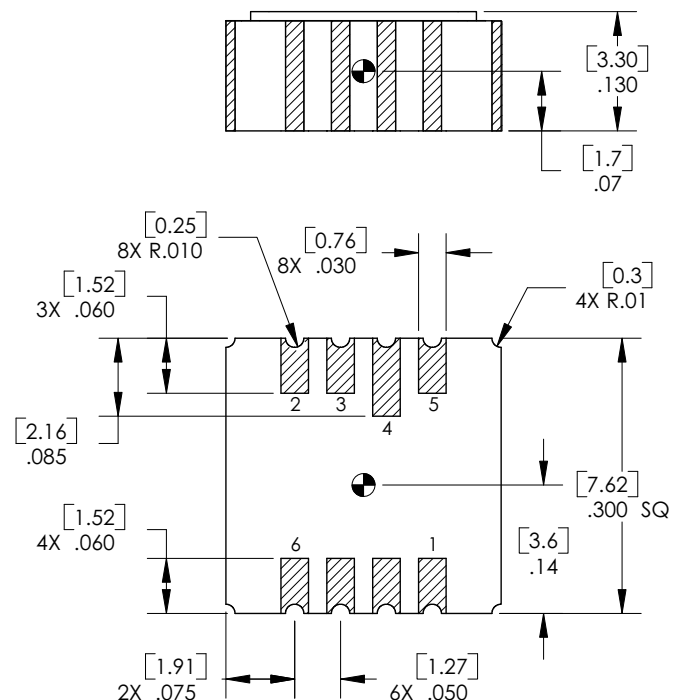
dimensions

FEATURES

- ◆ 10,000 Shock Protection
- ◆ Board Mountable Accelerometer
- ◆ Low Power Consumption
- ◆ mV Output - Uncompensated
- ◆ $\pm 50g$ to $\pm 6000g$ 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
Fax: 949-916-5677
Email: vibration@meas-spec.com

US Patents 5,103,667; 5,253,510; 5,445,006 apply

measurement
SPECIALTIES

Model 3038 Accelerometer

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

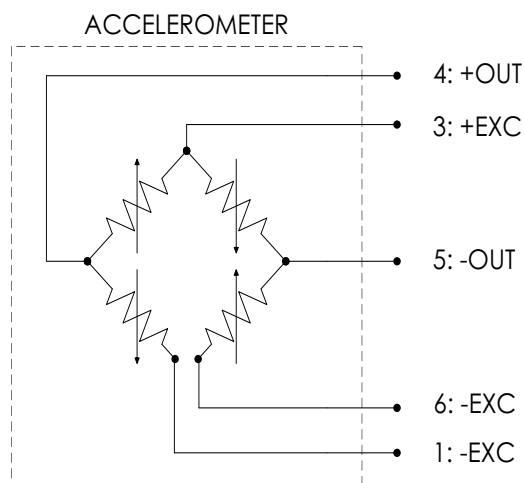
PHYSICAL

	Ceramic	
Base and Lid Material	0.6	grams
Weight	SMD	
Mounting		

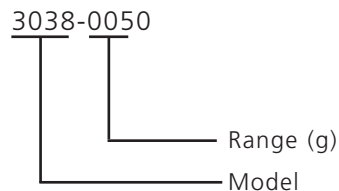
ENVIRONMENTAL

	10,000	g's
Shock Limit	-54 to +121	°C
Operating Temperature	Hermetically sealed	

electrical schematic



ordering information



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