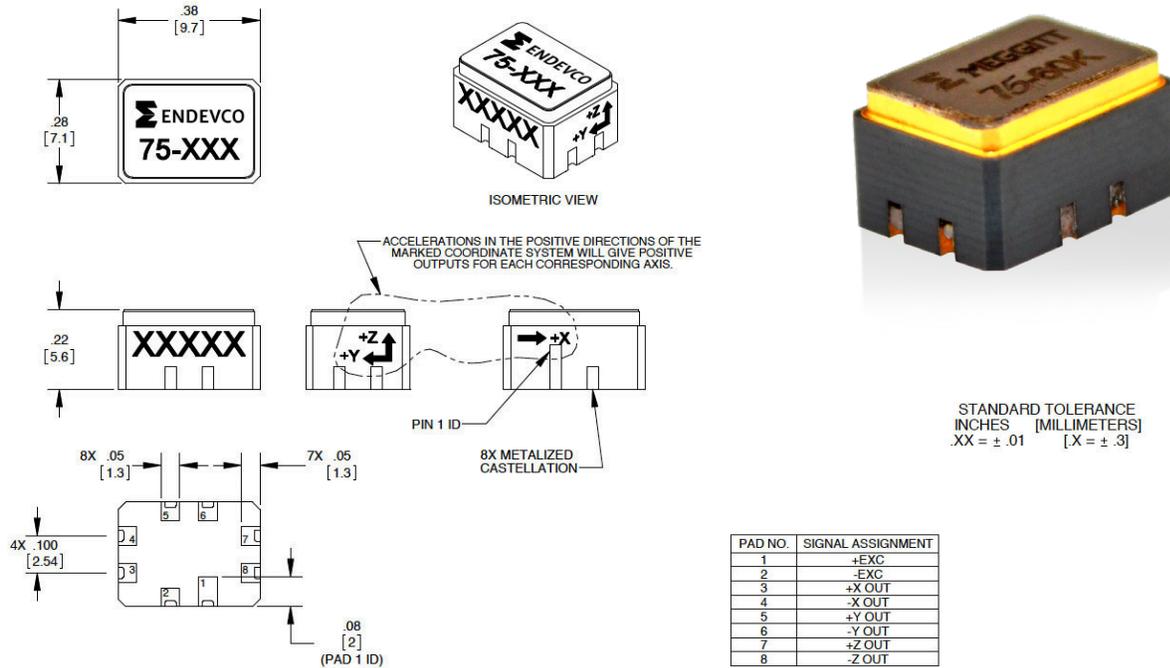


Undamped piezoresistive triaxial accelerometer

Model 75



Key features

- 2000, 6000, 20 000 and 60 000 g ranges
- High resonance frequency
- LCC package is SMT or hand solder compatible
- No damping for fast response time
- Minimal zero shift after shock

Description

The Endevco® Model 75 series is a family of rugged, undamped, piezoresistive triaxial accelerometers designed for high-acceleration shock measurements in three mutually perpendicular axes. This family uses three sensors that are packaged in a mutually orthogonal arrangement in a leadless chip carrier (LCC) package that supports mounting by surface mount technology (SMT) re-flow soldering (with epoxy underfil) or adhesive mounting (with hand soldering).

The Model 75 utilizes the same highly efficient sensing system as the Model 71, 7270A and 7274 accelerometer families. For each axis, the sensor is sculptured from a single chip of silicon, which includes the inertial mass and strain gages arranged in a four-active-arm Wheatstone bridge circuit. The Model 75 is available in ranges from 2000 g to 60 000 g, with all three axes having the same range.

U.S. patent numbers 4,498,229; 4,605,919 and 4,689,600 apply to this unit.

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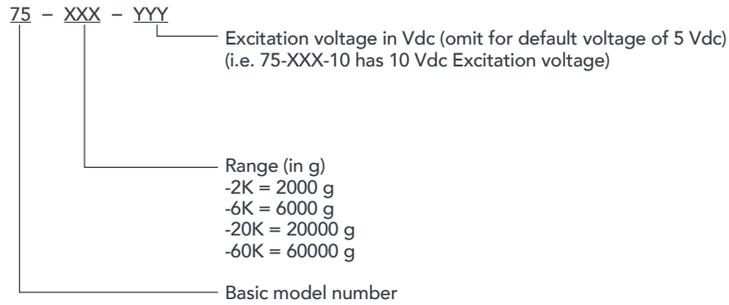
All specifications are referenced at +75°F (+24°C) and 5 Vdc, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Specifications					
Dynamic characteristics		-2K	-6K	-20K	-60K
Range	g	±2000	±6000	±20000	±60000
Sensitivity (min/typ)	µV/V/g	5/10/15	1.5/3.0/5.0	0.5/1.0/1.5	0.15/0.3/0.5
Non-linearity (typ)	%	±5	±5	±5	±5
Zero measurand output	mV/V	±10	±10	±10	±10
Transverse sensitivity	%	5	5	5	5
Frequency response (± 5% typ)	Hz	0 to 18	0 to 36	0 to 70	0 to 140
Thermal zero shift					
-18° to 66°C	%FSO/°C	0.006	0.006	0.006	0.006
0° to 150°F	%FSO/°F	0.003	0.003	0.003	0.003
Thermal sensitivity shift					
-18° to 66°C	%/°C	0.05	0.05	0.05	0.05
0° to 150°F	%/°F	0.03	0.03	0.03	0.03
Electrical characteristics					
Excitation	Vdc			5 Standard/12 Maximum	
Input resistance	ohms			217 ± 100	
Output resistance, each axis	ohms			650 ± 300	
Physical characteristics					
Case	Alumina Leadless Chip Carrier (LCC)				
Lid	Kovar with Nickel plating				
Solder pads	Gold over nickel plated Tungsten				
Weight	1.2 grams				
Environmental characteristics					
Shock limit	g	10,000	18,000	60,000	180,000
Temperature					
Operating		-55°C to + 121°C (-67°F to +250°F)			
Storage		-55°C to + 121°C (-67°F to +250°F)			
Humidity/Altitude		Hermetic (<5 x 10 ⁻⁸ atm/cc/sec He)			
ESD Protection		Class 3B (>8000V) per section 5.2 of MIL-STD-1686C			
Calibration data					
Sensitivity @ 5V		at 2,000g	at 5,000g	at 5,000g	at 5,000g
ZMO @ 5V	mV				
Input and output resistance	ohms				

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Notes

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.
2. Model number definition:



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