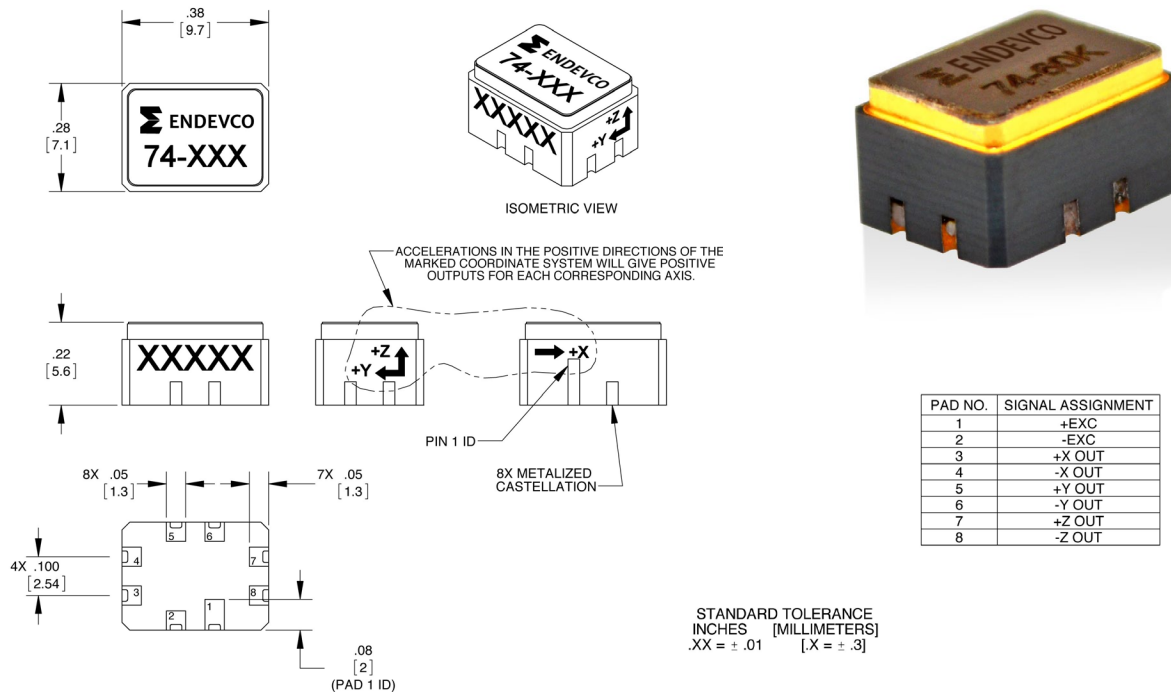


Damped piezoresistive triaxial accelerometer

Model 74



Key features

- 2K, 20K and 60K g full scale ranges
- Damped for exceptional survivability
- LCC package is SMT or hand solder compatible
- Low power consumption
- Minimal zero shift after shock

Description

The Endevco® Model 74 series is a family of rugged, damped, 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 underfill) or adhesive mounting (with hand soldering).

The Model 74 utilizes the same sensing element as the Model 72, 7280A and 7284A accelerometer families. Each axis uses a unique micro-machined, piezoresistive sensor with light gas damping to attenuate resonant amplitudes, and mechanical stops to reduce breakage under over load conditions. The Model 74 is available in 2,000 g, 20,000 g, and 60,000 g full scale ranges, with all three axes having the same range.

U.S. patent numbers 6,988,412 applies to this unit.

Damped piezoresistive triaxial accelerometer | Model 74

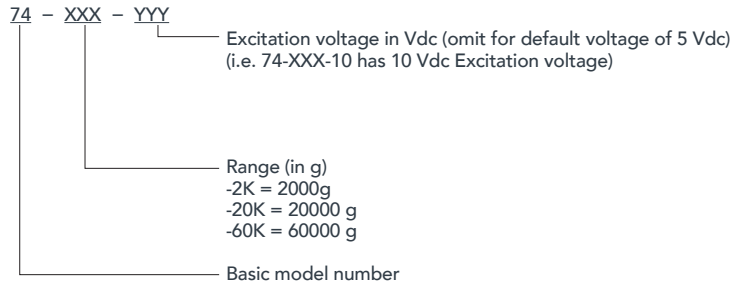
All specifications are referenced at +75°F (+24°C) and 5 Vdc, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Specifications				
Dynamic characteristics		-2k	-20K	-60K
Range	g	2,000	20,000	60,000
Sensitivity (min/typ)	μV/V/g	15/30	0.8/1.6	0.25/0.5
Non-linearity (typ)	%	±2.0	±2.0	±2.0
Zero measurand output	mV/V	±20	±20	±20
Transverse sensitivity	%	5	5	5
Frequency response (± 1 dB)	kHz	0 to 10	0 to 10	0 to 20
Thermal zero shift				
-55° to 121°C	%FSO/°C	0.007	0.007	0.007
-67° to 250°F	%/FSO/°F	0.004	0.004	0.004
Thermal sensitivity shift				
-55° to 121°C	%/°C	-0.08	-0.08	-0.08
-67° to 250°F	%/°F	-0.04	-0.04	-0.04
Electrical characteristics				
Excitation	Vdc		5 Standard/12 Maximum	
Input resistance	ohms		2200 ± 700	
Output resistance	ohms		6500 ± 2000	
Physical characteristics				
Case	Alumina Leadless Chip Carrier (LCC)			
Lid	Kovar with Nickel plating			
Solder pads	Gold over nickel plated Tungsten			
Weight	g		1.2	
Environmental characteristics				
Shock limit	g	10,000	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 5,000g (1,000 g for 2K range)		
ZMO @ 5V		mV		
Input and output resistance		ohms		

Damped piezoresistive triaxial accelerometer | Model 74

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:



10869 NC Highway 903, Halifax, NC 27839 USA

endevco.com | sales@endevco.com | 866 363 3826