

# Piezoelectric Accelerometer

**ENDEVCO  
MODEL  
2226C**

## Model 2226C

- Light Weight
- High Temperature to +177°C
- Adhesive Mounting
- Top Connector
- Vibration Measurement on Small Structures



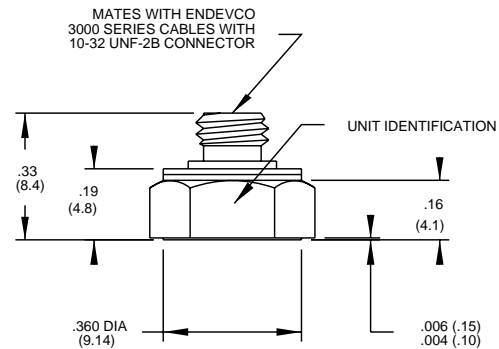
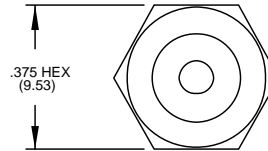
Actual size

### DESCRIPTION

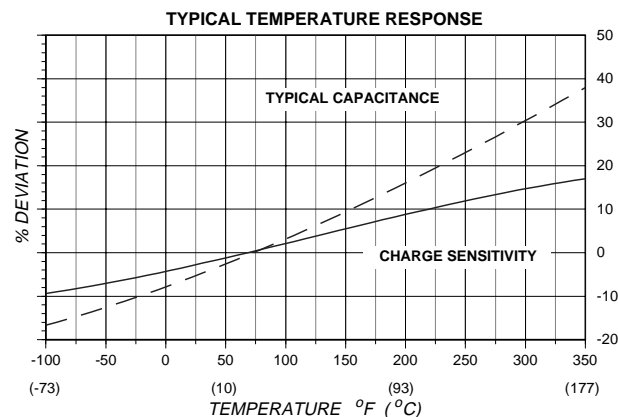
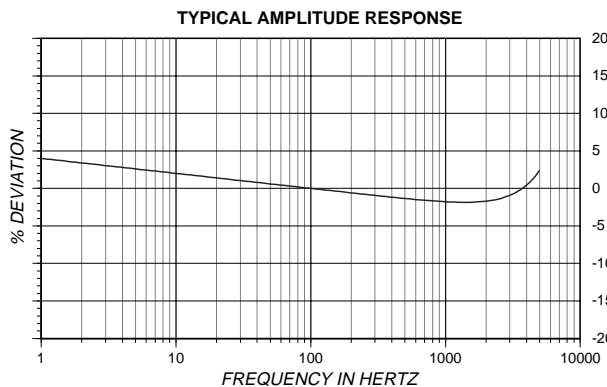
The ENDEVCO® Model 2226C is a miniature, adhesive mounting piezoelectric accelerometer designed specifically for vibration measurement on small structures and objects. The transducer features a top-mounted 10-32 receptacle for installation convenience in limited space. Its light weight (2.8 gm) effectively minimizes mass loading. The accelerometer is a self-generating device that requires no external power source for operation.

The Model 2226C features ENDEVCO's PIEZITE® Type P-8 crystal elements, operating in annular shear mode. This sensor exhibits excellent output sensitivity stability over time. A low-noise, flexible, coaxial cable is supplied for error-free operation. This device is typically used for small package testing and general adhesive mount applications.

ENDEVCO Signal Conditioner Models 133, 2775A or OASIS 2000 Computer-Controlled System are recommended for use with this high impedance accelerometer.



STANDARD TOLERANCE  
INCHES (MILLIMETERS)  
.XX = +/- .02 (.X = +/- .5)  
.XXX = +/- .010 (.XX = +/- .25)



# Piezoelectric Accelerometer

## SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

DYNAMIC CHARACTERISTICS	Units	
CHARGE SENSITIVITY		
TYPICAL	pC/g	2.8
MINIMUM	pC/g	2.2
FREQUENCY RESPONSE		See Typical Amplitude Response
RESONANCE FREQUENCY	kHz	21
AMPLITUDE RESPONSE [1]		
±5%	Hz	1 to 5000
±1dB	Hz	.5 to 7000
TEMPERATURE RESPONSE		See Typical Curve
TRANSVERSE SENSITIVITY	%	≤ 3
AMPLITUDE LINEARITY [2]	%	1
Per 500 g, 0 to 2000 g		

## ELECTRICAL CHARACTERISTICS

OUTPUT POLARITY		Acceleration directed into the base of the unit produces positive output
RESISTANCE	GΩ	≥ 10
CAPACITANCE	pF	400
GROUNDING		Signal return is connected to case

## ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE		-67°F to +350°F (-55°C to +177°C)
HUMIDITY		Epoxy sealed, non-hermetic
SINUSOIDAL VIBRATION LIMIT	g pk	1000
SHOCK LIMIT	g pk	2000
BASE STRAIN SENSITIVITY	equiv. g pk/μ strain	0.001
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (°C)	0.008 (0.014)
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss	0.001

## PHYSICAL CHARACTERISTICS

DIMENSIONS		See Outline Drawing
WEIGHT	gm (oz)	2.8 (0.10)
CASE MATERIAL		INVAR
CONNECTOR		Coaxial, 10-32 thread. Mates with Endevco 3060A Cable
MOUNTING [3]		Flat surface provided for adhesive mounting

## CALIBRATION

SUPPLIED:		
CHARGE SENSITIVITY	pC/g	
CAPACITANCE	pF	
MAXIMUM TRANSVERSE SENSITIVITY	%	
CHARGE FREQUENCY RESPONSE	%	20 Hz to 5000 Hz
	dB	5 kHz to 30 kHz

## ACCESSORIES

Model 3060A-120 (10 ft) CABLE ASSEMBLY

## OPTIONAL ACCESSORIES

Model 2771AM3 IN-LINE CHARGE CONVERTOR FOR USE WITH CURRENT SOURCE  
P/N 31849 ADHESIVE MOUNTING KIT

## NOTES

- Low-end response of the transducer is a function of its associated electronics.
- Short duration shock pulses, such as those generated by metal-to-metal impacts, may excite transducer resonance and cause linearity errors. Send for TP290 for more details.
- Adhesives such as petro-wax, hot-melt glue, and cyanoacrylate epoxy (super glue) may be used to mount the accelerometer temporarily to the test structure. An adhesive mounting kit (P/N 31849) is available as an option from Endevco. To remove an

epoxy-mounted accelerometer, first soften the epoxy with an appropriate solvent and then twist the unit off with the supplied removal wrench. Damage to sensors caused by inappropriate removal procedures are not covered by Endevco's warranty.

- Flexible cable, such as the supplied 3060A, should be used to minimize cable-strain errors.
- Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability.

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