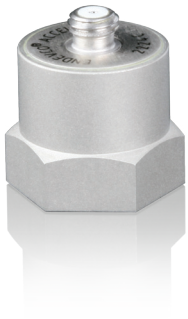
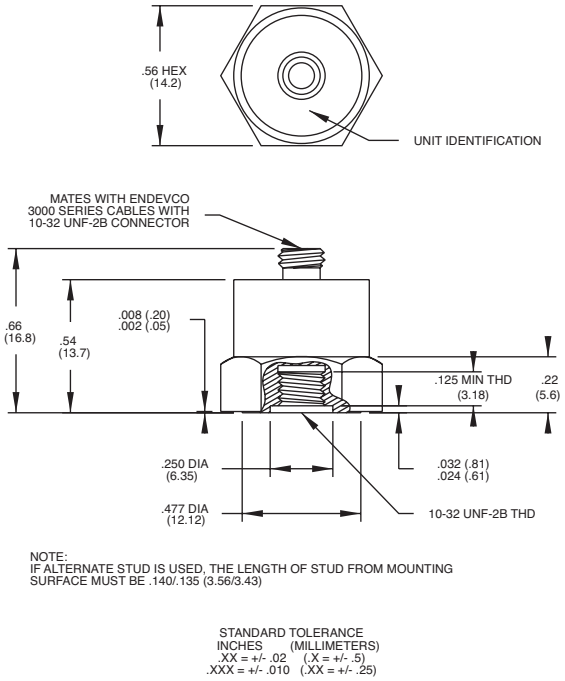
ENDEVCO
AN AMPHENOL COMPANY

Endevco®

Piezoelectric accelerometer

Model 2224C





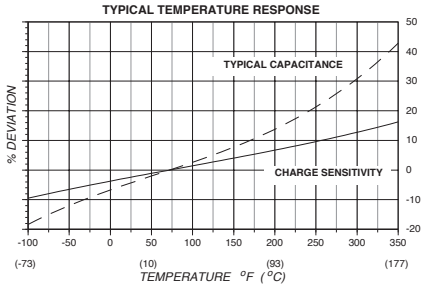
NOTE:
IF ALTERNATE STUD IS USED, THE LENGTH OF STUD FROM MOUNTING SURFACE MUST BE .140/.135 (3.56/3.43)

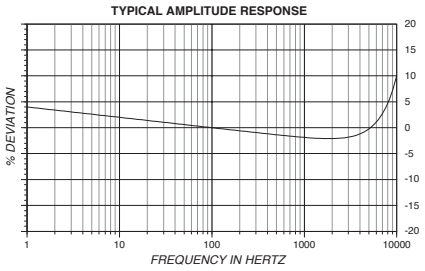
STANDARD TOLERANCE
INCHES (MILLIMETERS)
.XX = +/- .02 (.X = +/- .5)
.XXX = +/- .010 (.XX = +/- .25)

Endevco model 2224C is a general purpose piezoelectric accelerometer designed for vibration measurement on small structures. The unit features a top connector for mounting convenience in limited space. The accelerometer is a self generating device that requires no external power source for operation.

Model 2224C features Endevco's Piezite® type P-8 crystal element operating in annular shear mode. This sensor exhibits low base strain sensitivity, high resonance frequency, and excellent output stability over time. Signal ground is connected to the outer case of the unit and, when used with an isolated mounting stud, the accelerometer case is electrically isolated from ground. A low-noise coaxial cable is supplied for error-free operation.

Endevco signal conditioner models 133, 2775A or Oasis 2000 computer-controlled system are recommended for use with this high impedance accelerometer.





Key features

- Low cost
- Rugged
- Small size
- Top connector
- General purpose vibration measurement

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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	2224C
Charge sensitivity		
Typical	pC/g	12.0
Minimum Frequency	pC/g	8.5
response Resonance		See typical amplitude response
frequency Amplitude	kHz	32
response [1]		
±5 %	Hz	1 to 6000
±1 dB	Hz	.1 to 10 000
Temperature response		See typical curve
Transverse sensitivity Amplitude	%	≤ 3
linearity [2]	%	1
Per 250 g, 0 to 1000 g		

Electrical characteristics		
Output polarity		Acceleration into the base produces positive output
Resistance	GΩ	≥ 10
Capacitance	pF	800
Grounding		Signal ground common to transducer case

Environmental characteristics		
Temperature range		-67°F to +350°F (-55°C to +177°C)
Humidity		Epoxy sealed, non-hermetic
Sinusoidal vibration limit Shock	g pk	1000
limit	g pk	2000
Base strain sensitivity Thermal	equiv. g pk/µ strain	0.002
transient sensitivity	equiv. g pk/°F (/°C)	0.001 (0.002)
Electromagnetic sensitivity	equiv. g rms/gauss	0.0001

Physical characteristics		
Dimensions		See outline drawing
Weight	gm (oz)	16 (0.56)
Case material		303 stainless steel
Connector		Coaxial, 10-32 thread, mates with Endevco 3000 series cable
Mounting torque	lbf-in (Nm)	18 (2)

Calibration		
Supplied:		
Charge sensitivity Capacitance	pC/g	
Maximum transverse sensitivity	pF	
Charge frequency response	%	
	%	20 to 6 kHz
	dB	6 kHz to 40 kHz

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Accessories

Product	Description	2224C	2224C-R
3090C-120 (10 ft)	Cable assembly	Included	Optional
2981-12	Mounting stud, 10-32, Hex I.D.	Included	Optional
EHM464	Wrench, Hex key	Included	Optional
2981-3	Mounting stud, 10-32 to 10-32	Optional	Optional

Notes

1. Low-end response of the transducer is a function of its associated electronics.
2. 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.
3. 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.

Contact

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