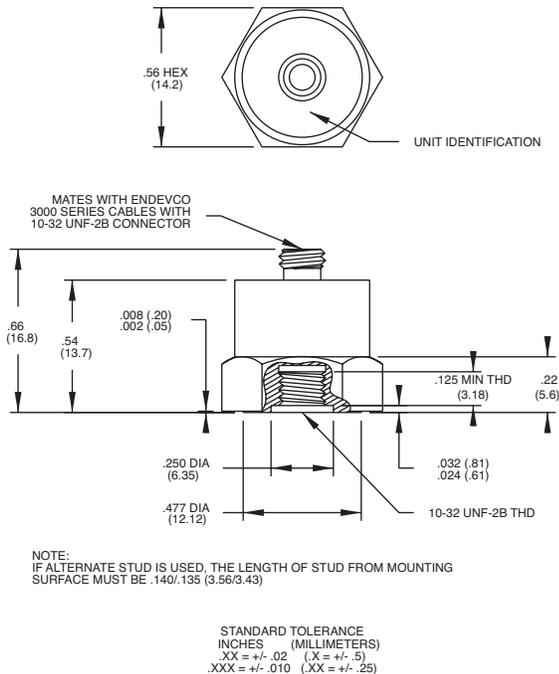


Endevco®

Piezoelectric accelerometer

Model 2224C



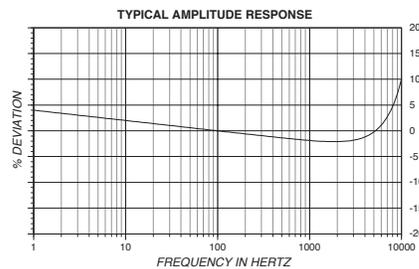
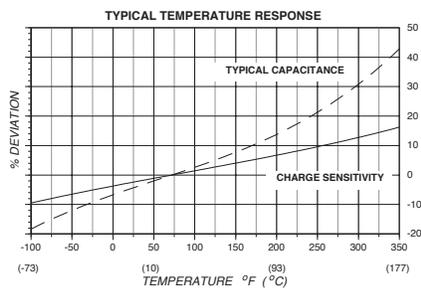
Key features

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

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.



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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 response Resonance frequency Amplitude response [1]	pC/g	8.5
±5 %	kHz	See typical amplitude response
±1 dB	Hz	32
Temperature response	Hz	1 to 6000
Transverse sensitivity Amplitude linearity [2]	%	.1 to 10 000
Per 250 g, 0 to 1000 g	%	See typical curve
		≤ 3
		1
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 limit	g pk	1000
limit	g pk	2000
Base strain sensitivity Thermal transient sensitivity	equiv. g pk/μ strain	0.002
Electromagnetic sensitivity	equiv. g pk/°F (1/°C)	0.001 (0.002)
	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	Included
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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