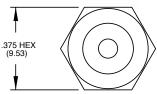


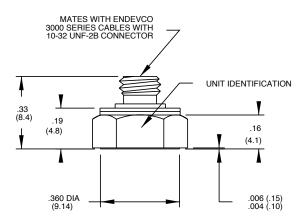
## Model 2226C Piezoelectric accelerometer

### **Features**

- NEW! 2226C-R available as replacement sensor
- Light weight
- High temperature to +177°C
- Adhesive mounting
- Top connector
- Vibration measurement on small structures







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

#### 北京汇润科贸有限公司

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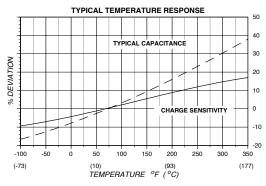
传真: +86 010 5885 7266 邮箱: <u>sales@aq315.com</u> http://www.aq315.com

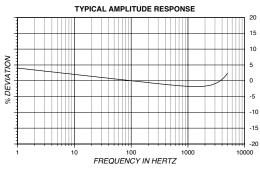
### Description

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 topmounted 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 element 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, 2771C, 2775B or OASIS 2000 computercontrolled system are recommended for use with this high impedance accelerometer.







### Model 2226C Piezoelectric accelerometer

# Endevco

### **Specifications**

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C), 4 mA and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied

Typical   Minimum   pC/g   2.8   Minimum   pC/g   2.2	Dynamic characteristics Charge sensitivity	Units	
Minimum         pC/g         2.2           Frequency response         KHz         See typical amplitude response           Resonance frequency         kHz         21           Amplitude response [1]         ±5%         HZ         1 to 5000           ±1 dB (ref)         HZ         0.1 to 7000           Emperature response         See typical curve           Transverse sensitivity         %         -3           Amplitude linearity         %         -3           Per 500g, 0 to 2000 g         ***         -1           Electrical characteristics         ***         Acceleration directed into the base of the unit produces positive output           Resistance         G0         ≥5           Capacitance of rounding         F         400           Environmental characteristics         F         400           Environmental characteristics         **         F           Emperature range         -67°F to +350°F (-155°C to +177°C)         Epoxy sealed, non-hermetic           Sinusoidal whration limit         g pk         2000           Base strain sensitivity         equiv. g pk/p turin         0.001           Shock Limit [2]         g pk         2000           Base strain sensitivity         equiv. g pk/p turin <th></th> <th>pC/a</th> <th>20</th>		pC/a	20
Frequency response Resonance frequency Amplitude response [1]  ±5% HZ 1 to 5000  ±1 dB (ref) HZ 1 to 7000  Femperature response Frought to the base of the unit produces positive output  Electrical characteristics Output polarity Resistance Resistance Resistance Resistance at +350°F (+177°C) GG Capacitance Grounding  Environmental characteristics  Fruiperature range Fundamental characteristics  Fruiperature range Fundamental characteristics  Fruiperature range Fundamental characteristics  Fundamental cha	* *		
Resonance frequency         kHz         1 to 5000           4mplitude response [1]         Hz         1 to 5000           ±5%         Hz         1 to 5000           £ It persure response         See typical curve           £ It persure response         See typical curve           £ Transverse sensitivity         %         3           Amplitude linearity         %         1           Per 500g, 0 to 2000 g         ***         ***           Electrical characteristics         Coutput polarity         Acceleration directed into the base of the unit produces positive output           Resistance         GO         >10           Resistance at +350°F [+177°C]         60         >5           Capacitance         pF         400           Grounding         Feromeration of the unit produces positive output         **           Environmental characteristics         Feromeration of the unit produces positive output         **           Environmental characteristics         Feromeration of the unit produces positive output         **           Environmental characteristics         g pk         1000         **           Sinusoidal vibration limit         g pk         1000         **         **           Sinusoidal vibration limit         g pk		pc/g	
Amplitude response [1]         ±5%         1 to 5000         1.1 to 7000           1 dB (ref)         H2         0.1 to 7000         1 to 5000         2 to 5000		111-	
#5%		KHZ	21
### Acceleration with the base of the unit products of the special curve and the special curve sensitivity		11-	1. 5000
Temperature response Transverse sensitivity % Amplitude linearity Per 500g, 0 to 2000 g  Electrical characteristics Output polarity Resistance Resistance Resistance at 4350°F (+177°C) G0 G0 Grounding Resistance at 4350°F (+177°C) G0 G0 Grounding Resistance Resistance at 4350°F (+177°C) G0 G0 Grounding Resistance at 4350°F (+177°C) Ferror and the foliable of the unit produces positive output Resistance at 4350°F (+177°C) G0 G0 Grounding Ferror Adoltion to the base of the unit produces positive output Resistance at 4350°F (+177°C) G0 G1 G2 G2 G2 G2 G2 G2 G3 G1			
Transverse sensitivity Amplitude linearity Per 500g, 0 to 2000 g   Electrical characteristics Output polarity  Resistance Resistance at +350°F (+177°C) GO Capacitance Grounding  Environmental characteristics  Environmental characteristics  Fermion and the base of the unit produces positive output  Environmental characteristics  Environmental characteristics  Temperature range Figure and a space of the space of the space of the unit produces positive output  Environmental characteristics  Temperature range Figure and the space of the unit produces positive output  Environmental characteristics  Temperature range Figure and the space of the unit produces positive output  Environmental characteristics  Temperature range Figure and the space of the unit produces positive output  Environmental characteristics  Temperature range Figure and the space of the unit produces positive output  Environmental characteristics  Internal transient sensitivity Figure and the space of the unit produces positive output  Physical characteristicy Figure and the space of the unit produces positive output  Electromagnetic sensitivity Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit produces positive output  Figure and the space of the unit	<b>. ,</b>	HZ	
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Per 500g, 0 to 2000 g    Per 500g, 0 to 2000 g   Electrical characteristics			
Electrical characteristics Output polarity  Resistance Resistance at +350°F (+177°C) G0 ≥5 Capacitance pF	·	%	1
Output polarity     Acceleration directed into the base of the unit produces positive output produces positive produces positive produces produces positive produces produced produces produces produced produces produces produced produces produces produces produces produces produced produces produces produces produces produces produces produces produces prod	Per 500g, 0 to 2000 g		
Resistance Resistance at +350°F (+177°C) G0 Acapacitance Grounding  Environmental characteristics  Emperature range Humidity Humidity Sinusoidal vibration limit Sinusoidal vibration limit Shock limit [2] Base strain sensitivity equiv. g pk/µ strain equiv. g pk/² f [/²C) Dimensions  Physical characteristics  Dimensions Weight Case material Connector  Mounting [3]  Calibration Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity pF Capacitance pF Maximum transverse sensitivity pF Capacitance pF Maximum transverse sensitivity pC Gapacitance pF Charge frequency response pF  400 A00 Signal return is connected to case			
Resistance Resistance at +350°F (+177°C) G0 G0 S5 Capacitance Grounding FF 400 Grounding Signal return is connected to case  Environmental characteristics  Temperature range Humidity Sinusoidal vibration limit g p k Shock limit [2] g p k 2000 Base strain sensitivity equiv. g pk/y strain Thermal transient sensitivity equiv. g pk/y strain equiv. g pk/y strain 0.001  Physical characteristics  Dimensions Weight Grounding  gm [oz]  Case material Connector  Mounting [3]  Calibration  Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response  9  400 Sinusoi F [-55°C to +177°C) Epoxy sealed, non-hermetic Epoxy sealed, non-hermetic 0.000 0.001 0.	Output polarity		Acceleration directed into the base of the unit
Resistance at +350°F (+177°C) G0 Capacitance Grounding F  A00 Grounding F  A00 Signal return is connected to case  Environmental characteristics  Temperature range Humidity F  Sinusoidal vibration limit Sinusoidal vibration seed vibration in limit Sinusoidal vibration seed			
Capacitance Grounding  Environmental characteristics  Temperature range Humidity Sinusoidal vibration limit Shock limit [2] Base strain sensitivity equiv. g pk/µ strain equiv. g pk/°F [/°C) Electromagnetic sensitivity equiv. g rms/gauss  Dimensions  Weight Case material Connector  Mounting [3]  Calibration Supplied: Charge sensitivity product of the strain sensitivity of the strain sensitivity product of the strain sensitivity of the strain sensitivity product of the strain sensitivity of th	************	GΩ	
Grounding     Signal return is connected to case       Environmental characteristics     Fenvironmental characteristics       Temperature range     -67°F to +350°F [-55°C to +177°C]       Humidity     Epoxy sealed, non-hermetic       Sinusoidal vibration limit     g pk     2000       Shock limit [2]     g pk     2000       Base strain sensitivity     equiv. g pk/y strain     0.001       Thermal transient sensitivity     equiv. g rms/gauss     0.001       Physical characteristics     See outline drawing       Dimensions     See outline drawing       Weight     gm [oz]     2.8 [0.10]       Case material     Stainless steel, nickel alloy sensor       Connector     Coaxial, 10-32 thread. Mates with Endevco 3060D cable       Mounting [3]     Flat surface provided for adhesive mounting       Calibration     Flat surface provided for adhesive mounting       Capacitance     pF       Maximum transverse sensitivity     %       Charge frequency response     %       20 to 5000 Hz			≥5
Environmental characteristics  Temperature range Humidity Sinusoidal vibration limit Shock limit [2] Base strain sensitivity Equiv. g pk/p strain equiv. g pk/p*[/°C) Electromagnetic sensitivity equiv. g rms/gauss  Dimensions Weight Case material Connector  Coasial, 10-32 thread. Mates with Endevco 3060D cable Mounting [3]  Calibration Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity pg pk pc/g Charge frequency response p		pF	400
Temperature range Humidity Sinusoidal vibration limit Sinusoidal vibration limit Sinusoidal vibration limit Shock limit [2] g pk 2000 Base strain sensitivity equiv. g pk/p strain 0.001 Thermal transient sensitivity equiv. g rms/gauss 0.001  Physical characteristics Dimensions Weight Case material Connector  Mounting [3]  Calibration Supplied: Charge sensitivity pC/g Capacitance Maximum transverse sensitivity p k q q q q q q q q q q q q q q q q q q q	Grounding		Signal return is connected to case
Humidity Sinusoidal vibration limit Sinusoidal vibration limit Sinusoidal vibration limit System of the provided for adhesive mounting Shock limit [2] System of the provided for adhesive mounting Shock limit [2] System of the provided for adhesive mounting System of the provided for adhesiv	Environmental characteristics		
Sinusoidal vibration limit g pk 1000 Shock limit [2] 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 2.8 [0.10] Case material Stainless steel, nickel alloy sensor Connector Coaxial, 10-32 thread. Mates with Endevco 3060D cable Mounting [3] Flat surface provided for adhesive mounting  Calibration Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	Temperature range		-67°F to +350°F (-55°C to +177°C)
Shock limit [2] 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 Stainless steel, nickel alloy sensor  Connector Coaxial, 10-32 thread. Mates with Endevco 3060D cable  Mounting [3] Flat surface provided for adhesive mounting  Calibration  Supplied: Charge sensitivity pC/g  Capacitance pF  Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	Humidity		Epoxy sealed, non-hermetic
Base strain sensitivity cquiv. g pk/p strain equiv. g pk/p F (/° C) cquiv. g rms/gauss  Dimensions Weight Case material Connector  Connector  Calibration Supplied: Charge sensitivity  pC/g Capacitance Maximum transverse sensitivity  equiv. g rms/gauss  o.001  cquiv. g rms/gauss  o.001  Sequitine drawing See outline drawing 2.8 (0.10) Stainless steel, nickel alloy sensor Coaxial, 10-32 thread. Mates with Endevco 3060D cable Flat surface provided for adhesive mounting  Calibration Supplied: Charge sensitivity pC/g Capacitance Maximum transverse sensitivity % Charge frequency response %  o.001  0.001  0.008 (0.014) 0.001 0.00	Sinusoidal vibration limit	g pk	1000
Thermal transient sensitivity Electromagnetic sensitivity equiv. g pk/°F (/°C) equiv. g rms/gauss  Dimensions Weight Case material Connector Connector  Connector  Calibration Supplied: Charge sensitivity  pC/g Capacitance Maximum transverse sensitivity  p() Charge frequency response  yequiv. g pk/°F (/°C) equiv. g rms/gauss  0.008 (0.014) 0.001  See outline drawing 2.8 (0.10) 2.8 (0.10) 5.5ee outline drawing 0.001  See outline drawing 0.001  See outline drawing 2.8 (0.10) 5.5ea material Coaxia, 10-32 thread. Mates with Endevco 3060D cable Flat surface provided for adhesive mounting	Shock limit [2]	g pk	2000
Electromagnetic sensitivity equiv. g rms/gauss 0.001  Physical characteristics Dimensions See outline drawing Weight 2.8 (0.10) Case material Stainless steel, nickel alloy sensor Connector Coaxial, 10-32 thread. Mates with Endevco 3060D cable Mounting [3] Flat surface provided for adhesive mounting  Calibration Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	Base strain sensitivity	equiv. g pk/µ strain	0.001
Physical characteristics  Dimensions Weight Case material Connector  Mounting [3]  Calibration Supplied: Charge sensitivity Capacitance Maximum transverse sensitivity Charge frequency response  Pm [oz]  See outline drawing 2.8 [0.10] Stainless steel, nickel alloy sensor Coaxial, 10-32 thread. Mates with Endevco 3060D cable Flat surface provided for adhesive mounting  PC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response  9  See outline drawing 2.8 [0.10] Stainless steel, nickel alloy sensor Coaxial, 10-32 thread. Mates with Endevco 3060D cable Flat surface provided for adhesive mounting	Thermal transient sensitivity	equiv. g pk/°F (/°C)	0.008 (0.014)
Dimensions Weight Case material Connector  Mounting [3]  Calibration Supplied: Charge sensitivity Capacitance Maximum transverse sensitivity Charge frequency response  Meight  gm (oz)  2.8 (0.10) Stainless steel, nickel alloy sensor Coaxial, 10-32 thread. Mates with Endevco 3060D cable Flat surface provided for adhesive mounting  Flat surface provided for adhesive mounting  Calibration Supplied: Charge sensitivity pC/g Capacitance pF  Maximum transverse sensitivity % Charge frequency response  9  20 to 5000 Hz	Electromagnetic sensitivity	equiv. g rms/gauss	0.001
Weight gm (oz) 2.8 (0.10)  Case material Stainless steel, nickel alloy sensor  Connector Coaxial, 10-32 thread. Mates with Endevco 3060D cable  Mounting [3] Flat surface provided for adhesive mounting  Calibration  Supplied: Charge sensitivity pC/g Capacitance pF  Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	Physical characteristics		
Weight     gm (oz)     2.8 (0.10)       Case material     Stainless steel, nickel alloy sensor       Connector     Coaxial, 10-32 thread. Mates with Endevco 3060D cable       Mounting [3]     Flat surface provided for adhesive mounting       Calibration     Supplied:       Charge sensitivity     pC/g       Capacitance     pF       Maximum transverse sensitivity     %       Charge frequency response     %     20 to 5000 Hz	Dimensions		See outline drawing
Connector  Mounting [3]  Calibration Supplied: Charge sensitivity Capacitance Maximum transverse sensitivity Charge frequency response  %  Coaxial, 10-32 thread. Mates with Endevco 3060D cable Flat surface provided for adhesive mounting  20 to 5000 Hz	Weight	gm (oz)	2.8 (0.10)
Mounting [3]  Calibration Supplied: Charge sensitivity Capacitance Maximum transverse sensitivity Charge frequency response  9  Charge frequency response  3060D cable Flat surface provided for adhesive mounting  20 to 5000 Hz	Case material	, and the second	Stainless steel, nickel alloy sensor
Mounting [3]       Flat surface provided for adhesive mounting         Calibration         Supplied:       Charge sensitivity       pC/g         Capacitance       pF         Maximum transverse sensitivity       %       20 to 5000 Hz         Charge frequency response       %       20 to 5000 Hz	Connector		
Calibration Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz			3060D cable
Supplied: Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	Mounting [3]		Flat surface provided for adhesive mounting
Charge sensitivity pC/g Capacitance pF Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	Calibration		
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Capacitance pF Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz		pC/q	
Maximum transverse sensitivity % Charge frequency response % 20 to 5000 Hz	•		
Charge frequency response % 20 to 5000 Hz	•	•	
	•		20 to 5000 Hz
	- , , ,	dB	5 to 30 kHz

### Accessories

Product	Description	2226C	2226C-R
3060D-120	Cable assembly, 10 ft	Included	Optional
2771C	In-line charge convertor	Optional	Optional
31849	Adhesive mounting kit	Optional	Optional
32279	Mounting wax	Included	Optional
133	Signal conditioner	Optional	Optional
2775B	Signal conditioner	Optional	Optional
4990A-1	OASIS 2000 computer-controlled system	Optional	Optional

#### Notes:

- 1. 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.
- 3. 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 3060D, 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.



