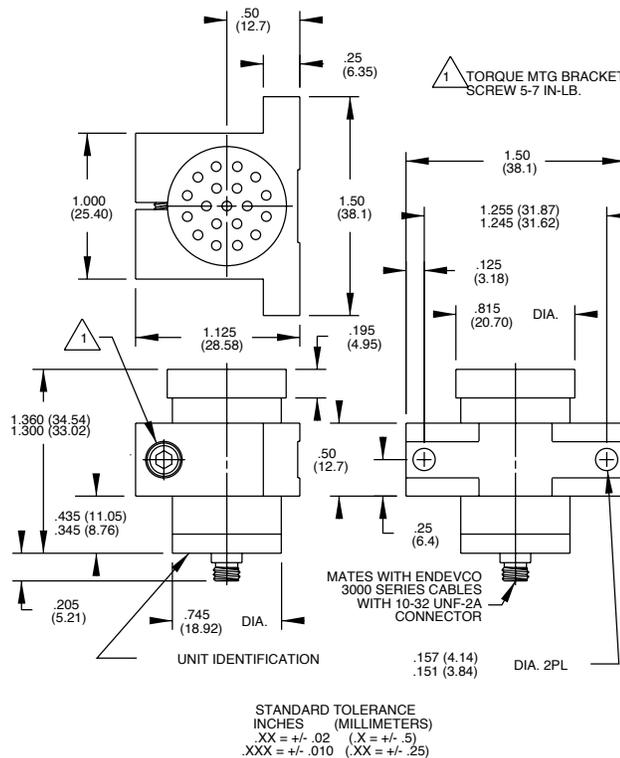
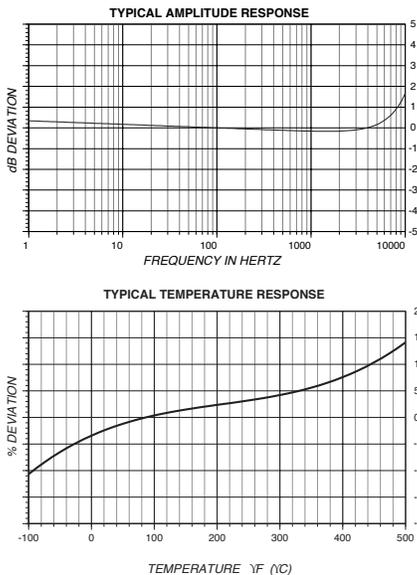


# Piezoelectric microphone

## Model 2510



### Key features

- Requires no external power
- Hermetically sealed
- Vibration compensated
- Operational range, 100 to >180 dB SPL
- High intensity acoustic measurement
- High temperature to +500°F (+260°C)

The Endevco® model 2510 microphone measures high intensity acoustic noise and very low pressure fluctuations. The rugged, hermetically sealed construction and extremely wide temperature range -67°F to +500°F (-55°C to +260°C) make this transducer extremely useful over a wide range of environmental conditions, including insensitivity to altitude changes, and the transducer has vibration compensation incorporated into the sensing element. The microphone is a self-generating device that requires no external power source for operation.

The model 2510 features a very thick diaphragm that prevents puncturing or damage due to particle impact, accidental mishandling, or high pressure pulses. Insulation between the transducer and mounting surface prevents data-degrading ground loops. The model 2510 is intended primarily to operate into charge amplifiers. Long cables may be used between the transducer and charge converter without affecting charge sensitivity. Although the basic design is directed toward maximizing charge characteristics, the model 2510 also gives excellent results when operated into voltage amplifiers.

Endevco signal conditioner models 2775A, 2721B or 2680 are recommended for use with this high impedance microphone.

# Piezoelectric microphone

## Model 2510

### Specifications

The following performance specifications are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted.

<b>DYNAMIC CHARACTERISTICS</b>		<b>Units</b>
CHARGE SENSITIVITY, Typical	pC rms @ 140 dB SPL [1]	31
	pC rms/psi [2]	1069
	pC rms/N/m <sup>2</sup> [3]	0.155
	dB re 1 pC rms @ 1 $\mu$ bar	-33.1
RANGE	dB SPL	100 to >180
FREQUENCY RESPONSE		See Typical Amplitude Response
RESONANCE FREQUENCY	kHz	30
<b>AMPLITUDE RESPONSE</b>		
$\pm$ 1 dB	Hz	2 to 4 kHz
$\pm$ 3 dB	Hz	1 to 10 kHz
TEMPERATURE RESPONSE		See Typical Curve
AMPLITUDE LINEARITY	dB	0.5
120 to 164 dB SPL		
<b>ELECTRICAL CHARACTERISTICS</b>		
RESISTANCE	M $\Omega$	$\geq$ 20 000
CAPACITANCE	pF	5200
GROUNDING		Case ground insulated from mounting bracket. Case isolated from mounting bracket by 1 M $\Omega$ , minimum
<b>ENVIRONMENTAL CHARACTERISTICS</b>		
TEMPERATURE RANGE		-67°F to +500°F (-55°C to +260°C)
HUMIDITY		Hermetically Sealed
VIBRATION SENSITIVITY		< Output of unit at 105 dB SPL @ 1 g pk
Up to 2 kHz		
SINUSOIDAL VIBRATION LIMIT	g pk	150
SHOCK LIMIT	g pk	1000
<b>PHYSICAL CHARACTERISTICS</b>		
DIMENSIONS		See Outline Drawing
WEIGHT	gm (oz)	57 (2.0)
CASE MATERIAL		Stainless Steel
CONNECTOR		Coaxial, 10-32 Type, Mates Endevco 3000 Series Cables
MOUNTING TORQUE	lbf-in (Nm)	10 (1.1)
<b>CALIBRATION</b>		
SUPPLIED:		pC pk @ 140 dB SPL
CHARGE SENSITIVITY		pC rms @ 140 dB SPL
CAPACITANCE		pF

# Piezoelectric microphone

## Model 2510

### ACCESSORIES

Model 3090C-120 (10ft) CABLE ASSEMBLY  
Model EH303 MOUNTING SCREW, 6-32, Two each

### NOTES

1. Reference: 0 dB = 0.0002  $\mu$ bar rms (dyne/cm<sup>2</sup> rms) =  
 $20 \times 10^{-9}$  N/m<sup>2</sup> rms = 20  $\mu$ Pa rms.
2. 140 dB SPL =  $2.9 \times 10^{-2}$  psi rms.
3. 140 dB SPL = 200 N/m<sup>2</sup> rms.
4. 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

#### ENDEVCO

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