OEM Accelerometer

ENDEVCO MODEL 525

Model 525

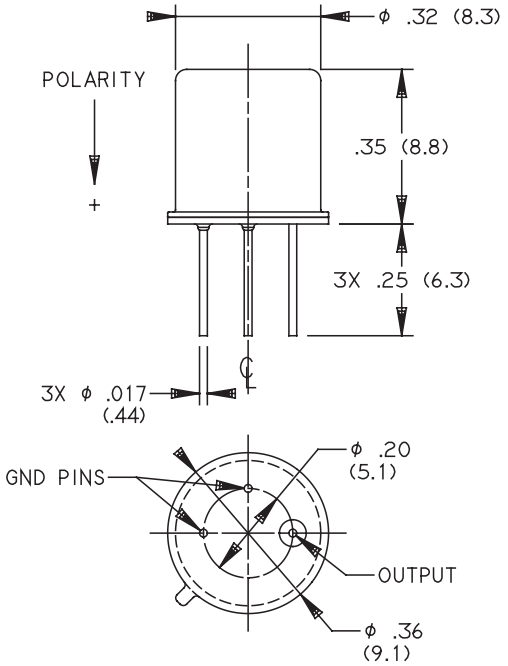
- **Low Impedance**
- **Low-Noise, High Resolution**
- **TO-5 Packaging**
- **Wide Bandwidth**
- **Low Cost / OEM Applications**

DESCRIPTION

The ENDEVCO Model 525 is a miniature piezoelectric accelerometer with internal electronics, configured in a TO-5 package for high volume OEM applications. As a low-impedance piezoelectric device, the Model 525 offers a wide frequency response, high shock survivability and low noise. The Model 525 is designed specifically to provide high-performance integrated vibration measurement of machines, structures or vehicles. Mounting hardware and cabling are eliminated. The device is designed for integration in standard hybrid or SMT electronics packaging and may be mounted by either adhesive or soldering.

The ENDEVCO Model 525 is a hermetically sealed design capable of withstanding long-term reliability in harsh environments. The Model 525 is available in two power ranges.

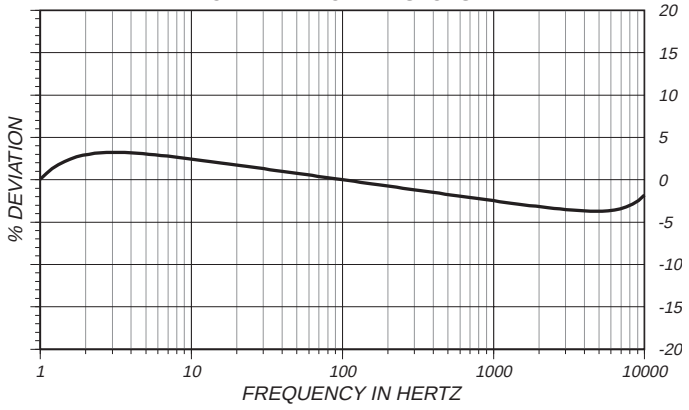
525-01 : +18v to +28v, 2mA to 20mA.
525-02 : +5v to +18v, 0.39mA to 2mA.



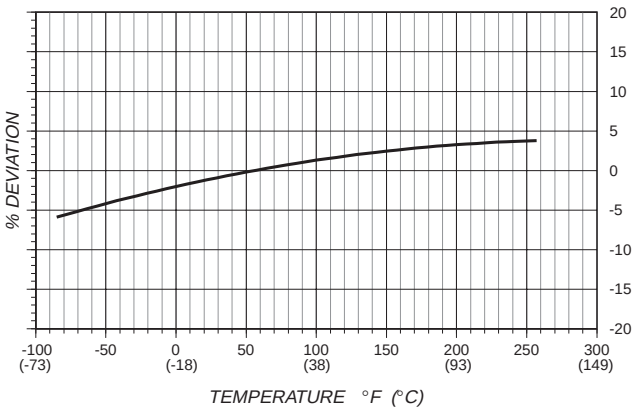
STANDARD TOLERANCE
INCHES (MILLIMETERS)
.XX = +/– .03 (.X = +/– .8)
.XXX = +/– .010 (.XX = +/– .25)

BRAVO: 5128

TYPICAL AMPLITUDE RESPONSE



TYPICAL TEMPERATURE RESPONSE



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SPECIFICATIONS

Values are typical at +23°C, referenced at 100 Hz and conform to ISA-RP 37.2 (1-64) unless otherwise specified.

		-01 Option		-02 Option	
DYNAMIC CHARACTERISTICS	**Unit**	**525-10-01**	**525-100-01**	**525-10-02**	**525-100-02**
RANGE	g	±500	±50	±100	±100
VOLTAGE SENSITIVITY (±20%)	mV/g	10	100	10	100
FREQUENCY RESPONSE		See Typical Curve			
RESONANCE FREQUENCY	Hz	30000		30000	
AMPLITUDE RESPONSE ±10	Hz	0.5 to 12 000		0.5 to 12 000	
TEMPERATURE RESPONSE					
Sensitivity deviation at (0°C to 40°C)	%	±5		±5	
Sensitivity deviation at (-20°C to +85°C)	%	±10		±10	
TRANSVERSE SENSITIVITY	%	< 5		< 5	
AMPLITUDE LINEARITY	%	< 1		< 1	
ELECTRICAL CHARACTERISTICS					
SUPPLY VOLTAGE	Vdc	+18 to +28		+5 to +18	
SUPPLY CURRENT	mA	+2 to +20		+0.39 to +2	
WARM-UP TIME	sec	<2		<2	
DC OUTPUT BIAS VOLTAGE	Vdc				
ROOM TEMPERATURE		+11.5 to +12.5		+3.2 to 3.5	
OVEN OPERATING TEMP (-55°C TO +125°C)		+7 to +14		+2.7 to 3.6	
FULL SCALE OUTPUT VOLTAGE	Vdc	±5		±1	
NOISE (Broadband)	µgrms	300	100	300	100
OUTPUT CHARACTERISTICS					
OUTPUT POLARITY		See Outline Drawing		See Outline Drawing	
GROUNDING		Signal Ground Connects to Case		Signal Ground Connects to Case	
OUTPUT IMPEDANCE	Ω	<100		<100	
ENVIRONMENTAL CHARACTERISTICS					
OPERATING TEMPERATURE		-54°C to +125°C (-65°F to +257°F)		-54°C to +125°C (-65°F to +257°F)	
HUMIDITY		Hermetic		Hermetic	
SINUSOIDAL VIBRATION LIMIT	g pk	±800		±800	
SHOCK LIMIT [1]	g pk	10000		10000	
PHYSICAL CHARACTERISTICS					
DIMENSIONS		TO-5 package 0.36" dia, 0.40" tall		TO-5 package 0.36" dia, 0.40" tall	
WEIGHT oz (gram)		0.10 (2.8)		0.10 (2.8)	
HEADER		Kovar, gold plated		Kovar, gold plated	
LID		Stainless Steel		Stainless Steel	
OUTPUT CONNECTION		1 Output lead 2 ground leads		1 Output lead 2 ground leads	

PART NUMBERING AND ORDERING

525 - __ __ - __ __ __

- SENSITIVITY: 010 = 10 mV/g, 100 = 100 mV/g
- TEMPERATURE SENSOR OPTION: T for temp. sensor, otherwise leave blank
- SENSITIVE AXIS: X = +x positive output, Y = +y positive output, Z = +z positive output

ACCESSORIES

No accessories included.

NOTES

1. Shock pulses of short duration may excite the transducer sesonance. Shock levels above the sinusoidal limit may produces temporary zero shift which will result in erroneous data.
2. 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.

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