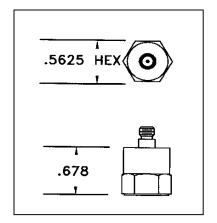
## Columbia Research Laboratories, Inc.

# **General Purpose Accelerometer**

**Model 5013** 

- \*Shock To 20,000 g
- \*Sensitivity 0.7 pC/g
- \*Low Base Strain Sensitivity
- \*Case Grounded
- \*10-32 Removable Stud





### **Accessories Supplied:**

- (1) Miniature Cable Assembly, LNHT-10'
- (1) 1/4-28 x 0.375"L Mounting Stud, St Stl
- (1) Hardwood Storage Case
- (1) Standard Calibration Data
- (1) Certificate of Calibration Traceable to N.I.S.T.

The Model 5013 Piezoelectric Accelerometer is a small, lightweight, very rugged sensor with low sensitivity of 0.7 picoCoulomb/g making it an excellent selection for high shock tests to 20,000 g. The unique design of the piezoelectric seismic system ensures that the units have no discernible spurious response to mounting torque, body strains, cable vibration, cable whip, pressure variations and most heat transients.

The Model 5013 incorporates a ring-shear crystal mass assembly within a stainless steel body to provide an extremely reliable sensor that is virtually insensitive to environmental inputs such as base bending and thermal transients. Signal ground is connected to the outer case of the unit. This unit features a 10-32 top connector and is provided with a 10' lownoise coaxial cable. The sensor is also supplied with a ½-28 removable stud for mounting. *Consult the factory for customized versions of this sensor.* 

### **Specifications**

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Transfer / Electrical	
Charge Sensitivity <sup>1</sup>	0.7 +/-0.2 pC/g
Capacitance	2,000 pF +/-20%
Frequency Linearity <sup>2</sup>	+/-5% Max
	2 Hz To 15,000 Hz
Mounted Resonant Frequency	80 KHz, Nom.
Transverse Sensitivity	5% Max
Amplitude Linearity	+/-1.0% (BFSL) / 2,000 g
Insulation Resistance	20,000 M Ohm Min, 50 VDC Test
Isolation Resistance	0 (Case Grounded)
Environmental	
Vibration Limit	5,000 g Max (Sine)
Shock Limit	20,000 g Max
Temperature Range	-100 To +350 Deg F (-73 To +175 Deg C)
Humidity <sup>3</sup>	0 To 98% R.H. (Non-Condensing)
Base Strain Sensitivity	0.003 g/uE Equiv, Typical
Electromagnetic Sensitivity	0.01 g (Equiv / 100 Gauss)
Dhysical	
Physical	01
Configuration	Shear
Size	0.5625 In. Hex x 0.675 In. H (14.3 mm Hex x 17.1 mm H)
Weight	0.46 Oz (13 Gm)
Case Material	18-8 Stainless Steel
Electrical Interface	Coaxial 10-32 Thread
Mounting	1/4-28 Tapped Base

#### NOTES

- <sup>1</sup> At +75 Deg F, 10g Peak, 100Hz; Lower Frequency Limit is Determined by Associated Electronics
- <sup>2</sup> Referenced to Sensitivity @ 100 Hz.
- 3 With Connector Protected or Sealed, Unit is Epoxy Sealed

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