

Ultra low power embedded accelerometer

LVEP050-TO5

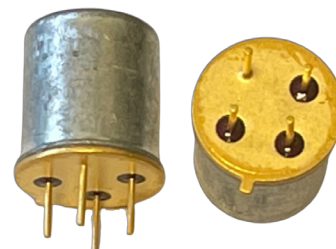
SPECIFICATIONS

Sensitivity, $\pm 5\%$, 25°C	50 mV/g
Acceleration range	25 g peak
Amplitude nonlinearity	1%
Frequency response, nominal¹:	
$\pm 5\%$	3 - 5,000 Hz
$\pm 10\%$	2 - 7,000 Hz
± 3 dB	1 - 11,000 Hz
Resonance frequency	17 kHz
Transverse sensitivity, max	5% of axial
Sensitivity variation with temp:	
-25°C	+5%
+120°C	-15%
Power requirement:	
Voltage source	3.0 - 5.5 VDC
Quiescent current, nominal	60 μ A
Electrical noise, nominal, equiv. g:	
Broadband 2.5 Hz to 25 kHz	700 μ g
Spectral 10 Hz	35 μ g/ $\sqrt{\text{Hz}}$
100 Hz	12 μ g/ $\sqrt{\text{Hz}}$
1,000 Hz	6 μ g/ $\sqrt{\text{Hz}}$
Output impedance, max	1,000 Ω
Bias output voltage, settling time², 25°C	<10 ms
Including temp effects	1.5 VDC $\pm 5\%$
Grounding	none: pellet case must be isolated from mounting surface
Electromagnetic sensitivity, equiv. g, max	200 μ g/gauss
Sensing element design	PZT, shear
Sealing	hermetic
Weight	3.2 grams
Case material	304L stainless steel
Header material	Kovar
Mounting	epoxy; pellet must be isolated from mounting surface or TO5 4-pin mount

Notes: ¹ Frequency response when epoxy mounted using flat shield surface.

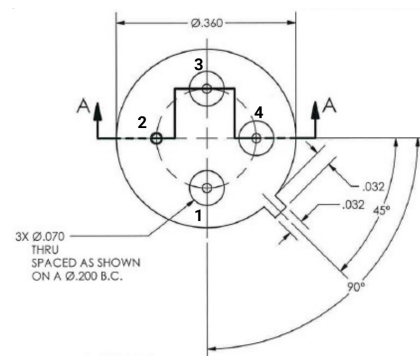
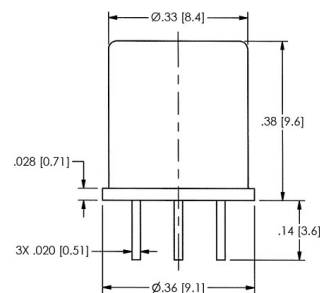
² Based on BOV within 10% of nominal BOV at 25°C.

Accessories supplied: calibration data



Key features

- 180 μ W power consumption
- Fast BOV settling time of <10 ms
- Standardized TO5 semiconductor package



Connections	
Function	Pin
common	1
case	2
output	3
power	4



Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.