

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, nominal ¹ :	$\pm 5\%$ 3 - 5,000 Hz $\pm 10\%$ 2 - 7,000 Hz ± 3 dB 1 - 12,500 Hz
Resonance frequency, nominal	>25 kHz
Transverse sensitivity, max	5% of axial
Sensitivity variation with temp:	-25°C +5% $+120^\circ\text{C}$ -15%
Power requirement:	
Voltage source	3.0 - 5.5 VDC
Quiescent current, nominal	60 μA
Power-down mode	0 μA
Electrical noise, nominal, equiv. g:	
Broadband 2.5 Hz to 25 kHz	700 μg
Spectral 10 Hz	35 $\mu\text{g}/\sqrt{\text{Hz}}$
100 Hz	12 $\mu\text{g}/\sqrt{\text{Hz}}$
1,000 Hz	6 $\mu\text{g}/\sqrt{\text{Hz}}$
Output impedance, max	1,000 Ω
Bias output voltage settling time ² , nominal	350 μs
Including temp effects	1.5 VDC $\pm 5\%$
Grounding	none: pellet case must be isolated from mounting surface
Electromagnetic sensitivity, equiv. g, max	200 $\mu\text{g/gauss}$
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.

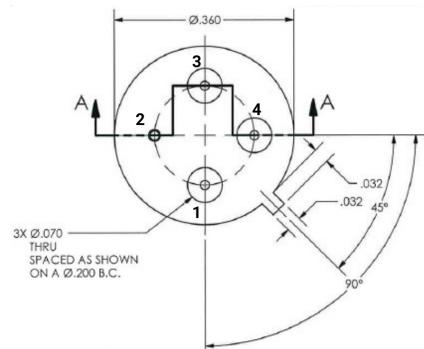
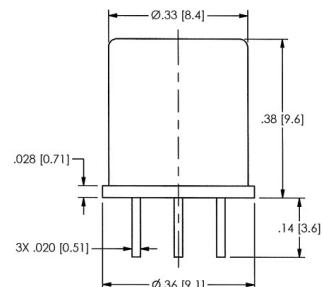
² Based on BOV within 10% of nominal BOV at 25°C.

Accessories supplied: calibration data



Key features

- 180 μW power consumption
- Fast BOV settling time of 350 μs
- Standardized TO5 semiconductor package



Connections	
Function	Pin
common	1
case	2
output	3
power	4

