

# Ultra low power embedded accelerometer

## LVEP025-TO5

### SPECIFICATIONS

<b>Sensitivity, <math>\pm 10\%</math><sup>1</sup>, 25°C</b>	25 mV/g
<b>Acceleration range</b>	50 g peak
<b>Amplitude nonlinearity</b>	1%
<b>Frequency response, nominal<sup>2</sup>:</b>	
$\pm 5\%$	1.5 - 5,000 Hz
$\pm 10\%$	1.0 - 7,000 Hz
$\pm 3$ dB	0.5 - 12,500 Hz
<b>Resonance frequency, nominal</b>	>25 kHz
<b>Transverse sensitivity, max</b>	7% of axial
<b>Sensitivity variation with temp:</b>	
-25°C	+5%
+120°C	-15%
<b>Power requirement:</b>	
Voltage source	3.0 - 5.5 VDC
Quiescent current, nominal	60 $\mu$ A
<b>Electrical noise, nominal, equiv. g:</b>	
Broadband 2.5 Hz to 25 kHz	950 $\mu$ g rms
Spectral 10 Hz	55 $\mu$ g/ $\sqrt{\text{Hz}}$
100 Hz	17 $\mu$ g/ $\sqrt{\text{Hz}}$
1,000 Hz	7.5 $\mu$ g/ $\sqrt{\text{Hz}}$
<b>Output impedance, max</b>	1,000 $\Omega$
<b>Bias output voltage settling time<sup>3</sup>, nominal</b>	350 $\mu$ s
<b>Including temp effects</b>	1.5 VDC $\pm 5\%$
<b>Grounding</b>	none: pellet case must be isolated from mounting surface
<b>Electromagnetic sensitivity, equiv. g, max</b>	200 $\mu$ g/gauss
<b>Sensing element design</b>	PZT, shear
<b>Sealing</b>	hermetic
<b>Weight</b>	3.2 grams
<b>Case material</b>	304L stainless steel
<b>Header material</b>	Kovar
<b>Mounting</b>	epoxy; pellet must be isolated from mounting surface or TO-5 4-pin mount

**Notes:** <sup>1</sup> 5% sensitivity tolerance available upon request.

<sup>2</sup> Frequency response when epoxy mounted using flat shield surface.

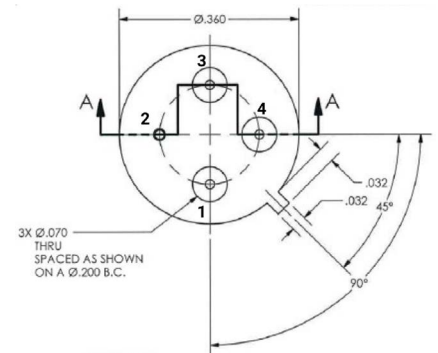
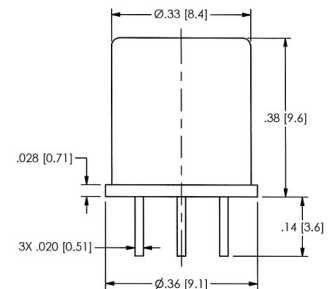
<sup>3</sup> Based on BOV within 10% of nominal BOV at 25°C. Power off for 30 sec minimum for fastest startup.

**Accessories supplied:** calibration data



### Key features

- 180  $\mu$ W power consumption
- Fast startup time, fast BOV settling time of 350  $\mu$ s
- Standardized TO-5 semiconductor package



Connections	
Function	Pin
common	1
case	2
output	3
power	4

