

# Ultra low power embedded accelerometer

## LVEP100-TO5

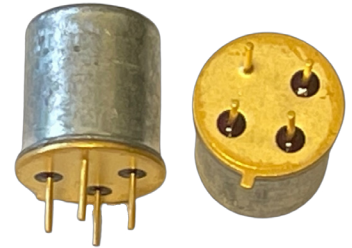
### SPECIFICATIONS

<b>Sensitivity, <math>\pm 5\%</math>, 25°C</b>		100 mV/g
<b>Acceleration range</b>		14 g peak
<b>Amplitude nonlinearity</b>		1%
<b>Frequency response, nominal<sup>1</sup>:</b>	$\pm 5\%$	6 - 5,000 Hz
	$\pm 10\%$	4 - 7,000 Hz
	$\pm 3$ dB	2 - 11,000 Hz
<b>Resonance frequency</b>		17 kHz
<b>Transverse sensitivity, max</b>		5% 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	600 $\mu$ g
Spectral	10 Hz	24 $\mu$ g/ $\sqrt$ Hz
	100 Hz	8 $\mu$ g/ $\sqrt$ Hz
	1,000 Hz	4 $\mu$ g/ $\sqrt$ Hz
<b>Output impedance, max</b>		1,000 $\Omega$
<b>Bias output voltage, settling time<sup>2</sup>, 25°C</b>		<10 ms
Including temp effects		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 TO5 4-pin mount	

Notes: <sup>1</sup> Frequency response when epoxy mounted using flat shield surface.

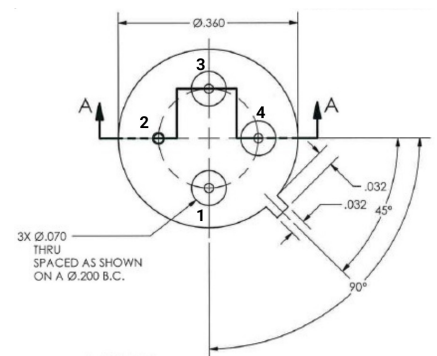
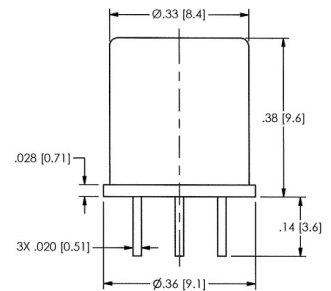
<sup>2</sup> Based on BOV within 10% of nominal BOV at 25°C.

Accessories supplied: calibration data



### Key features

- 180  $\mu$ 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.