

Ultra low power embedded accelerometer

LVEP100-TO5

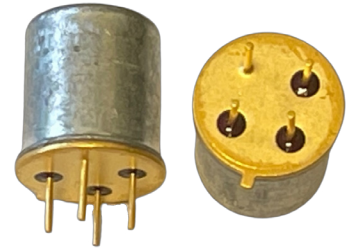
SPECIFICATIONS

| | | |
|---|---|------------------------|
| Sensitivity, $\pm 5\%$, 25°C | | 100 mV/g |
| Acceleration range | | 14 g peak |
| Amplitude nonlinearity | | 1% |
| Frequency response, nominal¹: | $\pm 5\%$ | 6 - 5,000 Hz |
| | $\pm 10\%$ | 4 - 7,000 Hz |
| | ± 3 dB | 2 - 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 | 600 μ g |
| Spectral | 10 Hz | 24 μ g/ \sqrt Hz |
| | 100 Hz | 8 μ g/ \sqrt Hz |
| | 1,000 Hz | 4 μ g/ \sqrt 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.

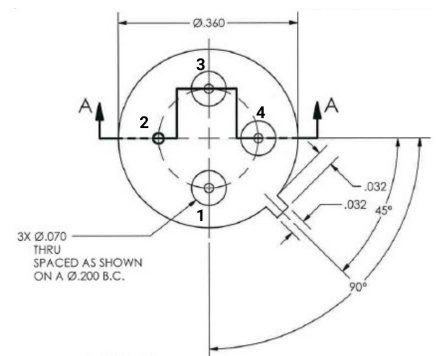
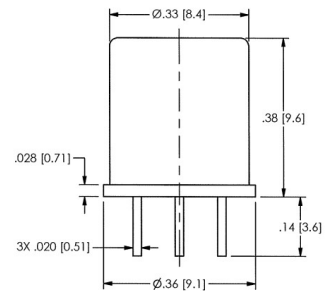
² Based on BOV within 10% of nominal BOV at 25°C.

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.