IEPE Three-axis micro-miniature accelerometer

DETAILS

The B01YG37 B02YG37 three-axis micro-miniature accelerometer features a piezoelectric ceramic shear structure, offering a wide-band frequency response and a custom ASIC signal conditioning circuit. The housing is made of a low-density titanium alloy and is laser-welded; it includes an integrated insulated mounting pad to ensure isolation from ground.

FEATURES

- Wide-band frequency response
- Custom ASIC signal conditioning circuit
- Shear structure, stable and reliable
- Insulated mounting base

TYPICAL APPLICATIONS

- Drop testing and packaging testing
- Powertrain NVH testing
- Equipment testing with limited installation space
- Testing of small components
- Environmental stress screening tests

Fig_1 Picture of BXXYG37

Fig_3 Dimensions of BXXYG37

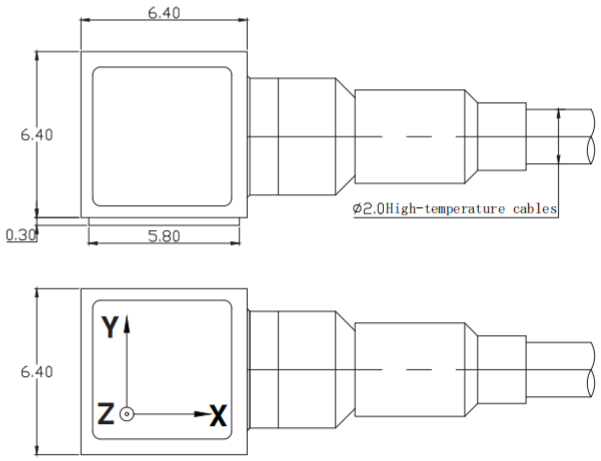


Fig_4 Typical Temperature Response

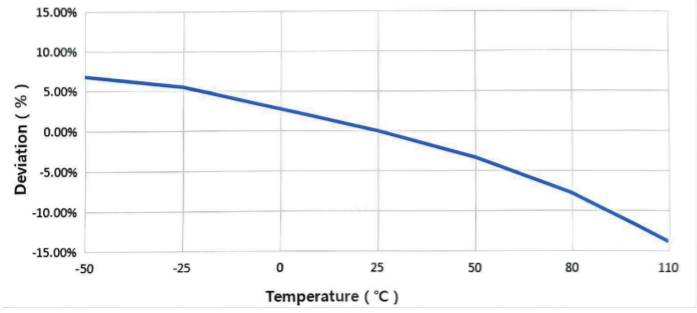
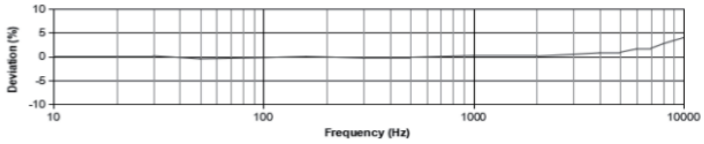


Fig_5 Typical Frequency Response



Specifications-B01YG37 B02YG37

MODEL NUMBER		UNIT	B01YG37	B02YG37
PERFORMANCE				
Sensitivity [1]		mV/g	5(±20%)	10(±20%)
		mV/(m/s²)	0.5	1
Measurement Range		g	±1000	±500
Broadband Resolution [2]		g rms	0.002	0.001
Non-Linearity [3]		%	1	
Frequency Range	± 5%	Hz	5-8k	5-8k
	±10%		2-10k	2-10k
Resonance Frequency [2]		Hz	⩾50k	⩾50k
Discharge Time Constant [2]		s	⩽1	
Transverse Sensitivity		%	⩽5	
ELECTRICAL				
Excitation Voltage		VDC	20-30	
Constant Current Excitation		mA	2-20	
Output Impedance		Ω	⩽100	
Output Bias Voltage		V	8-12	
Electrical Isolation		Ω	⩾1*10⁸	
Spectral Noise [2]	10Hz	μg/√Hz	300	150
	100Hz		80	40
	1000Hz		40	20
ENVIRONMENTAL				
Sinusoidal Vibration Limit [4]		g rms	2000	1500
Shock Limit [4]		g pk	3000	2000
Temperature Range		℃	-50~100	
		℉	-58~212	
Temperature Response [2]		-	See typical curve	
PHYSICAL				
Sealing		-	Laser welding IP68	
Sensing Element		-	Piezoelectric ceramics	
Housing Material		-	Titanium Alloy	
Size		mm	6.4*6.4*6.7	
		in	0.252*0.252*0.264	
Electrical Connector		-	Connected cable	
Mounting Thread		-	Adhesive	
Weight [2]		g	1.1	1.1
		oz	0.039	0.039
Mounting Torque		-	-	
Recommended Accessories	Cable	-	BB	
	Mounting Base	-	-	

Additional Information

Note:

1. @ 160Hz, 24VDC, 4mA conditions
2. Typical values
3. JBT 6822-2018 7.12.1 Vibration Testing Method
4. References the mechanical structure of the sensor not being damaged in a non powered state, rather than in a working state
5. Some products may have changes in size after adding TEDS

BXXYG37

Supplied Accessories:

- Product Verification Report

COMPLIANCE WITH STANDARDS