

IEPE Accelerometer

DETAILS

The model adopts piezoelectric ceramic shear structure, with wide band frequency response, high quality piezoelectric ceramic with long-term stability can ensure years of accurate measurement. Built-in low impedance circuit, characterized by low noise, good low frequency response, small size and high sensitivity. The housing is made of less dense titanium alloy and laser welded. Insulated mounting kit is standard.

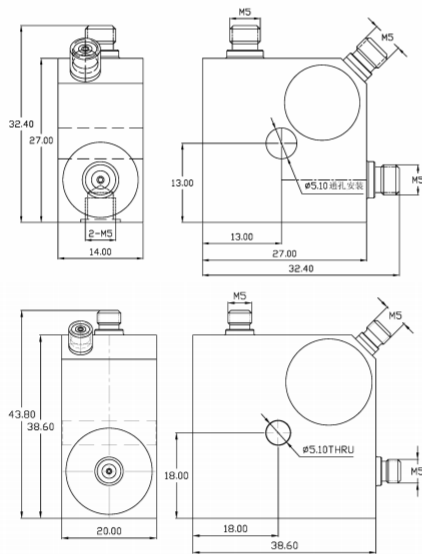
FEATURES

- Integrated Microminiature Built-in
- One-point multi-axial measurement
- 360° mounting
- Insulated mounting base as standard

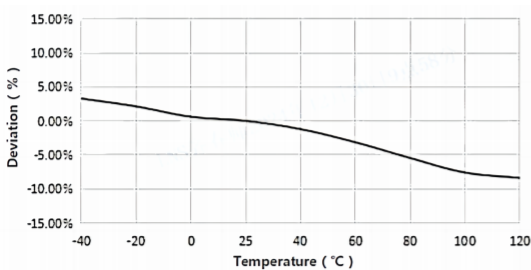
TYPICAL APPLICATIONS

- Bridge structural testing
- Building structural testing

Fig_1 Dimensions of B07Y42 B09Y42

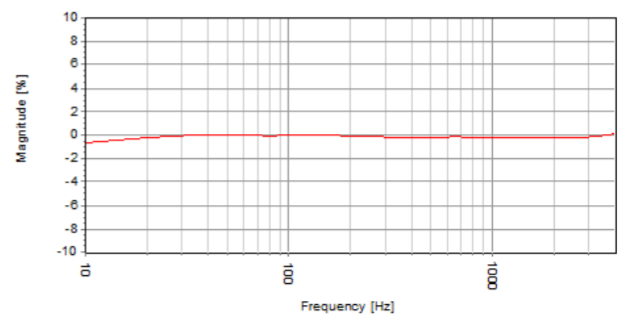


Fig_2 Typical Temperature Response



B07Y42
B09Y42

Fig_3 Typical Frequency Response



Specifications-BXXY42

MODEL NUMBER	UNIT	B07Y42	B09Y42
PERFORMANCE			
Sensitivity ¹	mV/g	200	500
	mV/(m/s ²)	20	50
Measurement Range	g	±25	±10
Broadband Resolution ²	g rms	0.00005	0.00002
Non-Linearity ³	%	1	
Frequency Range	± 5%(Hz)	1-4k	1-4k
	±10%(Hz)	0.5-5k	0.5-4k
Resonance Frequency ²	Hz	≥20k	≥15k
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	-	
Spectral Noise ²	μg/√Hz	3	1.2
		12	0.48
		0.8	0.32
ENVIRONMENTAL			
Sinusoidal Vibration Limit ⁴	g	200	80
Shock Limit ⁴	g	500	200
Temperature Range	°C	-50-120	
	°F	-58-248	
Temperature Response ²	%/°C	-0.1	
PHYSICAL			
Sealing	-	Laser welding IP68	
Sensing Element	-	Piezoelectric ceramics	
Housing Material	-	Titanium Alloy	
Size	mm	27×14×27	38.6×20×38.6
	in	1.063×0.551×1.063	1.520×0.787×1.520
Electrical Connector	-	M5×3 (Opt. 10-32)	
Mounting Thread	-	φ5.1 THRU	
Weight ²	g	41.5	150
	oz	1.464	5.291
TEDS Optional ⁵	-	Yes	

Additional Information

Note:

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

BXXY42

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

-A: 10-32 Output Connector

COMPLIANCE WITH STANDARDS



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