

## IPEP High Temperature Accelerometer

### DETAILS

BXXA90 series uniaxial acceleration sensor, using piezoelectric ceramic shear structure, with a wide bandwidth frequency response, low lateral sensitivity, thermal transients corresponding to low and other characteristics. Internal with high temperature low impedance circuit, low noise, better sensitivity temperature response and other characteristics, the maximum operating temperature of +160°C. The shell is laser-welded with stainless steel, with extremely high sealing grade and strength, and equipped with M5 mounting threads at the bottom.

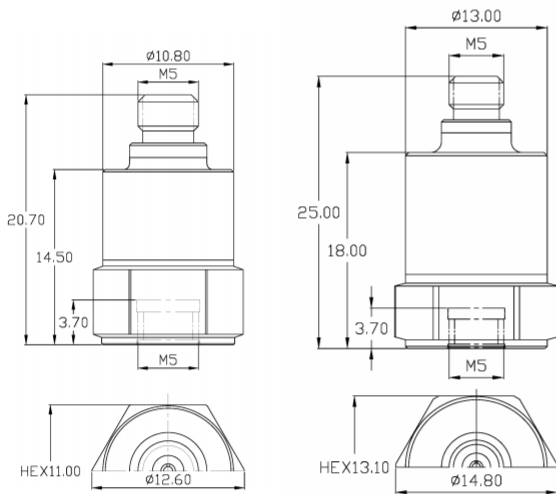
### FEATURES

- Built-in high temperature circuit
- Small size and light weight
- High quality piezoelectric material, low temperature drift
- Standard Series

### TYPICAL APPLICATIONS

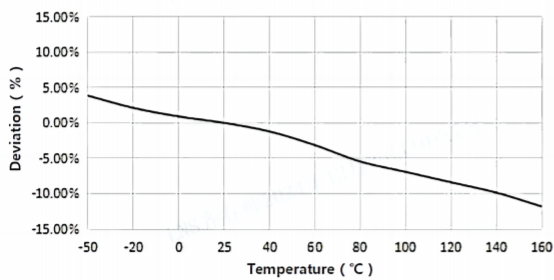
- Environmental testing
- ESS, NVH
- Vibration control

**Fig\_1** Dimensions of BXXA90

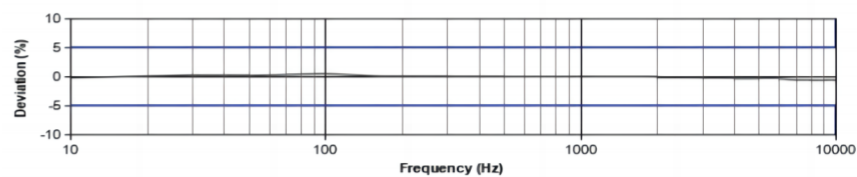


BXXA90

**Fig\_2** Typical Temperature Response



**Fig\_3** Typical Frequency Response



## Specifications-BXXA90

MODEL NUMBER	UNIT	B02A90	B03A90	B05A90	B06A90
<b>PERFORMANCE</b>					
Sensitivity <sup>1</sup>	mV/g	10(10%)	20	50	100
	mV/(m/s <sup>2</sup> )	1	2	5	10
Measurement Range	g	±500	±250	±100	±50
Broadband Resolution <sup>2</sup>	g rms	0.001	0.0005	0.0002	0.0001
Non-Linearity <sup>3</sup>	%	1			
Frequency Range	± 5%(Hz)	1-10k	1-10k	1-10k	1-9k
	±10%(Hz)	0.5-13k	0.5-13k	0.5-13k	0.5-11k
Resonance Frequency <sup>2</sup>	Hz	≥48k	≥50k	≥32k	≥29k
Discharge Time Constant <sup>2</sup>	s	≤1			
Transverse Sensitivity	%	≤5			
<b>ELECTRICAL</b>					
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 <sup>2</sup>	μg/√Hz	60	30	12	6
		24	12	4.8	2.4
		16	8	3.2	1.6
<b>ENVIRONMENTAL</b>					
Sinusoidal Vibration Limit <sup>4</sup>	g	2200	2000	800	400
Shock Limit <sup>4</sup>	g	5500	5000	2000	1000
Temperature Range	°C	-50-160			
	°F	-58-320			
Temperature Response <sup>2</sup>	%/°C	-0.07			
<b>PHYSICAL</b>					
Sealing	-	Laser welding IP68			
Sensing Element	-	Piezoelectric ceramics			
Housing Material	-	Stainless steel			
Size	mm	HEX 11.00×20.70	HEX 13.10×25.00		
	in	HEX 0.433×0.815	HEX 0.516×0.984		
Electrical Connector	-	M5 Top (Opt. 10-32)			
Mounting Thread	-	M5 (Opt. 10-32)			
Weight <sup>2</sup>	g	9	14	17	17
	oz	0.317	0.494	0.600	0.600
TEDS Optional <sup>5</sup>	-	No			

## 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

### BXXA90

Supplied Accessories:

- Product Verification Report
- Install Screws

### OPTIONAL VERSIONS

- A: 10-32 Output Connector
- E: 10-32 Mounting Threads

### COMPLIANCE WITH STANDARDS



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