

IEPE High Temperature Accelerometer

DETAILS

The BXXA94 series single-axis accelerometer employs a piezoelectric ceramic shear structure and features a wide frequency response, low transverse sensitivity, and low thermal transient response. It incorporates an internal high-temperature, low-impedance circuit, offering low noise and excellent temperature response, with a maximum operating temperature of +160°C. The housing is constructed of laser-welded stainless steel, providing exceptional sealing performance and strength, and is equipped with an M5 mounting thread on the bottom.

FEATURES

- Integrated Microminiature Built-in
- Built-in high temperature circuit
- Shear structure
- High quality piezoelectric material, low temperature drift

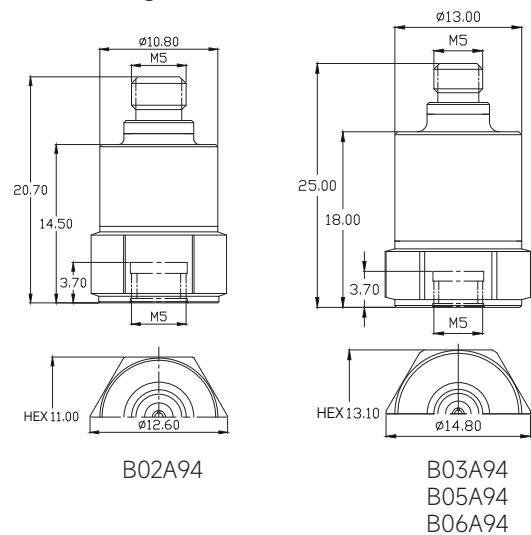
TYPICAL APPLICATIONS

- Environmental testing
- ESS、NVH
- Vibration control
- General vibration monitoring

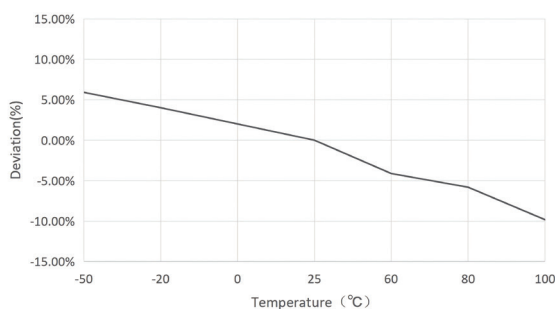
Fig_1 Picture of BXXA94



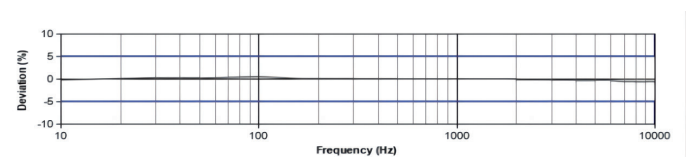
Fig_3 Dimensions of BXXA94



Fig_4 Typical Temperature Response



Fig_5 Typical Frequency Response



Specifications-BXXA94

MODEL NUMBER		UNIT	B02A94	B03A94	B05A94	B06A94
PERFORMANCE						
Sensitivity ¹		mV/g	10(±10%)	20	50	100
		mV/(m/s²)	1	2	5	10
Measurement Range		g	±500	±250	±100	±50
Broadband Resolution ²		g rms	0.001	0.0005	0.0002	0.0001
Non-Linearity ³		%	1			
Frequency Range	± 5%	Hz	1-10k	1-10k	1-10k	1-9k
	±10%		0.5-13k	0.5-13k	0.5-13k	0.5-11k
Resonance Frequency ²		Hz	≥48k	≥45k	≥32k	≥29k
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	8-14			
Electrical Isolation		Ω	-			
Spectral Noise ²	10Hz	μg/√Hz	60	30	12	6
	100Hz		24	12	4.8	2.4
	1000Hz		16	8	3.2	1.6
ENVIRONMENTAL						
Sinusoidal Vibration Limit ⁴		g rms	2200	3000	800	400
Shock Limit ⁴		g pk	5500	5000	2000	1000
Temperature Range		°C	-50~160			
		°F	-58~320			
Temperature Response ²		-	See typical curve			
PHYSICAL						
Sealing		-	Laser welding IP68			
Sensing Element		-	Piezoelectric ceramics			
Housing Material		-	Stainless steel			
Size	mm		HEX 11×20.7	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*3.70 (Opt. 10-32)			
Weight ²	g		9	14	17	17
	oz		0.317	0.494	0.600	0.600
Mounting Torque		-	3.0N·m			
Recommended Accessories	Cable	-	K14AB02			
	Mounting Base	-	H02B01	H02B02		
TEDS Model Number ⁵		-	No			

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

BXXA94

Supplied Accessories:

- Product Verification Report
- M5*8 Mounting Screw

OPTIONALVERSIONS

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

COMPLIANCE WITH STANDARDS

