

IEPE High-Frequency Uniaxial Accelerometer

DETAILS

This uniaxial accelerometer uses a piezoelectric ceramic shear structure with wide-bandwidth frequency response, low transverse sensitivity, and low thermal transient response. Within $\pm 5\%$ deviation, frequency response reaches 20 kHz — ideal for high-speed rotating equipment vibration testing. Stainless steel housing, laser-welded. M5 or 10-32 mounting thread at the bottom.

FEATURES

- Miniature built-in circuit
- Small and light, high frequency response, wide bandwidth up to 20 kHz
- Shape-memory alloy fasteners, stable and reliable

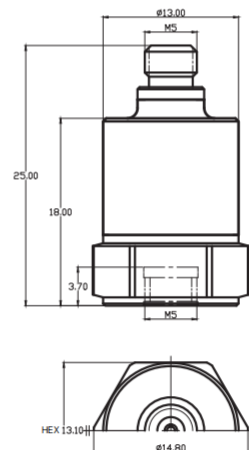
TYPICAL APPLICATIONS

- High-speed magnetic levitation bearings
- Ultra-high-speed motors
- Bearing gearboxes
- Rocket engine ignition testing

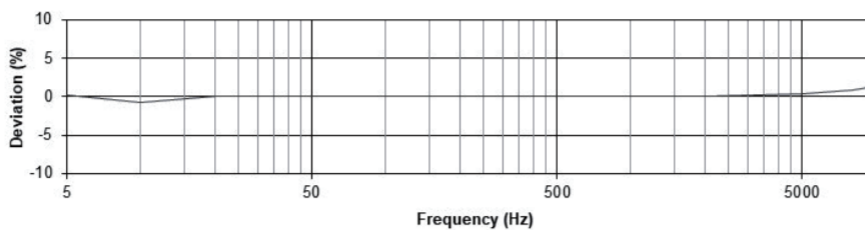
Fig_1 Picture



Fig_2 Dimensions



Fig_3 Typical Frequency Response



Specifications-B02A92 B02A92D

MODEL NUMBER		UNIT	B02A92	B02A92D
PERFORMANCE				
Sensitivity ¹		mV/g	10(±10%)	10(±10%)
		mV/(m/s ²)	1	1
Measurement Range		g	±500	±500
Broadband Resolution ²		g rms	0.001	0.001
Non-Linearity ³		%	1	
Frequency Range	± 5%	Hz	1-20k	1-20k
	±10%		0.5-21k	0.5-21k
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	-	
Spectral Noise ²	10Hz	μg/√Hz	60	60
	100Hz		24	24
	1000Hz		16	16
ENVIRONMENTAL				
Sinusoidal Vibration Limit ⁴		g rms	1200	1200
Shock Limit ⁴		g pk	3500	3500
Temperature Range		°C	-55-125	-55-160
		°F	-67-257	-67-320
Temperature Response ²		-	See typical curve	
PHYSICAL				
Sealing		-	Laser welding IP68	
Sensing Element		-	Piezoelectric ceramics	
Housing Material		-	Stainless steel	
Size		mm	HEX 13.10*25	
		in	HEX 0.516*0.984	
Electrical Connector		-	M5 Top (Opt. 10-32)	
Mounting Thread		-	M5*3.7 (Opt. 10-32)	
Weight ²		g	14	14
		oz	0.494	0.494
Mounting Torque		-	3.0N·m	
Recommended Accessories	Cable	-	K01AB02/K14AB02	
	Mounting Base	-	H02B02/H02B25	
TEDS Model Number ⁵		-	20292A	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

B02A92 B02A92D

Supplied Accessories:

- Product Verification Report
- M5*8 Mounting Screw

OPTIONALVERSIONS

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

COMPLIANCE WITH STANDARDS

