

Model 7531A Accelerometer



Triaxial Charge Output Accelerometer
1.8pC/g output, 10kHz Bandwidth
Hermetically Sealed, Titanium
Adhesively Mounted, Light Weight



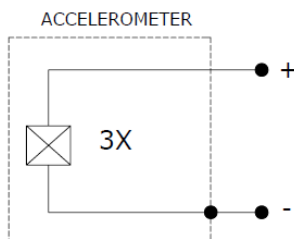
The **Model 7531A** is an adhesively mounted triaxial charge mode accelerometer with an operating temperature range to +260°C. The accelerometer is designed for high frequency vibration and shock measurements and offers a wide bandwidth to >10kHz with a nominal charge output of 1.8pC/g. The model 7531A incorporates stable high temperature piezo-ceramic crystals in annular shear mode

FEATURES

- 1.8pC/g Sensitivity
- Wide bandwidth up to >10kHz
- Isolated Case Option
- Hermetically Sealed
- Annular Shear Mode
- -73°C to +260°C Operating Range
- Stable Temperature Response

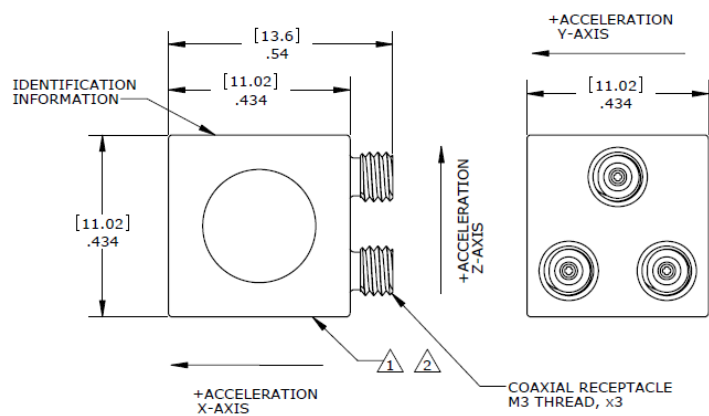
APPLICATIONS

- Vibration & Shock Monitoring
- High Temp Applications
- Laboratory Testing
- High Frequency Applications
- Gearbox Vibration Monitoring

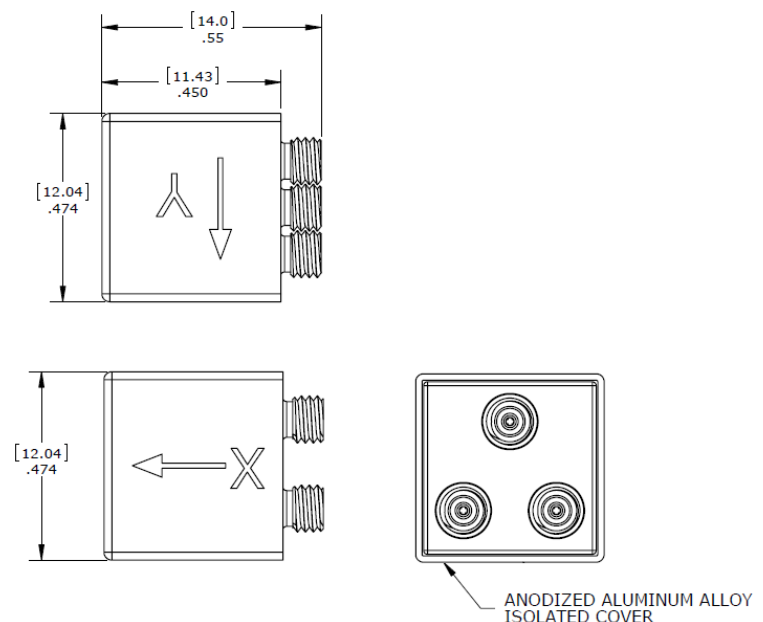


dimensions

Standard Dimensions



-03 Isolated Case Dimensions



Model 7531A Accelerometer

performance specifications

All values are typical at +24°C, 80Hz unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1003 for Plug & Play AC Accelerometers.

Parameters

DYNAMIC

		Notes
Sensitivity (pC/g)	1.8	Typical
Sensitivity (pC/g)	1.0	Minimum
Frequency Response (Hz) ²	1-7000	±10%
Frequency Response (Hz) ²	0.2-10000	±2dB
Natural Frequency (Hz)	48000	
Non-Linearity (%FSO)	±1/1000g	
Transverse Sensitivity (%)	<5	
Dynamic Range (g) ¹	±5000	
Shock Limit (g)	±10000	

ELECTRICAL

Capacitance (pF)	240	Nominal
Insulation Resistance (MΩ)	>100	@ 100Vdc
Grounding	Case Grounded	

ENVIRONMENTAL

Temperature Response (%)	See Typical Temperature Response Curve
Operating Temperature (°C)	-73 to +260 (-40 to 125 for -03 Isolated Case Option)
Storage Temperature (°C)	-73 to +260
Humidity	Hermetically Sealed, IP67

PHYSICAL

Sensing Element	Ceramic (shear mode)
Case Material	Titanium
Electrical Connector	M3 Coaxial Receptacle
Weight (grams)	5.3 (6.6 for -03 option)
Mounting	Adhesive (Stud Mount Option)

¹ Operating range over which the accelerometer meets the linearity specifications

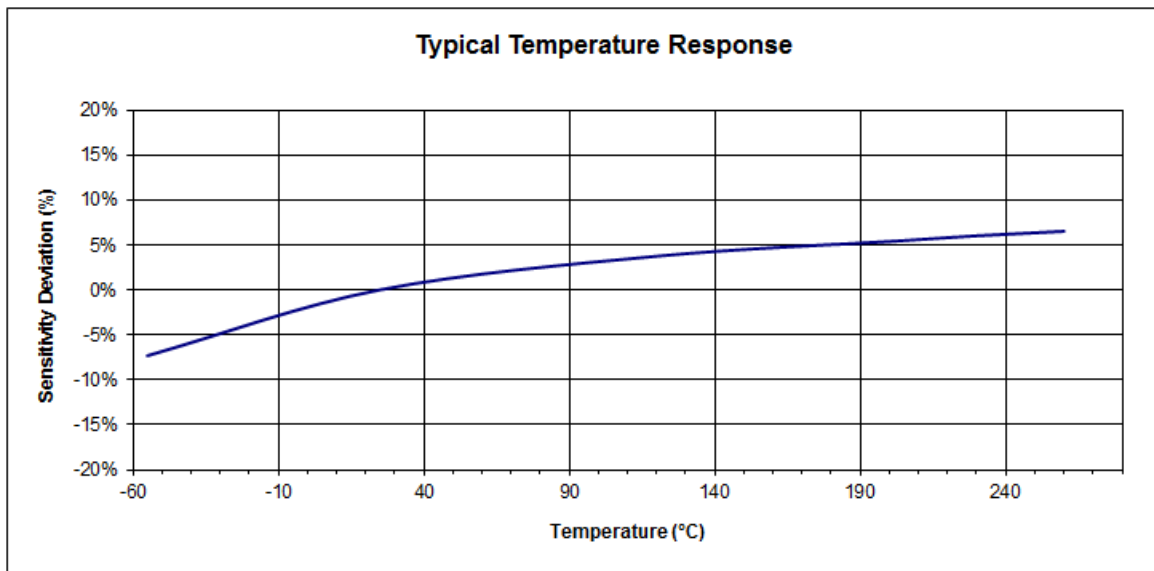
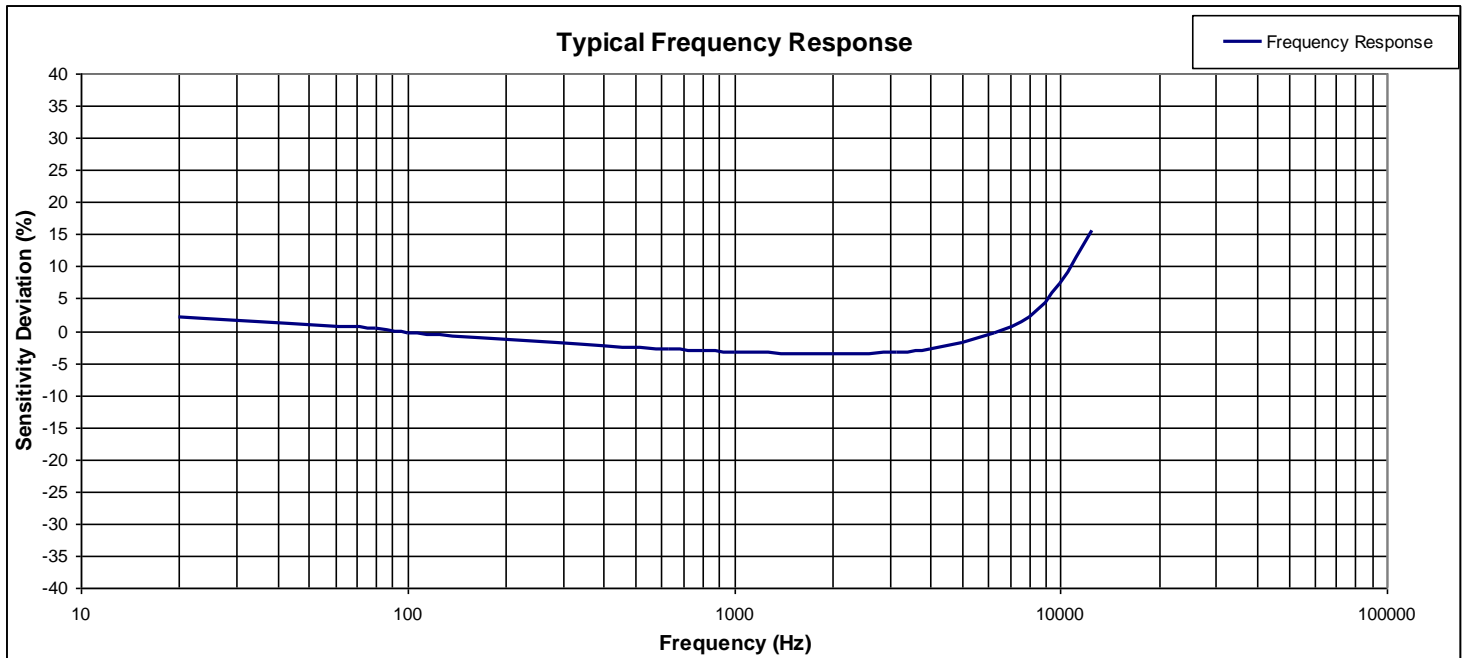
² Low-end response of the accelerometer is a function of its associated electronics.

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±2dB Frequency Response Limit
Supplied accessories:	AC-D02298	10-32 to 10-32 mounting stud
Optional accessories:	321-XXX	Cable Assembly, M3 to 10-32 (XXX designates length in inches, 10ft standard)
	130	In-Line Charge Converter
	161A	4-Channel PE & IEPE Signal Conditioner
	AC-A04025	Adhesive Mounting Adaptor (for -02 thread option)

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Model 7531A Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number

7531A-XX
 |____ Optional Dash Number

Dash Number	Thread Options
-01	M2.5 x 0.45 6g
-02	#5-40 UNF-2B
-03	Case Isolated

Example: 7531A
 Model 7531A, No Option