

# Model 7531A Accelerometer



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



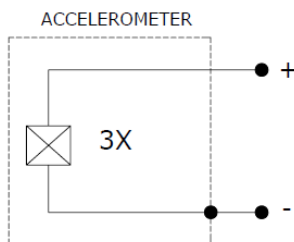
The **Model 7531A** is an adhesively mounted triaxial charge mode accelerometer with an operating temperature range to +260°C. The accelerometer is designed for high frequency vibration and shock measurements and offers a wide bandwidth to >10kHz with a nominal charge output of 1.8pC/g. The model 7531A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

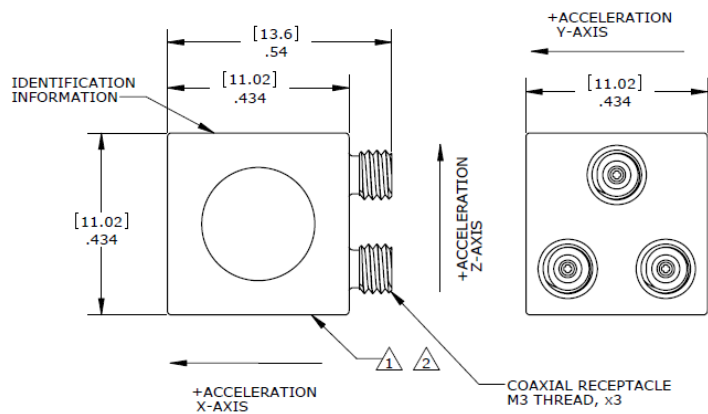
## APPLICATIONS

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

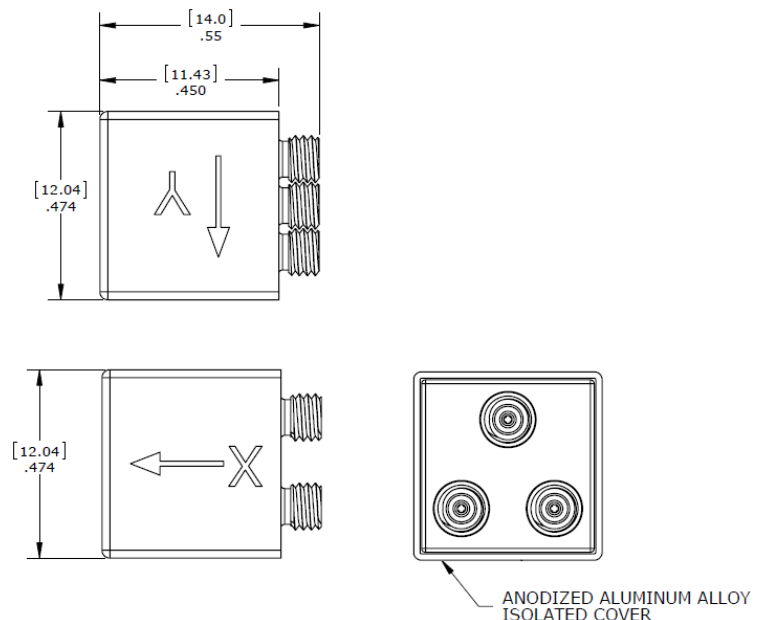


## dimensions

### 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) <sup>2</sup>	1-7000	±10%
Frequency Response (Hz) <sup>2</sup>	0.2-10000	±2dB
Natural Frequency (Hz)	48000	
Non-Linearity (%FSO)	±1/1000g	
Transverse Sensitivity (%)	<5	
Dynamic Range (g) <sup>1</sup>	±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)

<sup>1</sup> Operating range over which the accelerometer meets the linearity specifications

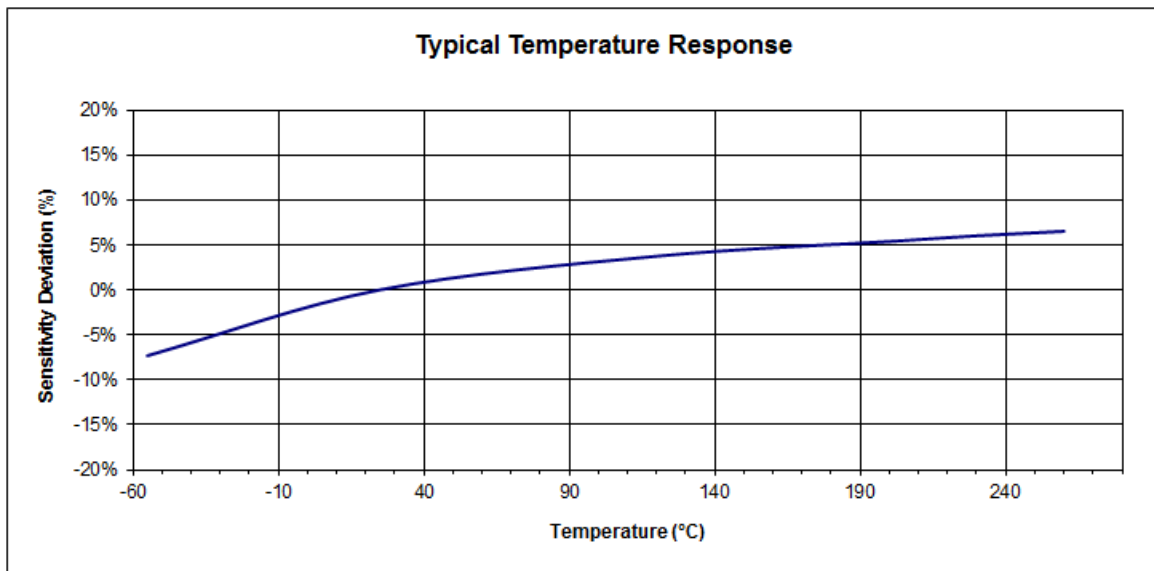
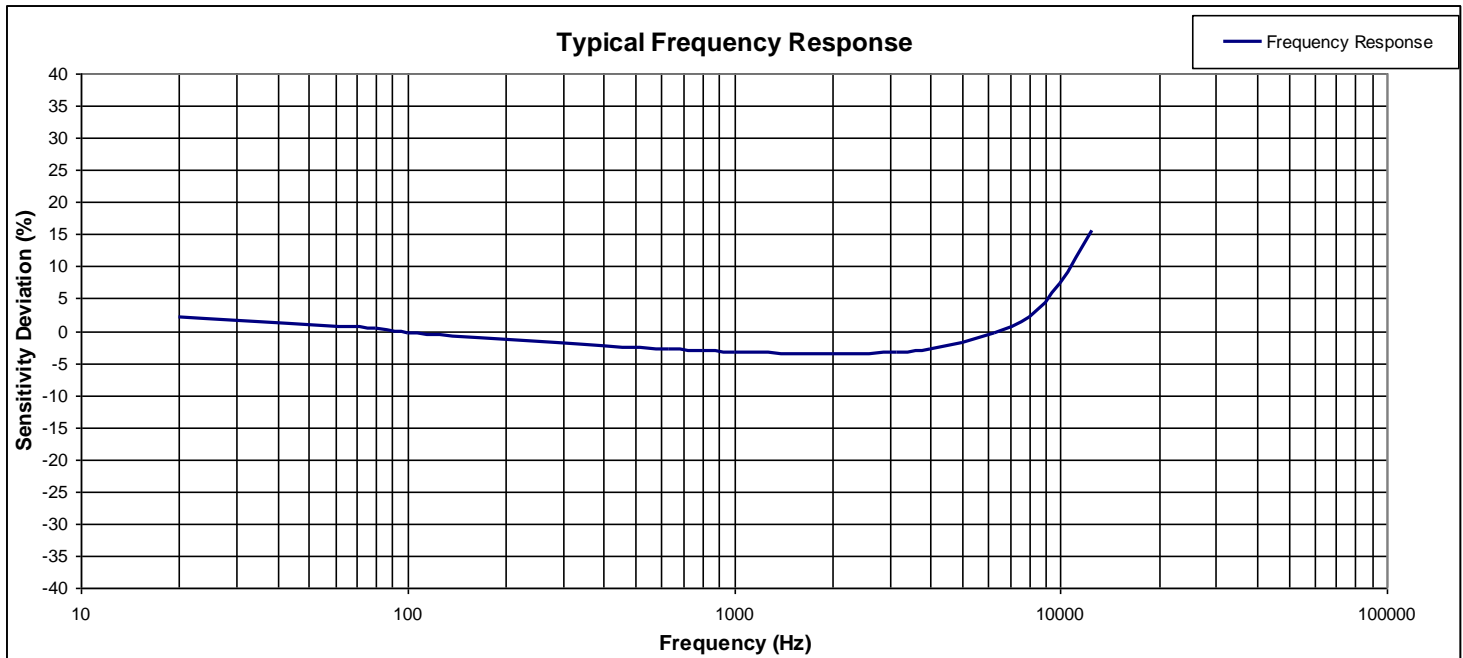
<sup>2</sup> Low-end response of the accelerometer is a function of its associated electronics.

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±2dB Frequency Response Limit
<b>Supplied accessories:</b>	AC-D02298	10-32 to 10-32 mounting stud
<b>Optional accessories:</b>	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)

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

# 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