

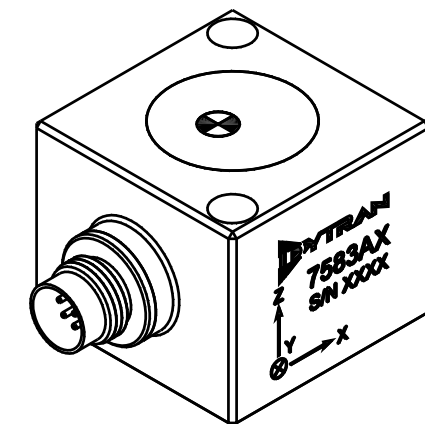
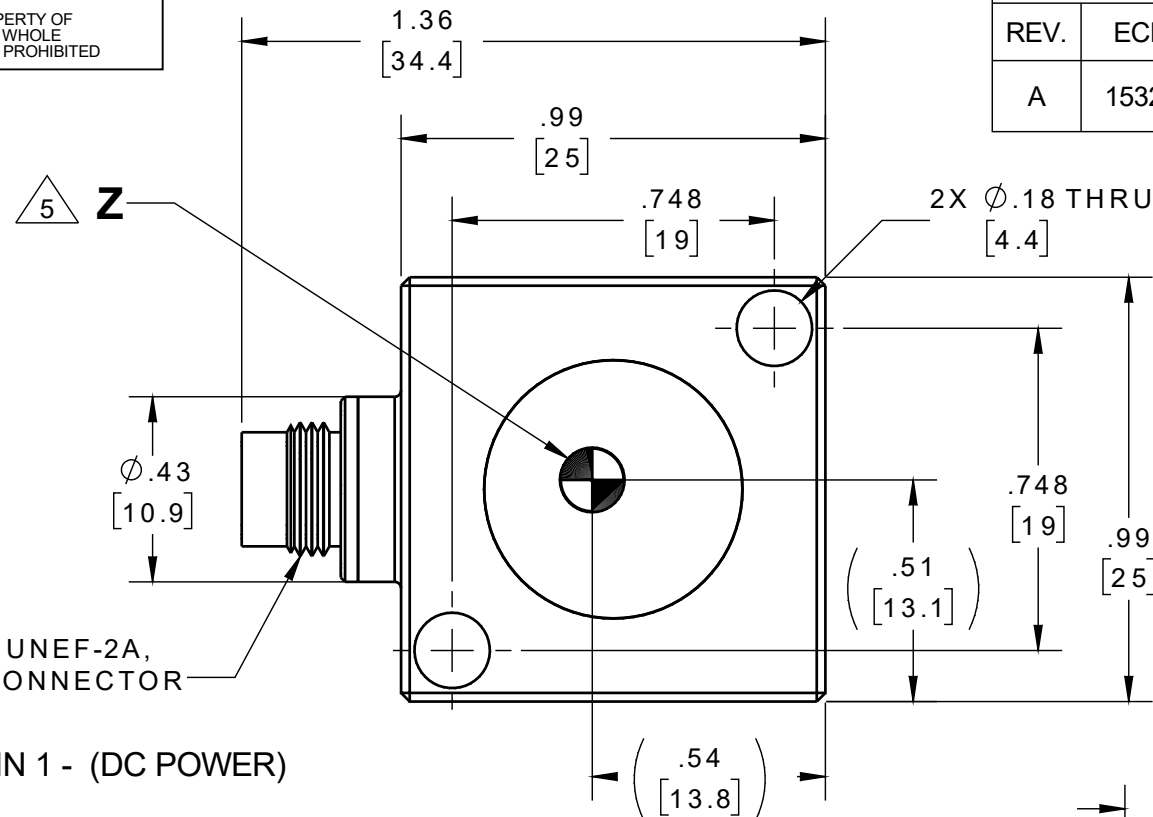
PROPRIETARY AND CONFIDENTIAL

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REVISIONS

| REV. | ECN   | DESCRIPTION                      | BY/DATE        | CHK | APPR |
|------|-------|----------------------------------|----------------|-----|------|
| A    | 15322 | INITIAL RELEASE. SAME AS REV X2. | KG<br>05/14/20 | DP  | LN   |

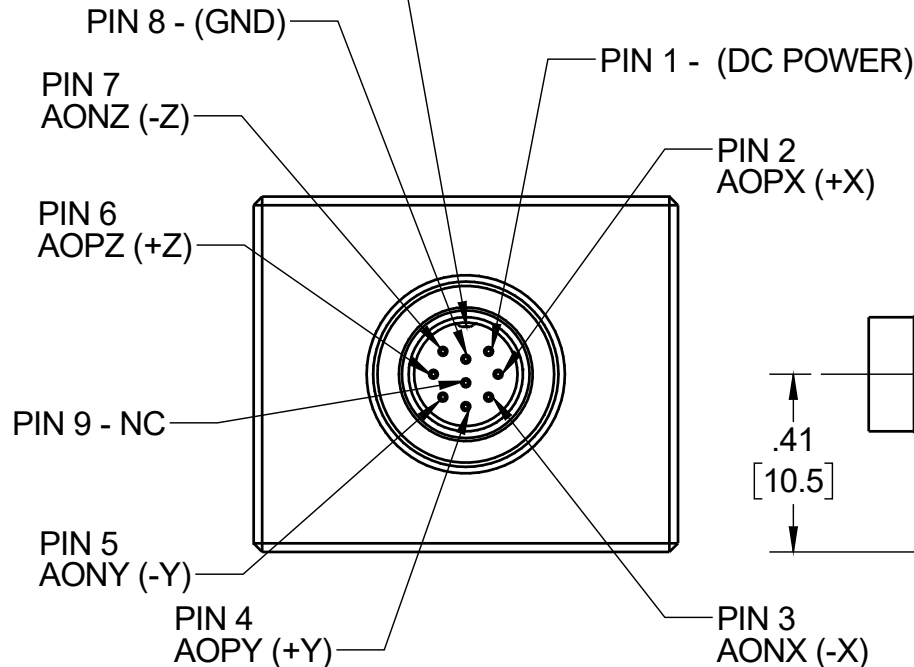
| MODEL  | INPUT RANGE |
|--------|-------------|
| 7583A1 | ±2g         |
| 7583A2 | ±5g         |
| 7583A3 | ±10g        |
| 7583A4 | ±30g        |
| 7583A5 | ±50g        |
| 7583A6 | ±100g       |
| 7583A7 | ±200g       |



C

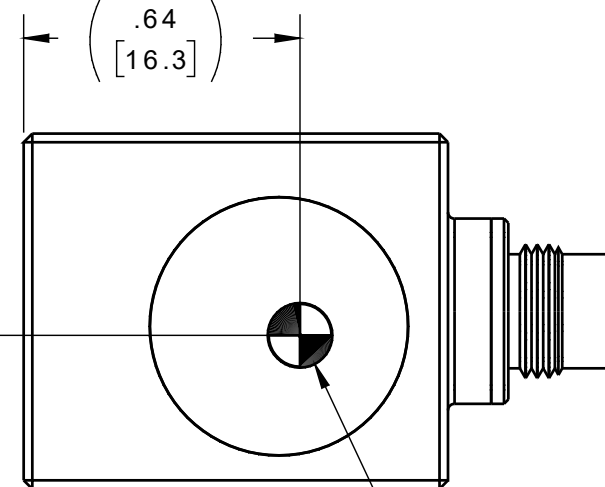
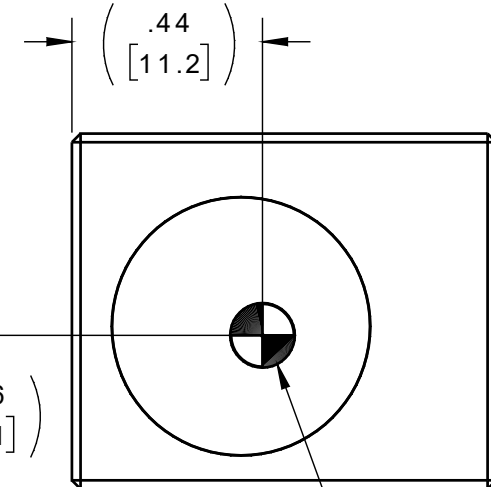
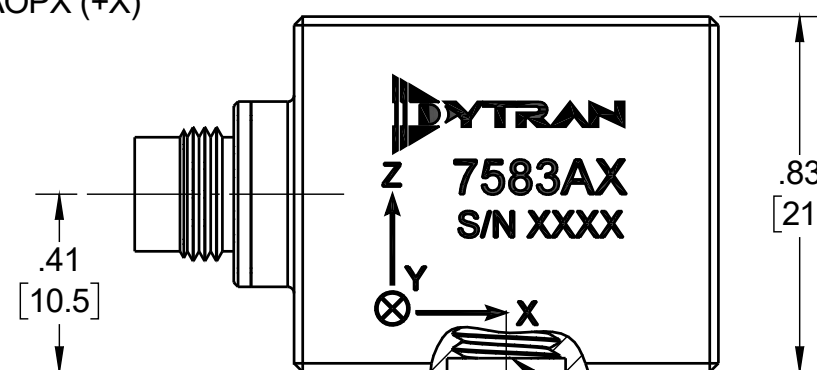
C

KEY 3 5/16-32 UNEF-2A, 9-PIN CONNECTOR



B

B



1/4-28 UNF-2B SEE SHEET 2 FOR MOUNTING PREPARATION

X 5

Y 5

- 5 MARKING DENOTES LOCATION OF SENSING ELEMENT'S CENTER OF MASS.
- 4. MINOR VOIDS, SCARS, SCRATCHES AND MOUNTING BLEMISH/WITNESS MARKS ON EXTERIOR SURFACES ARE ALLOWED DUE TO RESTRAINING AND HANDLING DURING TESTING, TRANSPORT OR PROCESSING. THESE APPEAR AS INDICATORS THAT DO NOT AFFECT FORM, FIT OR FUNCTION AS INTENDED BY DESIGN OR APPLICATION.
- 3 MATES WITH DYTRAN 6964AXX CABLE (XX DENOTES LENGTH IN FT).
- 2. WEIGHT: 38 GRAMS, MAX.
- 1. MATERIAL: TITANIUM ALLOY.

NOTES: UNLESS OTHERWISE SPECIFIED

|   |                                |   |  |                |  |
|---|--------------------------------|---|--|----------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>INTERPRET DIM & TOL PER ASME Y14.5M - 1994.<br>REMOVE BURRS.<br>COUNTERSINK INTERNAL THDS 90° TO MAJOR DIA.<br>CHAM EXT THDS 45° TO MINOR DIA.<br>THD LENGTHS AND DEPTHS ARE FOR MIN FULL THDS.<br>DIMENSIONS APPLY AFTER FINISHING. |                                | UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN INCHES.<br>DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS TOLERANCES ARE: |  | Chatsworth, CA |  |
| DECIMALS<br>.XX ±.03<br>.XXX ±.010  | METRIC<br>.X ±.08<br>.XX ±0.25 | ANGLES<br>±1°   | <b>TITLE: OUTLINE/INSTALLATION DWG, TRIAXIAL DC ACCELEROMETER, 7583AX SERIES</b> |                |  |
| APPROVALS   | DATE                           | SIZE <b>B</b> CAGE CODE <b>2W033</b> DWG NO <b>127-7583A1</b> REV <b>A</b>  |  |                |  |
| ORIG KG   | 08/09/19                       | SCALE: 1:1  |  |                |  |
| CHK DP  | 05/21/20                       | SHEET 1 OF 2  |  |                |  |
| APP   |                                | THIRD ANGLE PROJECTION USA  |  |                |  |
| DO NOT SCALE DRAWING  |                                |   |  |                |  |

A

A

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D

D

C

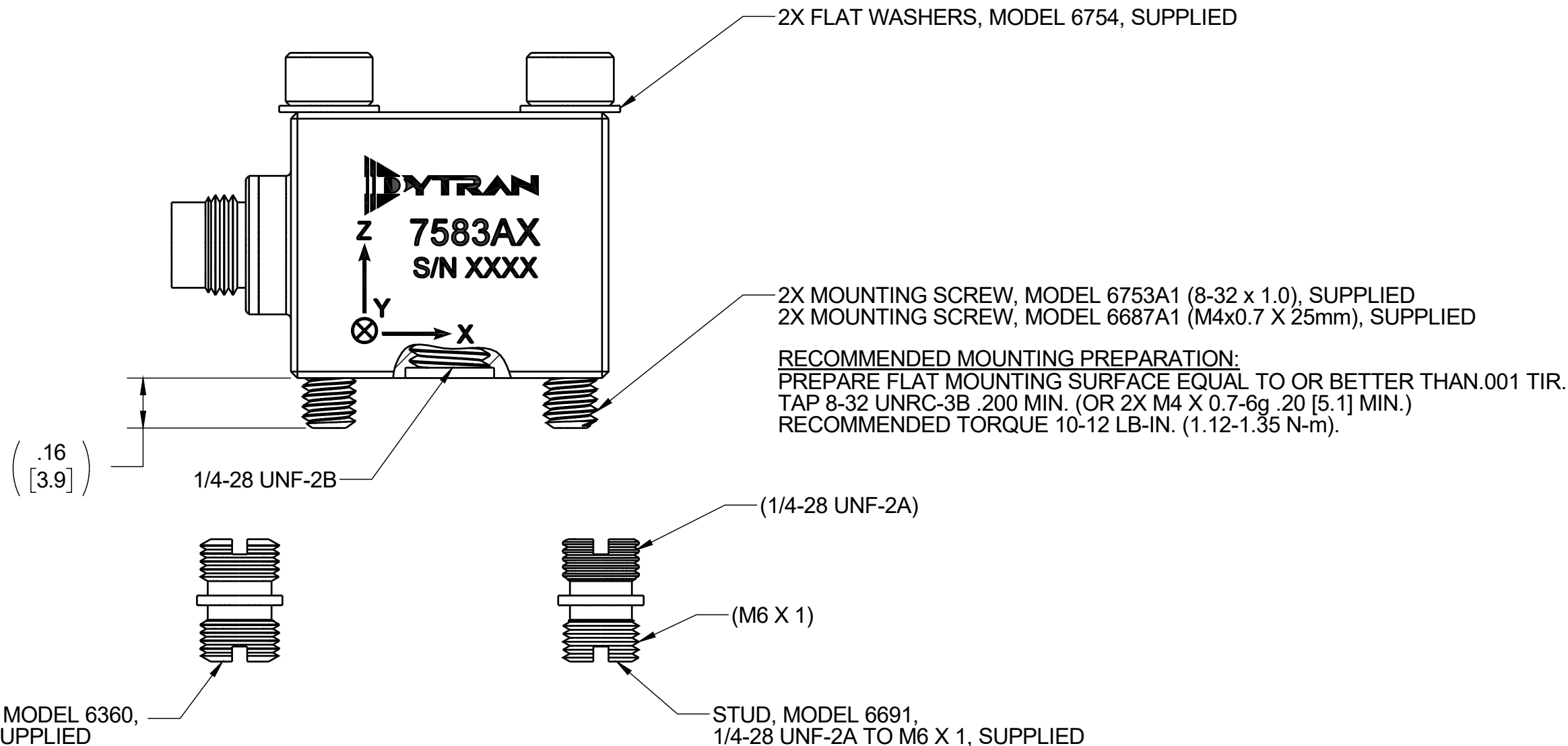
C

B

B

A

A



RECOMMENDED MOUNTING PREPARATION: MODEL 6366  
PREPARE MOUNTING SURFACE,  $\phi 1.25 [31.2]$  MIN, FLAT TO .001 TIR.  
TAP 1/4-28 UNF-2B  $\nabla .200 [5.1]$  MIN. TORQUE TO 12-15 Lb-in.

RECOMMENDED MOUNTING PREPARATION: MODEL 6691  
PREPARE MOUNTING SURFACE,  $\phi 1.25 [31.2]$  MIN, FLAT TO .001 TIR.  
TAP M6 X 1  $\nabla .200 [5.1]$  MIN. TORQUE TO 12-15 Lb-in.

|   |                           |                             |                 |
|---|---------------------------|-----------------------------|-----------------|
|   |                           |                             |                 |
| TITLE: OUTLINE/INSTALLATION DWG, TRIAXIAL DC ACCELEROMETER, 7583AX SERIES |                           |                             |                 |
| SIZE<br><b>B</b>  | CAGE CODE<br><b>2W033</b> | DWG NO<br><b>127-7583A1</b> | REV<br><b>A</b> |
| SCALE: 2:1  |                           | SHEET 2 OF 2                |                 |

Model Number  
7583A2

# PERFORMANCE SPECIFICATION

DOC NO  
PS7583A2

## TRIAxIAL VARIABLE CAPACITANCE ACCELEROMETER

REV B, ECN 15908, 08/28/20



- TRIAXIAL VARIABLE CAPACITANCE ACCELEROMETER
- DIFFERENTIAL MODE
- HERMETICALLY SEALED
- DC RESPONSE
- HIGH SHOCK SURVIVAL
- EXTENDED FREQUENCY RESPONSE

### PHYSICAL

Weight, Max  
Connector Type  
Mounting Thru Holes  
Material  
Sensing Technology

| ENGLISH                |    | SI                     |       |
|------------------------|----|------------------------|-------|
| 1.33                   | oz | 38                     | grams |
| 9-pin, 5/16-32 UNEF-2A |    | 9-pin, 5/16-32 UNEF-2A |       |
| 2 X Ø.18"              |    | 2 X Ø4.57mm            |       |
| Titanium Alloy         |    | Titanium Alloy         |       |
| MEMS                   |    | MEMS                   |       |

### PERFORMANCE

Input Range  
Frequency Response (±5%)  
Frequency Response (±3dB)  
Resonant Frequency  
Sensitivity Differential, ±10% [1]  
Output Noise, Differential, Typ.  
Non-Linearity, Max.  
Transverse Sensitivity, Max.  
Phase Shift (2 to 120 Hz)

|          |             |          |                            |
|----------|-------------|----------|----------------------------|
| ±5       | g pk        | ±49.03   | m/s <sup>2</sup> pk        |
| 0 - 1025 | Hz          | 0 - 1025 | Hz                         |
| 0 - 1900 | Hz          | 0 - 1900 | Hz                         |
| >1900    | Hz          | >1900    | Hz                         |
| 800      | mV/g        | 81.6     | mV/m/s <sup>2</sup>        |
| 17       | µg RMS/√ Hz | 167      | µm/s <sup>2</sup> RMS/√ Hz |
| 0.5      | % F.S.      | 0.5      | % F.S.                     |
| 3        | %           | 3        | %                          |
| <4°      |             | <4°      |                            |

### ENVIRONMENTAL

Maximum Mechanical Shock  
Operating Temperature Range  
Scale Factor Temperature Coefficient [2]  
Seal

|             |        |             |                     |
|-------------|--------|-------------|---------------------|
| 6000        | g pk   | 58840       | m/s <sup>2</sup> pk |
| -67 to +257 | °F     | -55 to +125 | °C                  |
| -11 to +122 | ppm/°F | -20 to +220 | ppm/°C              |
| Hermetic    |        | Hermetic    |                     |

### ELECTRICAL

Output Common Mode Voltage  
Bias Calibration Error  
Output Impedance, Nom.  
Operating Voltage  
Operating Current (AOP & AON open)  
Power Supply Rejection Ratio  
Ground Isolation  
Warm Up Time  
Overload Recovery

|             |       |             |                  |
|-------------|-------|-------------|------------------|
| 2.45 - 2.65 | VDC   | 2.45 - 2.65 | VDC              |
| 0.017       | g     | 0.0017      | m/s <sup>2</sup> |
| 1           | Ω     | 1           | Ω                |
| +6 to +14   | VDC   | +6 to +14   | VDC              |
| <18         | mA DC | <18         | mA DC            |
| >65         | dB    | >65         | dB               |
| >30         | MΩ    | >30         | MΩ               |
| <0.5        | sec   | <0.5        | sec              |
| <200        | µsec  | <200        | µsec             |

### This family also includes:

| Model  | Input Range (g pk) | Frequency Response (Hz) (±3dB) | Sensitivity Differential, ±10% (mV/g) | Max.Shock (g pk) | Noise Differential (µg RMS/√Hz) |
|--------|--------------------|--------------------------------|---------------------------------------|------------------|---------------------------------|
| 7583A1 | ± 2                | 0-1150                         | 2,000                                 | 6000             | 8                               |
| 7583A3 | ± 10               | 0-3200                         | 400                                   | 6000             | 34                              |
| 7583A4 | ± 30               | 0-4000                         | 133                                   | 6000             | 102                             |
| 7583A5 | ± 50               | 0-4500                         | 80                                    | 6000             | 170                             |
| 7583A6 | ± 100              | 0-5000                         | 40                                    | 6000             | 339                             |
| 7583A7 | ± 200              | 0-7000                         | 20                                    | 6000             | 678                             |

Refer to the performance specifications of the products in this family for detailed description.

### Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) Mounting stud, Model 6360, 1/4-28 UNF-2A, Qty 1
- 3) Mounting stud, Model 6691, 1/4-28 UNF-2A to M6 X 1, Qty 1
- 4) Mounting screws, Model 6753A1, 8-32 x 1.0, Qty. 2
- 5) Mounting screws, Model 6687A1, M4x0.7 x 25mm, Qty. 2
- 6) Flat washers, Model 6754, Qty. 2

### Notes:

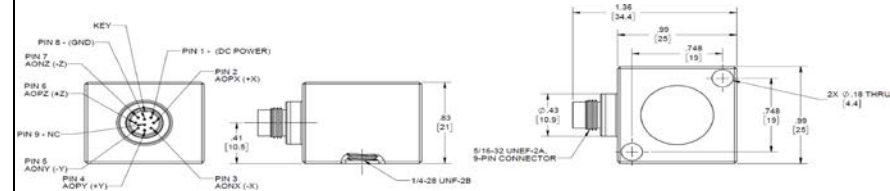
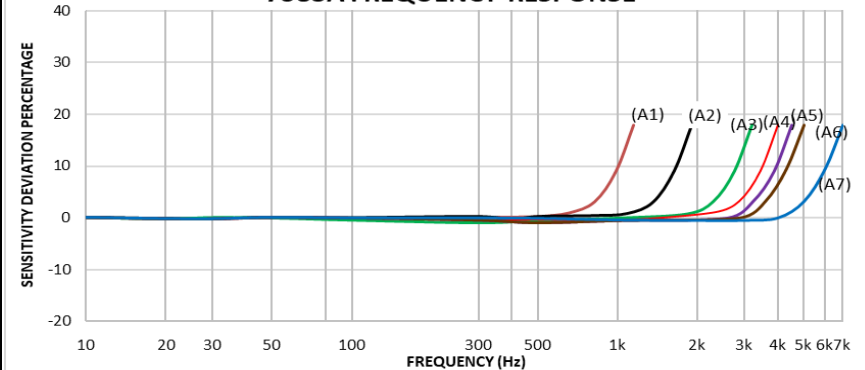
[1] Single ended sensitivity is half of values shown.

[2] Over the rated temperature range.

[3] In the interest of constant product improvement, we reserve the right to change specifications without notice.

It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary overtime. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

### 7583A FREQUENCY RESPONSE



Units on the line drawing are in inches, dimensions in brackets [] are in millimeters. Refer to 127-7583A1 for more information.



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