

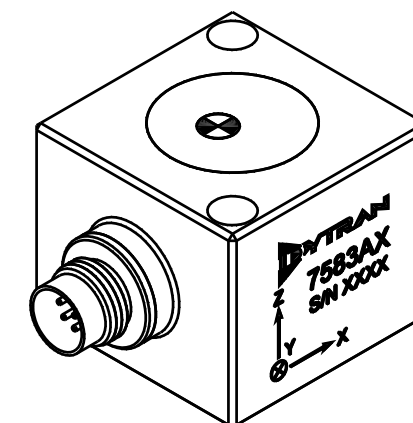
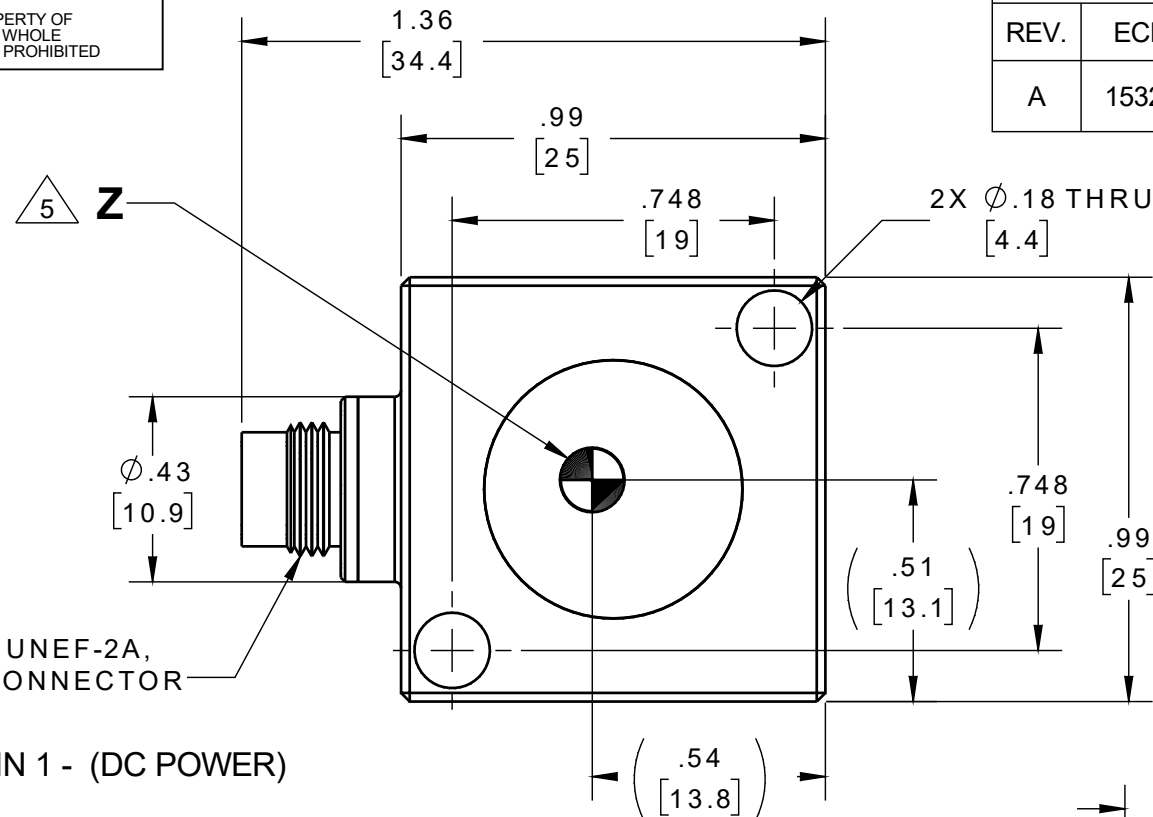
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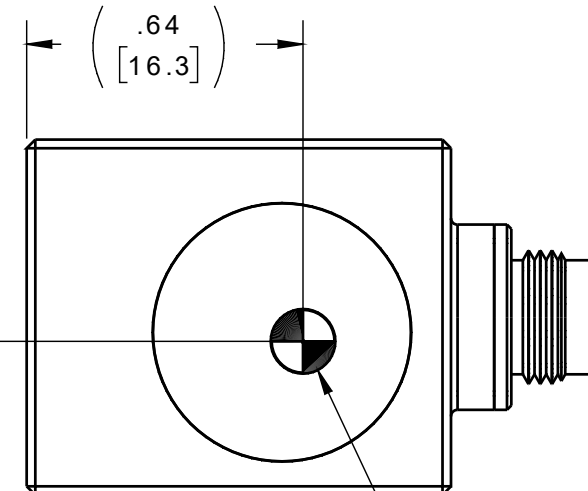
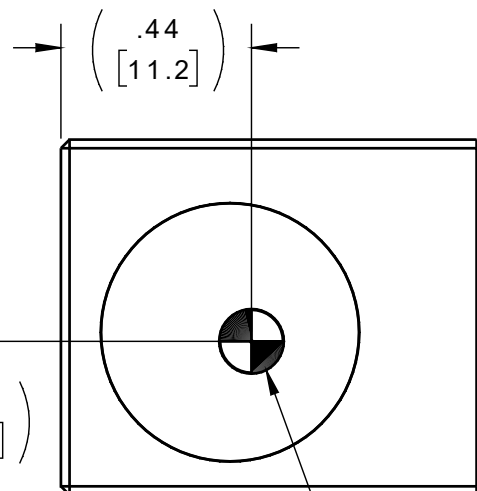
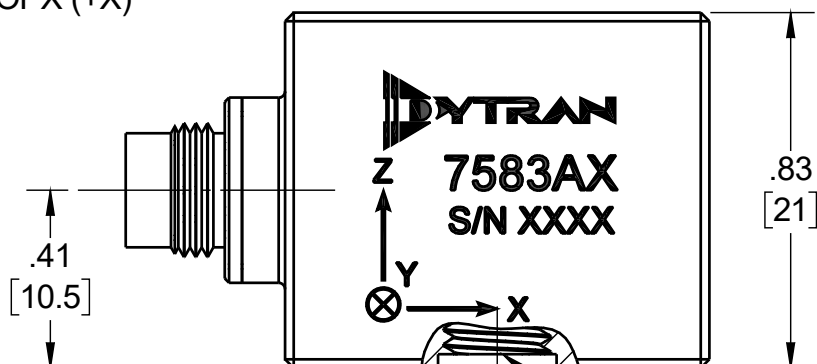
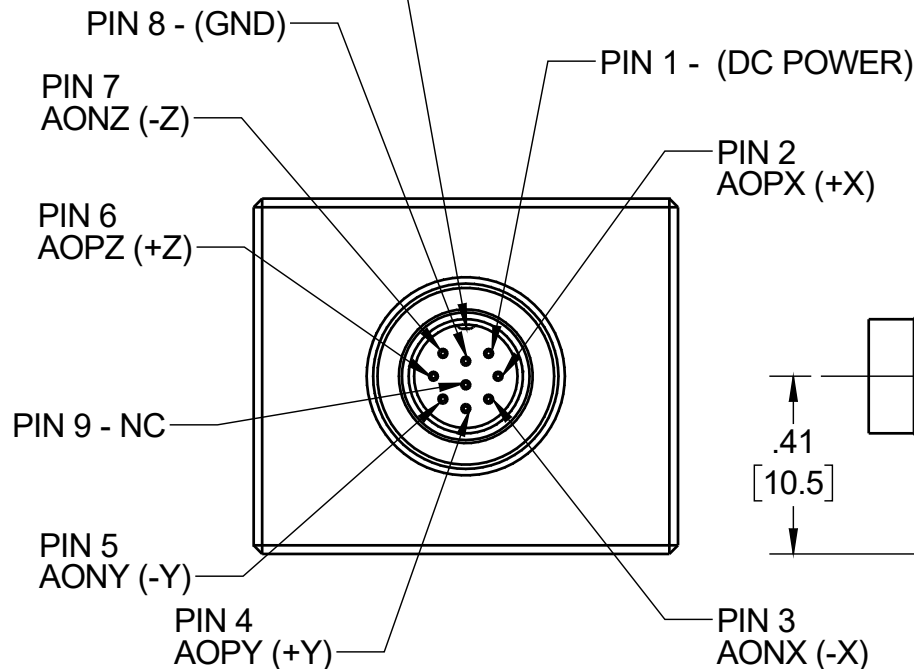
REVISIONS

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

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



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



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

- 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: INTERPRET DIM & TOL PER ASME Y14.5M - 1994. REMOVE BURRS. COUNTERSINK INTERNAL THDS 90° TO MAJOR DIA. CHAM EXT THDS 45° TO MINOR DIA. THD LENGTHS AND DEPTHS ARE FOR MIN FULL THDS. DIMENSIONS APPLY AFTER FINISHING.		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS [] ARE IN MILLIMETERS TOLERANCES ARE:		Chatsworth, CA	
DECIMALS .XX ±.03 .XXX ±.010	METRIC .X ±.08 .XX ±0.25	ANGLES ±1°	TITLE: OUTLINE/INSTALLATION DWG, TRIAXIAL DC ACCELEROMETER, 7583AX SERIES		
APPROVALS	DATE	SIZE B CAGE CODE 2W033 DWG NO 127-7583A1 REV A			
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					

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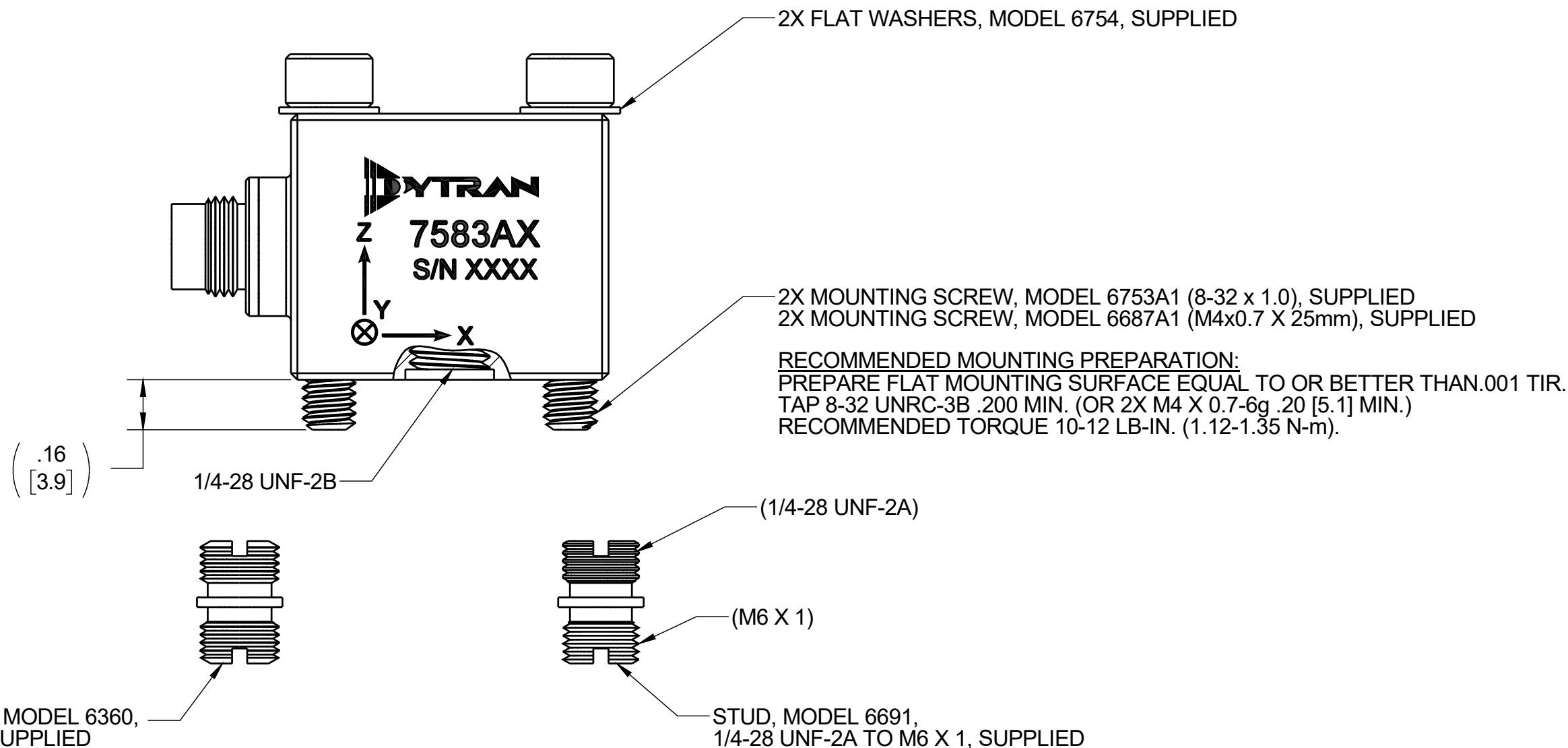
C

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 B	CAGE CODE 2W033	DWG NO 127-7583A1	REV A
SCALE: 2:1		SHEET 2 OF 2	

Model Number
7583A5

PERFORMANCE SPECIFICATION

DOC NO
PS7583A5

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	
Weight, Max	1.33	oz	38	grams
Connector Type	9-pin, 5/16-32 UNEF-2A		9-pin, 5/16-32 UNEF-2A	
Mounting Thru Holes	2 X Ø.18"		2 X Ø4.57mm	
Material	Titanium Alloy		Titanium Alloy	
Sensing Technology	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)

	ENGLISH		SI	
Input Range	±50	g pk	±490.3	m/s ² pk
Frequency Response (±5%)	0 - 2425	Hz	0 - 2425	Hz
Frequency Response (±3dB)	0 - 4500	Hz	0 - 4500	Hz
Resonant Frequency	>5800	Hz	>5800	Hz
Sensitivity Differential, ±10% [1]	80	mV/g	8.2	mV/m/s ²
Output Noise, Differential, Typ.	169	µg RMS/√ Hz	1658	µm/s ² RMS/√ Hz
Non-Linearity, Max.	0.5	% F.S.	0.5	% F.S.
Transverse Sensitivity, Max.	3	%	3	%
Phase Shift (2 to 120 Hz)	<4°		<4°	

ENVIRONMENTAL

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

	ENGLISH		SI	
Maximum Mechanical Shock	6000	g pk	58840	m/s ² pk
Operating Temperature Range	-67 to +257	°F	-55 to +125	°C
Scale Factor Temperature Coefficient [2]	-11 to +122	ppm/°F	-20 to +220	ppm/°C
Seal	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

	ENGLISH		SI	
Output Common Mode Voltage	2.45 - 2.65	VDC	2.45 - 2.65	VDC
Bias Calibration Error	0.167	g	0.017	m/s ²
Output Impedance, Nom.	1	Ω	1	Ω
Operating Voltage	+6 to +14	VDC	+6 to +14	VDC
Operating Current (AOP & AON open)	<18	mA DC	<18	mA DC
Power Supply Rejection Ratio	>65	dB	>65	dB
Ground Isolation	>30	MΩ	>30	MΩ
Warm Up Time	<0.5	sec	<0.5	sec
Overload Recovery	<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
7583A2	± 5	0-1900	800	6000	17
7583A3	± 10	0-3200	400	6000	34
7583A4	± 30	0-4000	133	6000	102
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:

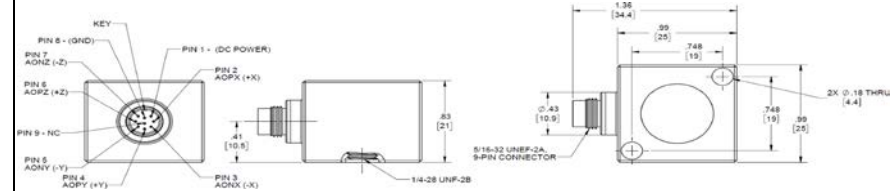
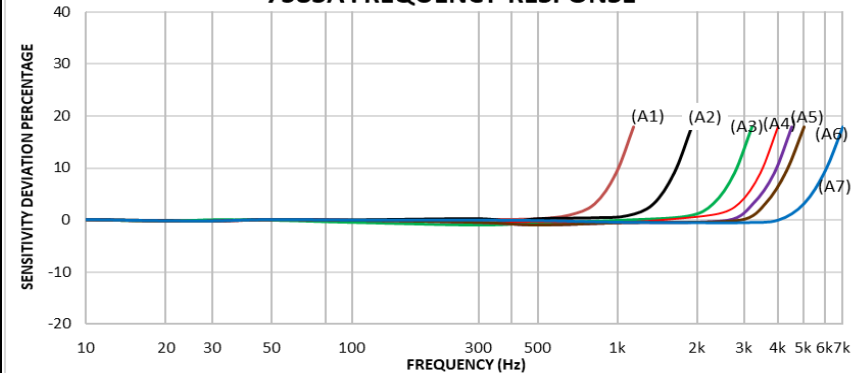
[1] Single ended sensitivity is half of values shown.

[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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