

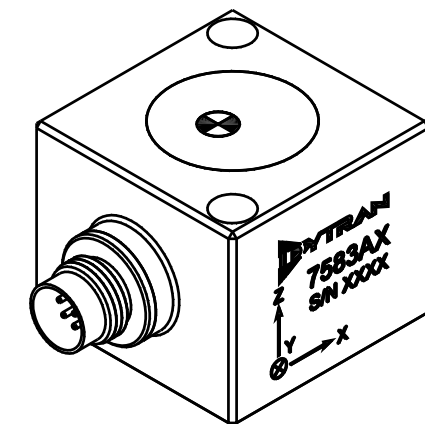
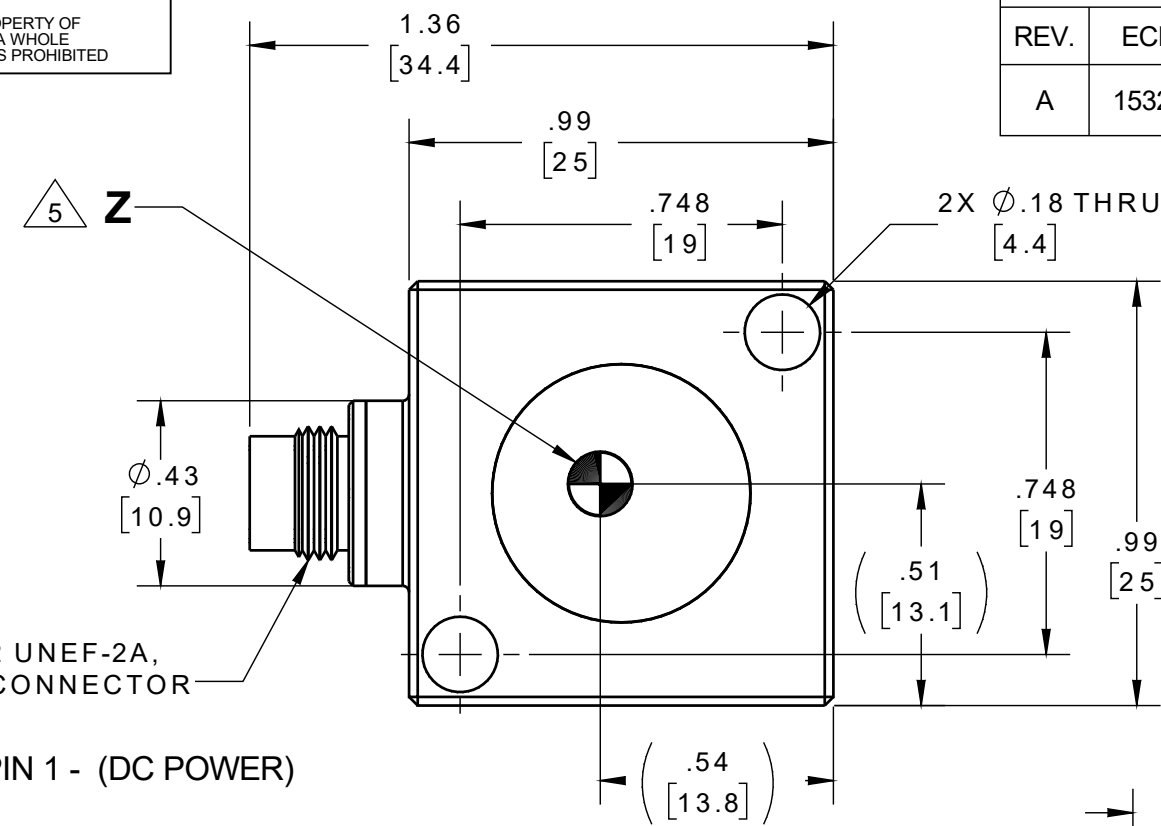
PROPRIETARY AND CONFIDENTIAL

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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



C

C

KEY

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

PIN 8 - (GND)

PIN 7 AONZ (-Z)

PIN 6 AOPZ (+Z)

PIN 9 - NC

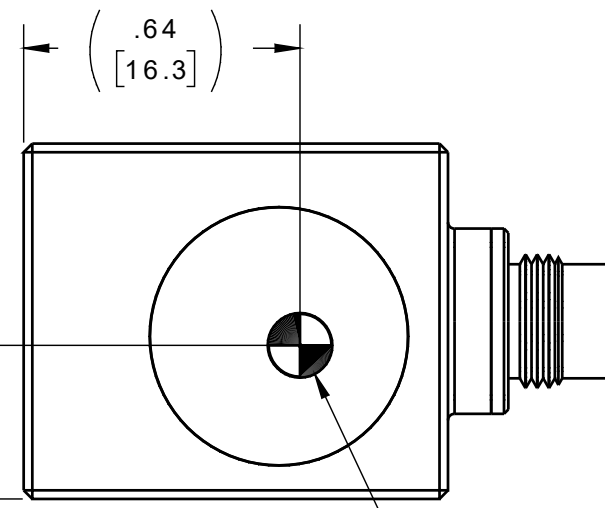
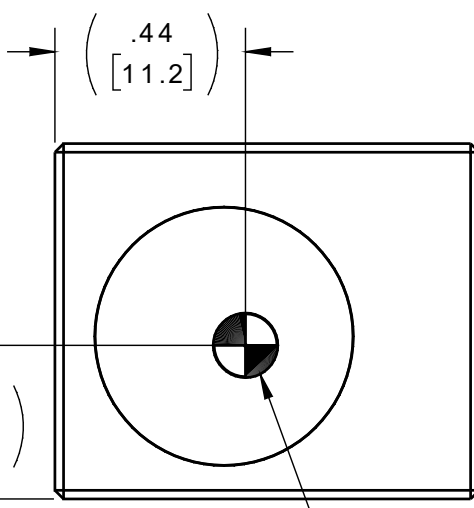
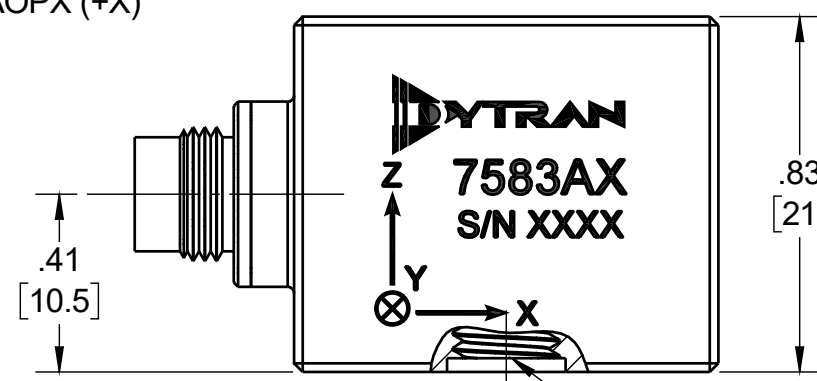
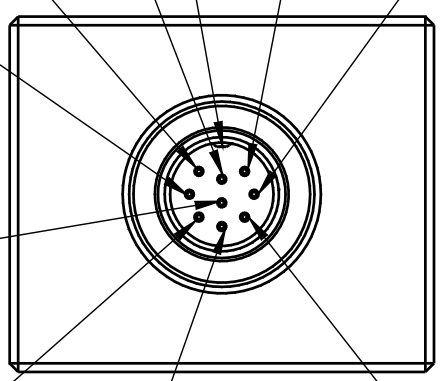
PIN 5 AONY (-Y)

PIN 4 AOPY (+Y)

PIN 3 AONX (-X)

PIN 2 AOPX (+X)

PIN 1 - (DC POWER)



B

B

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°	<b>TITLE: OUTLINE/INSTALLATION DWG, TRIAXIAL DC ACCELEROMETER, 7583AX SERIES</b>		
APPROVALS		DATE	SIZE	CAGE CODE	DWG NO
ORIG	KG	08/09/19	B	2W033	127-7583A1
CHK	DP	05/21/20	SCALE: 1:1		
APP					
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION USA			
ALL MACHINED SURFACES: TOTAL RUNOUT WITHIN .005. BREAK SHARP EDGES .005 TO .010. MACHINED FILLET RADII .005 TO .015. WELDING SYMBOLS PER AWS A2.4. ABBREVIATIONS PER MIL-STD-12.					REV A
					SHEET 1 OF 2

A

A

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C

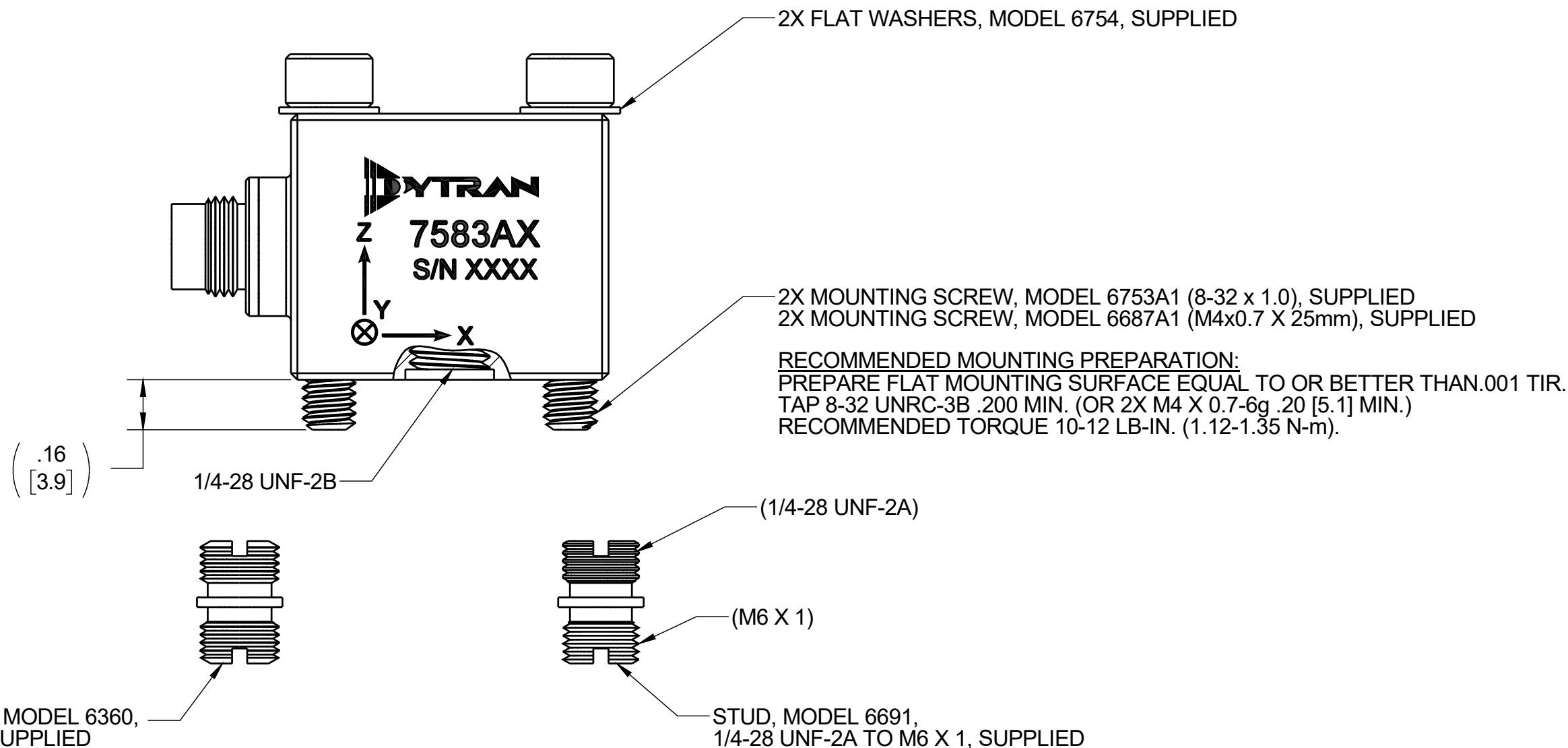
C

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

<b>Model Number</b> 7583A7	<b>PERFORMANCE SPECIFICATION</b>		<b>DOC NO</b> PS7583A7
	<b>TRIAxIAL VARIABLE CAPACITANCE ACCELEROMETER</b>		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)

±200	g pk	±1961.3	m/s <sup>2</sup> pk
0 - 2200	Hz	0 - 2200	Hz
0 - 7000	Hz	0 - 7000	Hz
>11000	Hz	>11000	Hz
20	mV/g	2.0	mV/m/s <sup>2</sup>
678	µg RMS/√ Hz	6651	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
0.667	g	0.068	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
7583A2	± 5	0-1900	800	6000	17
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

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

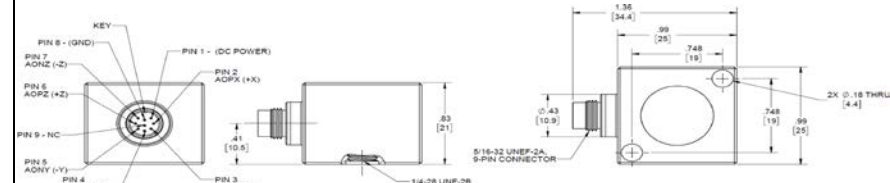
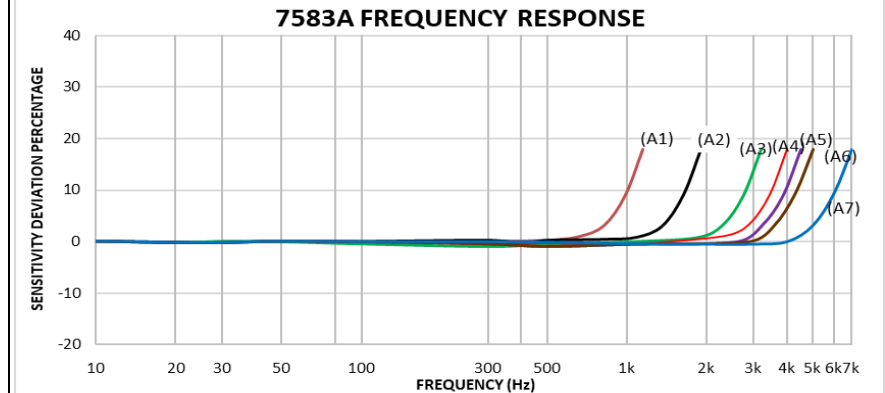
**Notes:**

[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.



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

