## PROPRIETARY AND CONFIDENTIAL **REVISIONS** THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY **REV ECN** DESCRIPTION BY/DATE APPR OF DYTRAN INSTRUMENTS INC. ANY REPRODUCTION IN PART OR AS A CHK WHOLE WITHOUT THE WRITTEN PERMISSION OF INITIAL RELEASE, SAME AS X1 Α 14677 RA 11/13/18 DYTRAN INSTRUMENTS INC. IS PROHIBITED **SENSITIVITY** MODEL 3333A5T 1mV/G M4.5 X 0.35 4-PIN 10.8 3333A6T 5mV/G CONNECTOR 3333A7T 10mV/G X 🕶 3333A8T 25mV/G .43 3333A9T 50mV/G 10.8 3333A10T 100mV/G PIN 4 PIN<sub>1</sub> .61 RTN COMMON X AXIS 15.5 .35 .20 9 5.1 PIN<sub>3</sub> PIN<sub>2</sub> **ZAXIS** Y AXIS ISOLATION CUP 5. MINOR VOIDS, SCARS, SCRATCHES AND MOUNTING BLEMISH/WITNESS MARKS ON EXTERIOR SURFACES **MOUNTING RECOMMENDATIONS** ARE ALLOWED DUE TO RESTRAINING AND HANDLING PREPARE A SURFACE AT LEAST DURING TESTING, TRANSPORT OR PROCESSING. .50 BY .50. SURFACE FLATNESS MUST THESE APPEAR AS INDICATORS THAT DO NOT AFFECT BE EQUAL OR BETTER THAN .001 TIR. FORM, FIT OR FUNCTION AS INTENDED BY DESIGN OR APPLICATION HOUSING/CONNECTOR MATERIAL: TITANIUM ISOLATION CUP: ALUMINUM ALLOY USE ONE DROP OF CYANOACRYLATE 6061-T6, BLACK ANODIZED TO MOUNT THE ACCELEROMETER. 3 MATES WITH DYTRAN 6893AXX CABLE 2 ARROWS INDICATE DIRECTIONS OF ACCELERATION FOR POSITIVE OUTPUT 1. WEIGHT: 2.8 GRAMS MAX CONTRACT NO. NOTES: UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED: UNLESS OTHERWISE SPECIFIED: INTERPRET DIM & TOL PER DIMENSIONS ARE IN INCHES. ASME Y14.5M - 1994. DIMENSIONS IN BRACKETS [] REMOVE BURRS. ARE IN MILLIMETERS COUNTERSINK INTERNAL THDS OUTLINE/INSTALI **TOLERANCES ARE:** 90° TO MAJOR DIA. CHAM EXT THDS 45° TO MINOR DIA. INCHES METRIC ANGLES DWG, ACCELEROMETER, 3333A5T THD LENGTHS AND DEPTHS ARE FOR .X ± 0.8 ± 1° .XX ± .03 MIN FULL THDS. USED ON NEXT ASSY .XXX ±.010 .XX ±0.25 THDS PER MIL-S-7742. **APPROVALS** DATE APPLICATION MATERIAL TRIAXIAL. 3333A5T. TEDS DIMENSIONS APPLY AFTER FINISHING. THIRD ANGLE PROJECTION ORIG R.A. 11/08/18 CAGE CODE DWG. NO. SIZE ALL MACHINED SURFACES. REV 1/20/18 FINISH CHK TOTAL RUNOUT WITHIN .005. 127-3333A5T Α BREAK SHARP EDGES .005 TO .010.

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DO NOT SCALE DRAWING

129

SCALE:

2:1

**SOLIDWORKS** 

SHEET 1 OF 1

MACHINED FILLET RADII .005 TO .015. WELDING SYMBOLS PER AWS A2.4.

ABBREVIATIONS PER MIL-STD-12.

MODEL NUMBER 3333A10T

PERFORMANCE SPECIFICATION

Accelerometer, Triaxial, IEPE

REV B, ECN 15776, 06/02/20



- ULTRA LOW FREQUENCY RESPONSE
- ULTRA LOW NOISE LEVEL
- HERMETICALLY SEALED
- CASE ISOLATED

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		ENGLISH		SI		
PHYSICAL						
Weight, Max		0.14	oz	4.0	grams	
Mounting		Adhesive		Adhesive		
Connector [1]	Туре	4-pin		4-pin		
	Material	Ti-6 Al-4V	ļ	Ti-6 Al-4V		
Housing	Material	Ti-6 Al-4V		Ti-6 Al-4V		
Isolation Cup	Material	Anodized Aluminum		Anodized Aluminum		
Sensing Element	Material	Ceramic	-	Ceramic		
	Mode	Shear	J	Shear	ı	
PERFORMANCE			_		_	
Sensitivity, +15/-10% [2]		100	mV/g	10.19	mV/m/s <sup>2</sup>	
Acceleration Range,		50	Gpeak	491	m/s² peak	
Frequency Range, +15/-10%		.54-10,000	Hz	.54-10,000	Hz	
Resonance Frequency		>24	kHz	>24	kHz	
Linearity [3]		1	%F.S.	1	%F.S.	
Transverse Sensitivity Max		6	%	6	%	
Noise floor, Max		0.00095	Grms	0.009	m/s²rms	
Spectral Noise	1Hz	207	μGrms/sqr(Hz)	2031	μm/s <sup>2</sup> rms/sqr(Hz)	
	10Hz	52	μGrms/sqr(Hz)	510	µm/s <sup>2</sup> rms/sqr(Hz)	
	100Hz	32	μGrms/sqr(Hz)	314	µm/s <sup>2</sup> rms/sqr(Hz)	
	1000Hz	11	μGrms/sqr(Hz)	108	µm/s <sup>2</sup> rms/sqr(Hz)	
	10000Hz	18	μGrms/sqr(Hz)	177	μm/s <sup>2</sup> rms/sqr(Hz)	
ENVIRONMENTAL						
Shock Max		5000	g pk	49050	m/s <sup>-</sup>	
Vibration Max		3000	g pk	29430	m/s <sup>-</sup>	
Operating Temperature		-60 to +180	°F	-51 to +82	°C	
TEDs Operating Temperature	9	-40 to +185	°F	-40 to +85	°C	
Seal		Hermetic		Hermetic		
Base Strain Sensitivity		0.02	g/με	0.20	m/s²/με	
ELECTRICAL						
Supply Current Range [4]		2 to 20	mA	2 to 20	mA	
Compliance Voltage Range		+18 to +30	VDC	+18 to +30	VDC	
Output Impedance, Typ.		100	Ω	100	Ω	
Output Bias Voltage		+11 to +13	VDC	+11 to +13	VDC	
Discharge Time Constant		0.5 - 1.5	sec	0.5 - 1.5	sec	
TEDS Feature		IEEE 1451.4	1	IEEE 1451.4		
Case Isolation		10	GΩ	10	GΩ	

This family also includes:								
Model	Sensitivity (mV/g)	Range (Gpeak)	Resolution (Grms)	Oper. Temp(°F)	Time Constant (sec)			
3333A5T	1	5000	0.03	-60 to +225	0.5 - 1.5			
3333A6T	5	1000	0.0072	-60 to +225	0.5 - 1.5			
3333A7T	10	500	0.0036	-60 to +225	0.5 - 1.5			
3333A8T	25	200	0.0024	-60 to +185	0.5 - 1.5			
3333A9T	50	100	0.00095	-60 to +185	0.5 - 1.5			

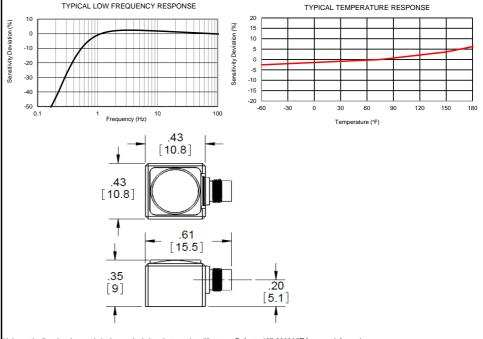
Refer to the performance specifications of the products in this family for detailed description.

## Supplied Accessories:

1) Accredited calibration certificate (ISO 17025)

## Notes:

- [1] M4.5 X 0.35 Connector. Mates with Dytran cable Model 6893AXX.
- [2] Measured at 100Hz, 1 Grms per ISA RP 37.2.
- [3] Measure using zero-based straight line method, % of F.S. or any lesser range.
- [4] Do not apply power to this system without current limiting, 20 mÅ MAX. To do so will destroy the IC charge amplifier.
- [5] 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, units in brackets are in millimeters. Refer to 127-3333A5T for more information.

