

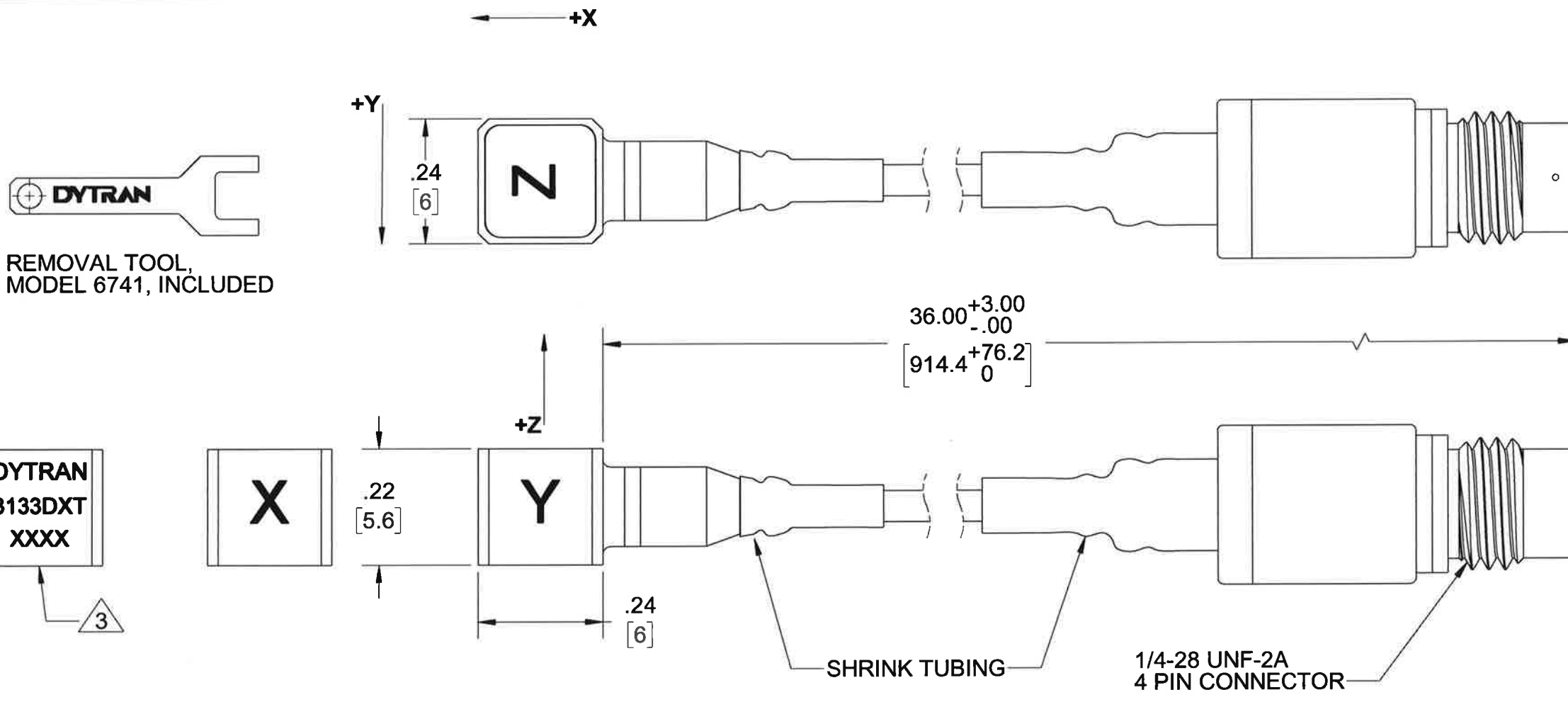
PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF DYTRAN INSTRUMENTS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF DYTRAN INSTRUMENTS INC. IS PROHIBITED

REVISIONS

| REV. | ECN | DESCRIPTION | BY/DATE | CHK | APPR |
|------|-------|--|----------------|-----|------|
| C | 13002 | ZONE 4B .22 [5.6] WAS" .23 [5.8], ZONE 3B .24 [6] WAS: ϕ .18 [4.6], NOTE 3 ϕ .39 WAS: ϕ .20 | JS 10/02/16 | LA | LN |

| MODEL | SENSITIVITY |
|---------|--------------------------|
| 3133D1T | 10 mV/g ($\pm 15\%$) |
| 3133D2T | 2 mV/g ($\pm 25\%$) |
| 3133D3T | 5 mV/g ($\pm 20\%$) |
| 3133D4T | 0.7 mV/g ($\pm 25\%$) |
| 3133D5T | 0.25 mV/g ($\pm 25\%$) |



5. DYTRAN MODEL 6298 PETRO MOUNTING WAX AND MODEL 6741 REMOVAL TOOL, SUPPLIED.

4. ARROWS INDICATE DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT.

3. FOR BEST FREQUENCY RESPONSE, PREPARE A FLAT MOUNTING SURFACE OF AT LEAST ϕ .39, FLAT TO .0001 TIR. APPLY ONE DROP OF CYANOACRYLATE ADHESIVE TO MOUNT THE ACCELEROMETER.

2. HOUSING MATERIAL: TITANIUM ALLOY.

1. WEIGHT: 1.3 GRAMS MAX, LESS CABLE.

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.

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.

| DECIMALS | METRIC | ANGLES |
|-----------------|----------------|---------------|
| .XX \pm .03 | .X \pm 0.8 | $\pm 1^\circ$ |
| .XXX \pm .010 | .XX \pm 0.25 | |

| APPROVALS | | DATE |
|-----------|----|----------|
| ORIG | AB | 11/15/13 |
| CHK | LN | 12/22/15 |
| APP | AS | 12/23/15 |

DO NOT SCALE DRAWING

MASTER COPY ONLY IF IN RED

DYTRAN INSTRUMENTS, INC. Chatsworth, CA

TITLE: **OUTLINE/INSTALLATION DWG, TRIAXIAL ACCEL WITH TEDS, 3133DT SERIES**

| | | | |
|---------------|------------------------|--------------------------|--------------|
| SIZE B | CAGE CODE 2W033 | DWG NO 127-3133DT | REV C |
|---------------|------------------------|--------------------------|--------------|

SCALE: 1:1 SHEET 1 OF 1



- **ULTRA MINIATURE SIZE**
- **IDEAL LOW FREQUENCY RESPONSE**
- **LOW BASE STRAIN SENSITIVITY**
- **TEDS FEATURE**

| | |
|---------|----|
| ENGLISH | SI |
|---------|----|

PHYSICAL

| | | | | |
|-----------------|-------------|----|-------------|-------|
| Weight | 0.03 | oz | 0.8 | grams |
| Mounting | Adhesive | | Adhesive | |
| Integral Cable | 3 | ft | 914 | mm |
| Connector | 4-pin | | 4-pin | |
| Housing | Titanium | | Titanium | |
| Isolation | Case Ground | | Case Ground | |
| Sensing Element | Ceramic | | Ceramic | |
| Mode | Shear | | Shear | |

PERFORMANCE

| | | | | |
|-----------------------------|---------------|--------|---------------|-----------------------|
| Sensitivity [1], [2], ± 25% | 5 | mV/g | 0.5 | mV/m/s ² |
| Acceleration Range | 1,000 | Gpeak | 9810 | m/s ² peak |
| Frequency Range, ±5% | 0.3 to 6000 | Hz | 0.3 to 6000 | Hz |
| Frequency Range, ±10% | 0.25 to 10000 | Hz | 0.25 to 10000 | Hz |
| Linearity [4] | ± 1 | % F.S. | ± 1 | % F.S. |
| Resonance Frequency | >27 | kHz | >27 | kHz |
| Transverse Sensitivity | 6 | % | 6 | % |
| Output Impedance | 100 | Ω | 100 | Ω |
| Noise floor, Max. | 0.06 | Grms | 0.59 | m/s ² rms |

ENVIRONMENTAL

| | | | | |
|-----------------------------------|-------------|---------|------------|-------------------------|
| Maximum Shock | 3,000 | Gpeak | 29430 | m/s ² |
| Maximum Vibration | 1,500 | Gpeak | 14715 | m/s ² |
| Operating Temperature | -67 to +320 | °F | -55 to 160 | °C |
| Seal | Hermetic | | Hermetic | |
| Magnetic Sensitivity at 100 Gauss | 0.0002 | g/Gauss | 0.002 | m/s ² /Gauss |
| Base Strain Sensitivity | 0.001 | g/με | 0.01 | m/s ² /με |

ELECTRICAL

| | | | | |
|-------------------------|-------------|---------|-------------|---------|
| Compliance Voltage | +18 to +30 | VDC | +18 to +30 | VDC |
| Current Range [4] | 2 to 20 | mA | 2 to 20 | mA |
| Bias Voltage | +8 to +10 | VDC | +8 to +10 | VDC |
| Discharge Time Constant | 1.1 to 1.7 | seconds | 1.1 to 1.7 | seconds |
| Output Impedance | 100 | Ω | 100 | Ω |
| TEDS Feature [5] | IEEE 1451.4 | | IEEE 1451.4 | |

This family also includes:

| Model | Sensitivity (mV/g) | Range (Gpeak) | Resolution (Grms) | Oper. Temp(°F) | TC |
|---------|--------------------|---------------|-------------------|----------------|------------|
| 3133D1T | 10 | 500 | 0.02 | -67 to 320 | 1.1 to 1.7 |
| 3133D2T | 2 | 2,500 | 0.15 | -67 to 320 | 0.5 to 2.5 |
| 3133D4T | 0.7 | 5,000 | 0.3 | -67 to 320 | 0.5 to 2.5 |
| 3133D5T | 0.25 | 20,000 | 0.5 | -67 to 320 | 0.5 to 4.0 |

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

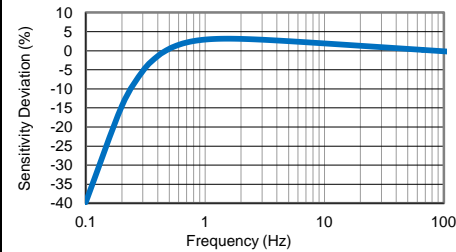
Supplied Accessories:

- 1) Model 6298 small petro wax
- 2) Model 6741 removal tool
- 3) Accredited calibration certificate (ISO 17025)

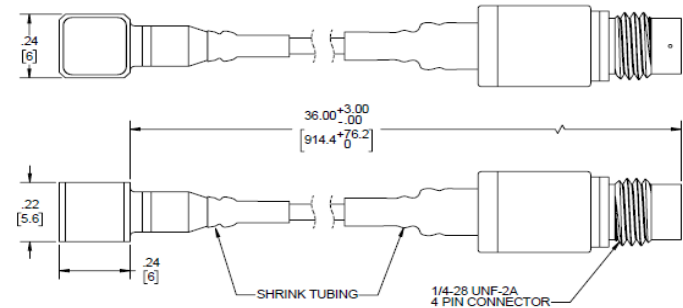
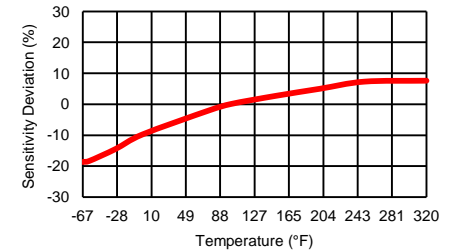
Notes:

- [1] Measured at 100 Hz, 10 Grms
- [2] Actual sensitivity is given on a calibration certificate
- [3] Do not apply power to this device without current limiting, 20mA max, to do so will destroy the integral IC amplifier
- [4] Measured using zero-based straight line method, % of F.S. or any lesser range.
- [5] TEDS operational temperature: -40° F to +185° F [-40° C to +85° C]

TYPICAL LOW FREQUENCY RESPONSE



TYPICAL TEMPERATURE RESPONSE



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3133DT for more information.

