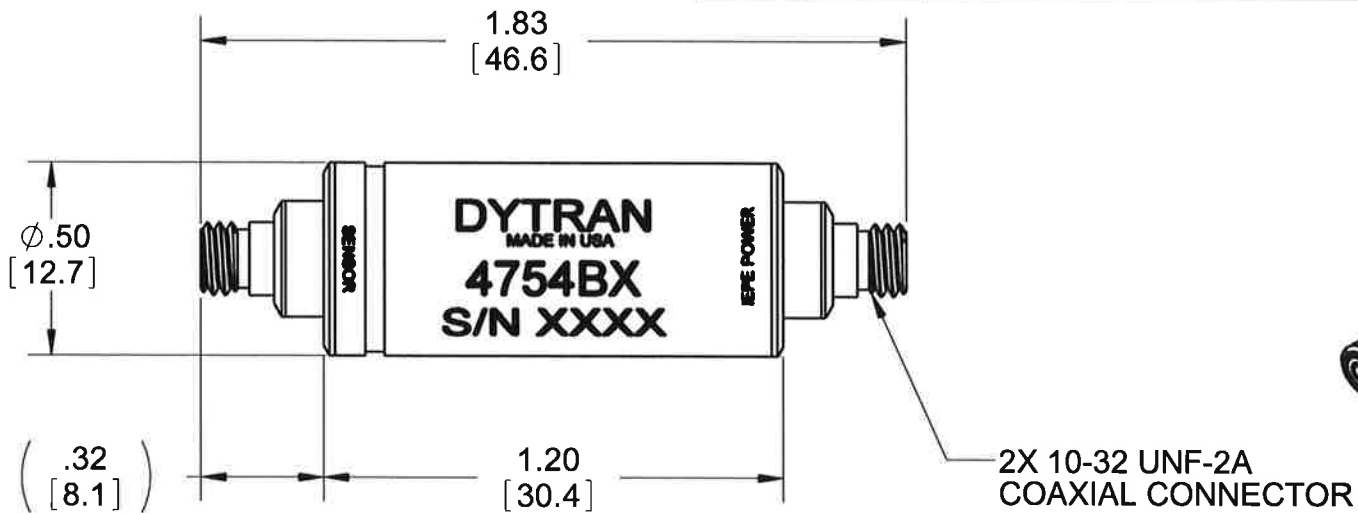


PROPRIETARY AND CONFIDENTIAL

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| REVISIONS | | | | |
|-----------|-------|-----------------------|-------------|---------------------------------------|
| REV | ECN | DESCRIPTION | BY/DATE | CHK APPR |
| A | 9021 | INITIAL RELEASE | LN 01/25/13 | JS DV |
| B | 12317 | ADDED 4754B1 & 4754B2 | LN 11/03/15 | <i>[Signature]</i> <i>[Signature]</i> |



| MODEL | SENSITIVITY |
|--------|-------------|
| 4754B | 10mV/pC |
| 4754B1 | 0.1mV/pC |
| 4754B2 | 1.0mV/pC |

- 3. SENSITIVITY: SEE TABLE
- 2. MATERIAL, HOUSING/CONNECTOR: 300 SERIES STAINLESS STEEL
- 1. WEIGHT, MAX : 17 GRAMS

NOTES: UNLESS OTHERWISE SPECIFIED

| | | | | | | | |
|--|--|---|--|---|--|---|--|
| <p>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. THDS PER MIL-S-7742. DIMENSIONS APPLY AFTER FINISHING.</p> | | <p>UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS [] ARE IN MILLIMETERS TOLERANCES ARE: INCHES METRIC ANGLES .XX ± .03 .X ± 0.8 ± 1° .XXX ± .010 .XX ± 0.25</p> | | <p>CONTRACT NO.</p> | | <p>MASTER DYTRAN ONLY IF IN RED INSTRUMENTS, INC. Chatsworth, CA</p> | |
| <p>USED ON NEXT ASSY</p> | | <p>MATERIAL</p> | | <p>APPROVALS DATE</p> | | <p>TITLE: OUTLINE/INSTALLATION DWG, IN-LINE CHARGE AMP, LOW CURRENT & IR, MODEL 4754B</p> | |
| <p>APPLICATION THIRD ANGLE PROJECTION USA</p> | | <p>FINISH</p> | | <p>ORIG LN 08/23/12</p> | | <p>SIZE CAGE CODE DWG. NO. REV</p> | |
| <p>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.</p> | | <p>DO NOT SCALE DRAWING</p> | | <p>CHK JS 01/30/13</p> | | <p>A 2W033 127-4754B B</p> | |
| | | | | <p>APP DV 06/26/13</p> | | <p>SCALE: NONE SOLIDWORKS SHEET 1 OF 1</p> | |
| | | | | <p>APP <i>[Signature]</i> 11/9/15</p> | | | |

| | | |
|-------------------------------|----------------------------------|----------------------------|
| Model Number 4754B1 | PERFORMANCE SPECIFICATION | DOC NO PS4754B1 |
| | CHARGE AMPLIFIER, IN-LINE | REV D, ECN 15185, 06/28/19 |



- **FAST TURN ON TIME**
- **HIGH TEMPERATURE SENSORS**
- **MINIATURE PACKAGE**
- **TOLERATES LOW CURRENT & LOW INSULATION RESISTANCE FROM SENSORS**

PHYSICAL

| | | ENGLISH | | SI | |
|---------------------|-----------|---------------|----|---------------|-------|
| Weight, Max | | 0.60 | oz | 17 | grams |
| Input Connector [1] | Type | 10-32 | | 10-32 | |
| Output Connector | Type | 10-32 | | 10-32 | |
| Housing | Material | 300 Series | | 300 Series | |
| | Isolation | Case Grounded | | Case Grounded | |

PERFORMANCE

| | | | | | |
|---|-----|-------------|--------|-------------|--------|
| Sensitivity, ±5% [2] | | 0.1 | mV/pC | 0.1 | mV/pC |
| Input Range | | 50,000 | pC | 50,000 | pC |
| Frequency Range, ±5% | 2mA | 5 to 40,000 | Hz | 5 to 40,000 | Hz |
| Non-Linearity [3] | | +/-1% | %F.S. | +/-1% | %F.S. |
| Noise floor (5Hz to 10kHz) | | 40 | µVrms | 40 | µVrms |
| Maximum Input Voltage | | 30 | Vp | 30 | Vp |
| Minimum Source Resistance | | 10 | kΩ | 10 | kΩ |
| Maximum Source Capacitance | | 20,000 | pF | 20,000 | pF |
| Turn on Time (within 10% of bias) | | <1 | minute | <1 | minute |
| Thermal coefficient of sensitivity, Max | | 0.01 | %/°F | 0.02 | %/°C |

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 | | 10.0 to 13.0 | VDC | 10.0 to 13.0 | VDC |
| Discharge Time Constant | | 0.1 to 0.3 | sec | 0.1 to 0.3 | sec |
| Polarity | | Inverting | | Inverting | |

ENVIRONMENTAL

| | | | | | |
|--|--|-------------|-------------------|------------|-------------------|
| Shock Max | | 2000 | g pk | 19620 | m/s^2 |
| Vibration Max | | 300 | g pk | 2943 | m/s^2 |
| Operating Temperature | | -40 to +185 | °F | -40 to +85 | °C |
| Seal | | HERMETIC | | HERMETIC | |
| Radiation Exposure Limit (Integrated Neutron Flux) | | 1.0E+10 | N/cm ² | 1.0E+10 | N/cm ² |
| Radiation Exposure Limit (Integrated Gamma Flux) | | 1.0E+06 | rad | 1.0E+06 | rad |

This family also includes:

| Model | Sensitivity (mV/pC) | Range (pC) | Resolution (µVrms) | Oper. Temp(°F) | TC |
|--------|---------------------|------------|--------------------|----------------|------------|
| 4754B | 10 | 500 | 40 | -40 to +185 | 0.1 to 0.3 |
| 4754B2 | 1 | 5,000 | 40 | -40 to +185 | 0.1 to 0.3 |

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

Supplied Accessories:

1) Accredited calibration certificate (ISO 17025)

Notes:

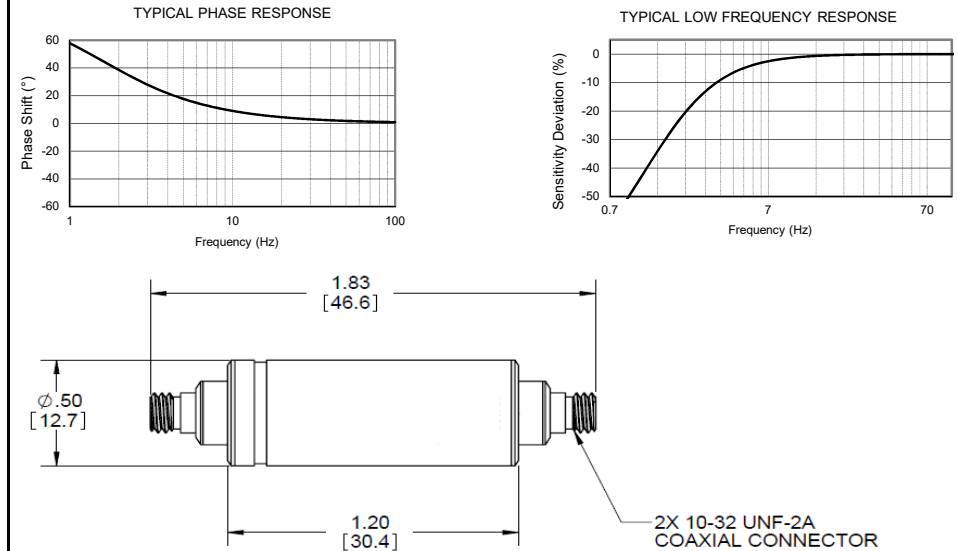
[1] Glass to metal seal connector, type 10-32 coaxial receptacle.

[2] Measured at 100 Hz, 1000 pF input.

[3] Percent of full scale or any lesser range, zero based best-fit straight line method.

[4] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the integral IC 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 127-4754B for more information.



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