


| Model Number  |            | PERFORMANCE SPECIFICATIONS  |            |                   |                            | DOC NO                     |  |
|---|------------|---|------------|-------------------|----------------------------|----------------------------|--|
| 3023A2  |            | TRI AXIAL IEPE ACCELEROMETER  |            |                   |                            | PS3023A2                   |  |
|   |            |   |            |                   |                            | REV G, ECN 14529, 09/24/18 |  |
|  |            | <ul style="list-style-type: none"><li>• STUD MOUNT</li><li>• EXCELLENT LINEARITY</li><li>• ULTRA LOW WEIGHT</li></ul> |            |                   |                            |                            |  |
| <b>PHYSICAL</b>   |            | ENGLISH   |            | SI                |                            |                            |  |
| Weight, Max.  |            | 0.14  | oz         | 4.0               | grams                      |                            |  |
| Connector   |            | 4- PIN  |            | 4- PIN            |                            |                            |  |
| Mounting Provision  |            | 10-32 Tapped Hole   |            | 10-32 Tapped Hole |                            |                            |  |
| Material, Housing/Connector   |            | Titanium Alloy  |            | Titanium Alloy    |                            |                            |  |
| Sensing Element   |            | Quartz  |            | Quartz            |                            |                            |  |
| Element Style   |            | Shear   |            | Shear             |                            |                            |  |
| <b>PERFORMANCE</b>  |            |   |            |                   |                            |                            |  |
| Sensitivity, -10 / +15% [1]   |            | 10  | mV/g       | 1                 | mV/m/s <sup>2</sup>        |                            |  |
| Range for ± 5 Volts Output  |            | ±500  | g          | ±4903             | m/s <sup>2</sup>           |                            |  |
| Frequency Response, -5/+15%   | 1 & 2 Axis | 1.5 to 4000   | Hz         | 1.5 to 4000       | Hz                         |                            |  |
|   | 3 Axis     | 1.5 to 10000  | Hz         | 1.5 to 10000      | Hz                         |                            |  |
| Resonant Frequency  |            | > 40  | kHz        | > 40              | kHz                        |                            |  |
| Broad Band Resolution [6]   |            | 0.007   | Grms       | 0.069             | m/s <sup>2</sup> rms       |                            |  |
| Spectral Noise  | 1.25Hz     | 0.003   | Grms/v(Hz) | 0.029             | m/s <sup>2</sup> rms/v(Hz) |                            |  |
|   | 10Hz       | 0.001   | Grms/v(Hz) | 0.0098            | m/s <sup>2</sup> rms/v(Hz) |                            |  |
|   | 100Hz      | 0.0002  | Grms/v(Hz) | 0.00196           | m/s <sup>2</sup> rms/v(Hz) |                            |  |
|   | 1000Hz     | 0.00005   | Grms/v(Hz) | 0.00049           | m/s <sup>2</sup> rms/v(Hz) |                            |  |
|   | 10000Hz    | 0.00004   | Grms/v(Hz) | 0.00039           | m/s <sup>2</sup> rms/v(Hz) |                            |  |
| Linearity [2]   |            | 1   | % F.S.     | 1                 | % F.S.                     |                            |  |
| Maximum Transverse Sensitivity  |            | 6   | %          | 6                 | %                          |                            |  |
| Strain Sensitivity @ 250µε  |            | 0.006   | g/µε       | 0.06              | m/s <sup>2</sup> /µε       |                            |  |
| Signal Polarity   |            | [5]   |            | [5]               |                            |                            |  |
| <b>ENVIRONMENTAL</b>  |            |   |            |                   |                            |                            |  |
| Maximum Vibration   |            | ±600  | Gpeak      | ±5884             | m/s <sup>2</sup> peak      |                            |  |
| Maximum Shock   |            | 5000  | Gpeak      | 49033             | m/s <sup>2</sup> peak      |                            |  |
| Temperature Range   |            | -60 to +250   | °F         | -51 to +121       | °C                         |                            |  |
| Seal  |            | Hermetic  |            | Hermetic          |                            |                            |  |
| Magnetic Sensitivity at 100 Gauss   |            | 0.00005   | g/Gauss    | 4.905             | m/s <sup>2</sup> /T        |                            |  |
| <b>ELECTRICAL</b>   |            |   |            |                   |                            |                            |  |
| Supply Current Range [3]  |            | 2 to 20   | mA         | 2 to 20           | mA                         |                            |  |
| Compliance Voltage Range  |            | 18 to 30  | Volts      | 18 to 30          | Volts                      |                            |  |
| Output Impedance, Typ   |            | 100   | Ω          | 100               | Ω                          |                            |  |
| Bias Voltage  |            | 7 to 11   | VDC        | 7 to 11           | VDC                        |                            |  |
| Discharge Time Constant   |            | 0.3 - 1.5   | Sec        | 0.3 - 1.5         | Sec                        |                            |  |
| Electrical Isolation  |            | Case Grounded   | GΩ, min    | Case Grounded     | GΩ, min                    |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |
|   |            |   |            |                   |                            |                            |  |

# This family also includes:

| Model  | Sensitivity (mV/g) | Frequency Response (Hz)   | Mounting          | Operating Temp (°F) |
|--------|--------------------|---------------------------|-------------------|---------------------|
| 3023A  | 10 (-10 to +15%)   | 1.5 to 10000 (-5 to +15%) | Adhesive          | -60 to +250         |
| 3023A1 | 10 (-10 to +15%)   | 1.5 to 10000 (-5 to +15%) | 5-40 Tapped Hole  | -60 to +250         |
| 3023A3 | 5 (-10 to +15%)    | 1.5 to 10000 (-5 to +15%) | Adhesive          | -60 to +250         |
| 3023A4 | 5 (-10 to +15%)    | 1.5 to 10000 (-5 to +15%) | 5-40 Tapped Hole  | -60 to +250         |
| 3023A5 | 1 (±5%)            | 1.5 to 10000 (-5 to +15%) | Adhesive          | -60 to +250         |
| 3023A6 | 5 (-10 to +15%)    | 1.5 to 10000 (-5 to +15%) | 10-32 Tapped Hole | -60 to +250         |
| 3023A9 | 1 (±10%)           | 1.5 to 10000 (-5 to +15%) | 10-32 Tapped Hole | -60 to +250         |

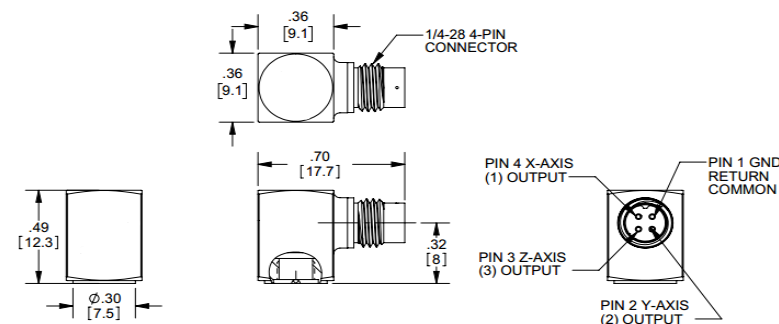
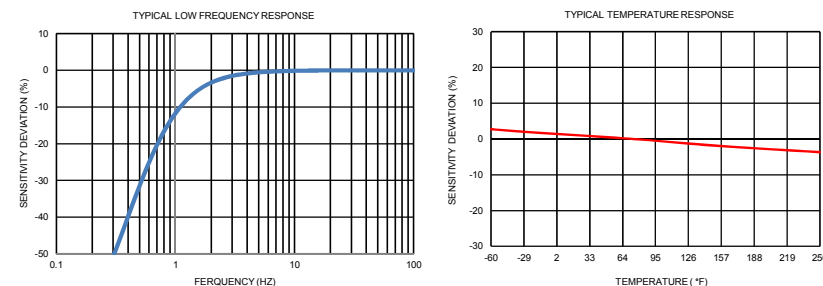
Refer to the performance specifications of the products in this family for detailed description

# Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) Model 6200 Mounting Stud, Quantity 1

# Notes:

- [1] Measured at 100Hz, 1 Grms per ISA RP 37.2.
- [2] Measure using zero-based straight line method, % of F.S. or any lesser range.
- [3] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the IC charge amplifier.
- [4] In the interest of constant product improvement, we reserve the right to change specifications without notice.
- [5] Positive for motion in direction of arrows on housing.
- [6] Typical. Not to exceed .010 Grms [.10 m/s<sup>2</sup>].



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3023A2 for more information.