Preliminary

Piezo resistive Accelerometer
BST 18C Uniaxial

Features
- DC Response
- High Shock
- Calibration
- Meets SAE J211
- Aluminium Housing
- Small Size

Application
- Crash Test
- Fatter Test
- Slid Test

Dimensions

Description
The new model BST 18C is a uniaxial accelerometer based on piezo resistive technology. With the fully Wheatstone-Bridge (4 wire system) configuration helps to connect the sensor on all data acquisition systems. The light weight and small size of the sensor makes it easy to mount it on difficult positions at the car for a crash test, slid test or for flatter test application.

Do to the anodized aluminium housing with a 4-pin Com connector is to mount with a mounting stud M4 on difficult positions. With the 6m, very rugged, shielded and flexible 4-wire cable are all common connectors are mountable. As an option, we supply the sensor with a Dallas ID and a Shunt resistor in the connector.

A calibration for the sensor is obligatory.
## Preliminary

### Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>100</th>
<th>200</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range (g)</td>
<td>100</td>
<td>200</td>
<td>500</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>Sensitivity (mV/V/g)</td>
<td>0.1</td>
<td>0.06</td>
<td>0.04</td>
<td>0.018</td>
<td>0.016</td>
</tr>
<tr>
<td>Frequency 5% (Hz)</td>
<td>1000</td>
<td>1100</td>
<td>1800</td>
<td>2750</td>
<td>3000</td>
</tr>
<tr>
<td>Resonance Frequency (kHz)</td>
<td>&gt;6</td>
<td>&gt;8</td>
<td>&gt;13</td>
<td>&gt;18</td>
<td>&gt;20</td>
</tr>
<tr>
<td>Damping ratio</td>
<td>0.4</td>
<td>0.4</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Shock limit (g)</td>
<td>4000</td>
<td>4000</td>
<td>6000</td>
<td>8000</td>
<td>8000</td>
</tr>
</tbody>
</table>

Supply voltage: 3 to 10 VDC constant
Zero measurement output: +/- 50 mV
Thermal Shift Zero: < +/- 0.05 % FSO (0° to 50° C)
Thermal Shift Span: - 0.2 % /°C +/- 0.05 (0° to 50° C)
Operation Temperature: -20° to 80° C
Resonance Frequency (kHz): >6 >8 >13 >18 >20
Damping ratio: 0.4 0.4 0.7 0.7 0.7
Shock limit (g): 4000 4000 6000 8000 8000

All data are typical at 24°C and 10 Vdc supply.

### Diagram

- Ex -
- Sig -
- Ex +
- Sig +

### Cable Code

- Red = Excitation +
- Green = Signal +
- Black = Excitation -
- White = Signal -

### Order information

- BST 18C-1000-6Z
  - 18C = Model Name
  - 1000 = Range 1000g
  - 6 = 6 m cable
  - Z = no connector