



Model 66203RPZ1

Low cost embeddable accelerometer, 3-wire, MircoPower, 50 mV/g, low profile TO5 housing, positive output, header pins

Installation and Operating Manual

**For assistance with the operation of this product,
contact the PCB Piezotronics, Inc.**

**Toll-free: 800-959-4464
24-hour SensorLine: 716-684-0001
Fax: 716-684-3823
E-mail: imi@pcb.com
Web: www.imi-sensors.com**



Model Number
66203RPZ1

3 WIRE LOW POWER EMBEDDABLE INDUSTRIAL ACCELEROMETER

Revision: NR
ECN #: 54702

Performance

| | | | |
|------------------------------|---------------|----------------------------|--------|
| Sensitivity($\pm 20\%$) | 50 mV/g | 5.1 mV/(m/s ²) | [1][2] |
| Measurement Range | ± 25 g | ± 245 m/s ² | |
| Frequency Range(± 3 dB) | 1 to 12.5k Hz | 1 to 12.5k Hz | [3][4] |
| Resonant Frequency | > 25 kHz | > 25 kHz | [4] |
| Broadband Resolution | 550 μ g | 5.4 mm/s ² | [5] |
| Non-Linearity | $\leq 1\%$ | $\leq 1\%$ | [6] |
| Transverse Sensitivity | $\leq 7\%$ | $\leq 7\%$ | |

Environmental

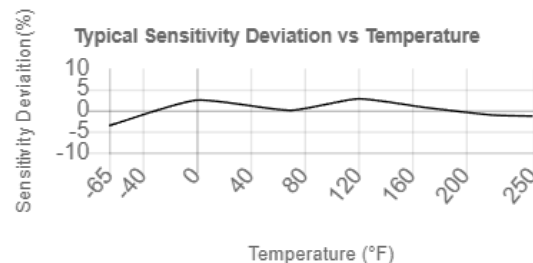
| | | | |
|------------------------------|----------------|-------------------------|-----|
| Overload Limit(Shock) | 5,000 g pk | 49k m/s ² pk | |
| Temperature Range(Operating) | -65 to +250 °F | -54 to +121 °C | |
| Temperature Response | See Graph | See Graph | [5] |

Electrical

| | | | |
|--|--------------------------------|---|-----|
| Settling Time(Within 10% of the output bias) | 350 μ s | 350 μ s | [5] |
| Discharge Time Constant | ≥ 0.16 sec | ≥ 0.16 sec | |
| Excitation Voltage | 3 to 5.5 VDC | 3 to 5.5 VDC | |
| Output Impedance | < 1,000 Ohm | < 1,000 Ohm | |
| Current Draw | 60 μ A | 60 μ A | [5] |
| Output Bias Voltage($\pm 5\%$) | 1.5 VDC | 1.5 VDC | |
| Spectral Noise(10 Hz) | 35 μ g/ $\sqrt{\text{Hz}}$ | 343 ($\mu\text{m/sec}^2$)/ $\sqrt{\text{Hz}}$ | [5] |
| Spectral Noise(100 Hz) | 12 μ g/ $\sqrt{\text{Hz}}$ | 118 ($\mu\text{m/sec}^2$)/ $\sqrt{\text{Hz}}$ | [5] |
| Spectral Noise(1 kHz) | 6 μ g/ $\sqrt{\text{Hz}}$ | 59 ($\mu\text{m/sec}^2$)/ $\sqrt{\text{Hz}}$ | [5] |

Physical

| | | |
|--------------------------------|---------------------|---------------------|
| Size (Lip Diameter x Height) | 0.36 x 0.38 in | 9.1 mm x 9.7 mm |
| Weight | 0.1 oz | 3 gm |
| Mounting | Adhesive/Solder | Adhesive/Solder |
| Sensing Element | Ceramic | Ceramic |
| Sensing Geometry | Shear | Shear |
| Housing Material | Stainless Steel | Stainless Steel |
| Sealing | Welded Hermetic | Welded Hermetic |
| Electrical Connector | Header Pins | Header Pins |
| Electrical Connection Position | Bottom | Bottom |
| Electrical Connections(Pin 1) | Acceleration Output | Acceleration Output |
| Electrical Connections(Pin 2) | Case | Case |
| Electrical Connections(Pin 3) | Neg (-) Ground | Neg (-) Ground |
| Electrical Connections(Pin 4) | Pos (+) Power | Pos (+) Power |



CE
UK
CA^[7]

All specifications are at room temperature unless otherwise specified.
In the interest of constant product improvement, we reserve the right to change specifications without notice.

OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

NOTES:

- [1]Positive output along Z-axis (in upward direction when pin mounted).
- [2]Conversion Factor $1g = 9.81 \text{ m/s}^2$.
- [3]The high frequency tolerance is accurate within $\pm 10\%$ of the specified frequency.
- [4]Performance depends on mounting
- [5]Typical.
- [6]Zero-based, least-squares, straight line method.
- [7]See PCB Declaration of Conformance PS274 for details

SUPPLIED ACCESSORIES:

Model ICS-2 NIST-traceable single-point amplitude response calibration at 6000 cpm (100 Hz) for each axis (1)

| | | | | |
|------------------|------------------|------------------|------------------|--------------|
| Entered: ND | Engineer: LAB | Sales: JL | Approved: NJF | Spec Number: |
| Date: 04/17/2024 | Date: 04/17/2024 | Date: 04/17/2024 | Date: 04/17/2024 | 78685 |

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2

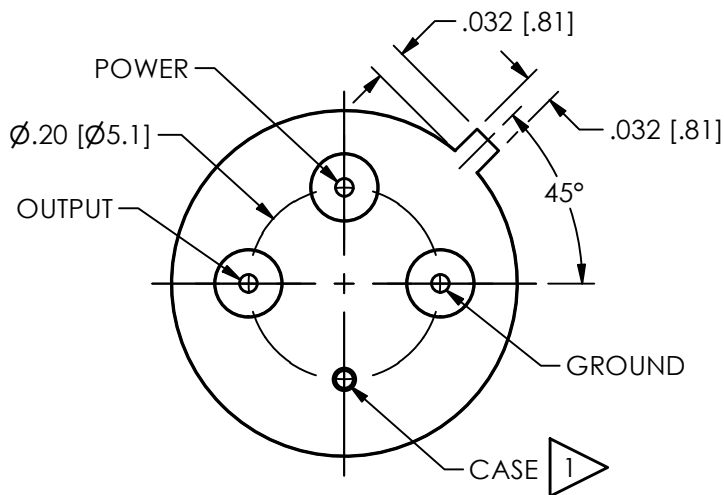
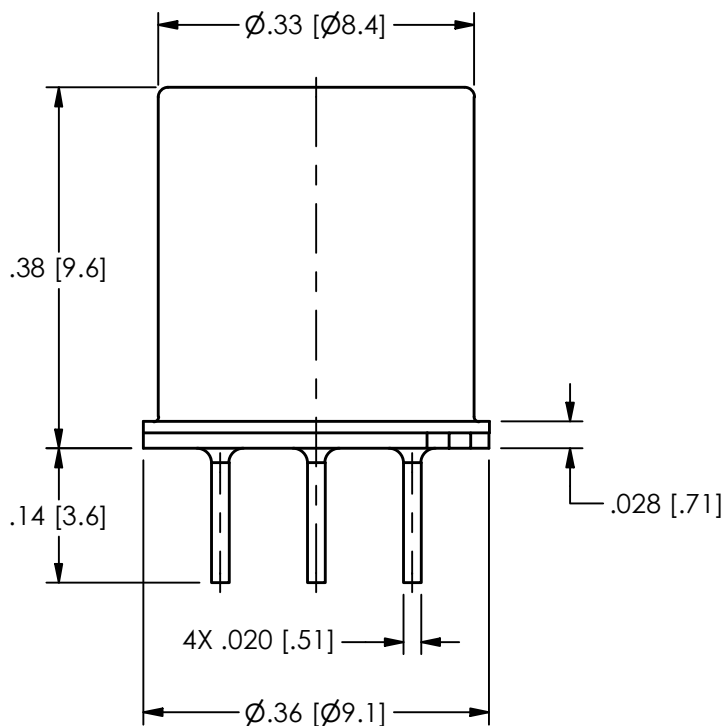
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REVISIONS

| REV | DESCRIPTION | DIN |
|-----|------------------------------|-------|
| A | ADD FIELD NOTE 1 TO CASE PIN | 55601 |

78683



1 DO NOT CONNECT CASE TO ANY OTHER CONNECTION POINT INCLUDING GROUND OR EARTH GROUND

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

DRAWN

CHECKED

ENGINEER



PCB PIEZOTRONICS
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CODE IDENT. NO. 52681

SIZE A

DWG. NO. 78683

SCALE: 5X

SHEET 1 OF 1

DIMENSIONS IN INCHES
DECIMALS XX ±.03
XXX ±.010
ANGLES ± 2 DEGREES

DIMENSIONS IN MILLIMETERS
[IN BRACKETS]
DECIMALS X ± 0.8
XX ± 0.25
ANGLES ± 2 DEGREES

CABLE TOLERANCES IN ENGLISH
1" ≤ LENGTH < 1' = +1" / - 0
1' ≤ LENGTH < 5' = +2" / - 0
5' ≤ LENGTH < 100' = +6" / - 0
100' ≤ LENGTH = +1' / - 0

CABLE TOLERANCES IN METRIC
2.54cm ≤ LENGTH < 30.5cm = +2.54cm / - 0
30.5cm ≤ LENGTH < 1.5m = +5.1cm / - 0
1.5m ≤ LENGTH < 30.5m = +15.2cm / - 0
30.5m ≤ LENGTH = +30.5cm / - 0

FILLETS AND RADII
.003 - .005

FILLETS AND RADII
0.07 - 0.13

TITLE
OUTLINE DRAWING
MODEL 660 SERIES
LOW POWER 3-WIRE ACCELEROMETER

2

1