



## **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  
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Model Number  
66203RPZ1

## 3 WIRE LOW POWER EMBEDDABLE INDUSTRIAL ACCELEROMETER

Revision: NR  
ECN #: 54702

### Performance

	ENGLISH	SI	
Sensitivity( $\pm 20\%$ )	50 mV/g	5.1 mV/(m/s <sup>2</sup> )	[1][2]
Measurement Range	$\pm 25\text{ g}$	$\pm 245\text{ m/s}^2$	
Frequency Range( $\pm 3\text{ dB}$ )	1 to 12.5 kHz	1 to 12.5 kHz	[3][4]
Resonant Frequency	> 25 kHz	> 25 kHz	[4]
Broadband Resolution	550 $\mu\text{g}$	5.4 mm/s <sup>2</sup>	[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 <sup>2</sup> 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 $\mu\text{s}$	350 $\mu\text{s}$	[5]
Discharge Time Constant	$\geq 0.16\text{ sec}$	$\geq 0.16\text{ sec}$	
Excitation Voltage	3 to 5.5 VDC	3 to 5.5 VDC	
Output Impedance	< 1,000 Ohm	< 1,000 Ohm	
Current Draw	60 $\mu\text{A}$	60 $\mu\text{A}$	[5]
Output Bias Voltage( $\pm 5\%$ )	1.5 VDC	1.5 VDC	
Spectral Noise(10 Hz)	35 $\mu\text{g}/\sqrt{\text{Hz}}$	343 ( $\mu\text{m/sec}^2$ )/ $\sqrt{\text{Hz}}$	[5]
Spectral Noise(100 Hz)	12 $\mu\text{g}/\sqrt{\text{Hz}}$	118 ( $\mu\text{m/sec}^2$ )/ $\sqrt{\text{Hz}}$	[5]
Spectral Noise(1 kHz)	6 $\mu\text{g}/\sqrt{\text{Hz}}$	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)	Case	Case	
Electrical Connections(Pin 2)	Neg (-) Ground	Neg (-) Ground	
Electrical Connections(Pin 3)	Pos (+) Power	Pos (+) Power	
Electrical Connections(Pin 4)			

### 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 m/s<sup>2</sup>.
- [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:

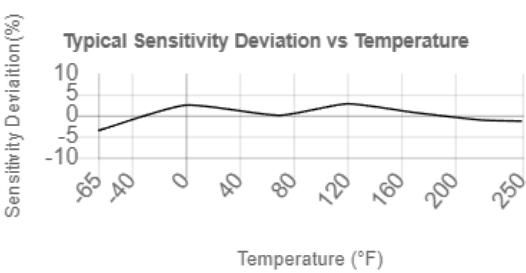
Date: 04/17/2024    Date: 04/17/2024    Date: 04/17/2024    Date: 04/17/2024    78685



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CA [7]



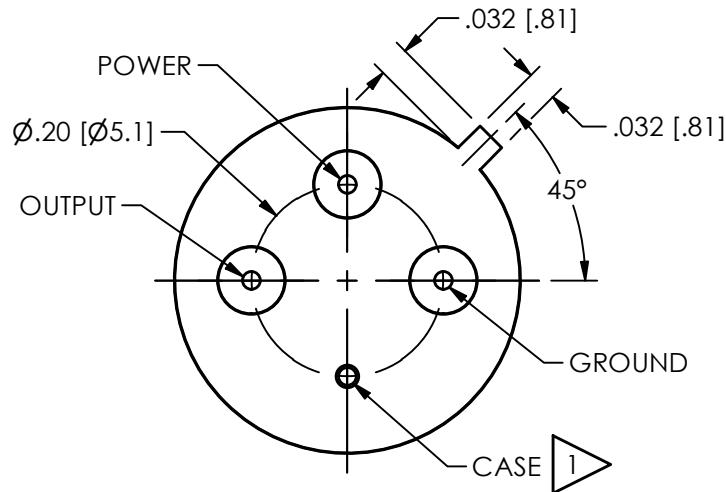
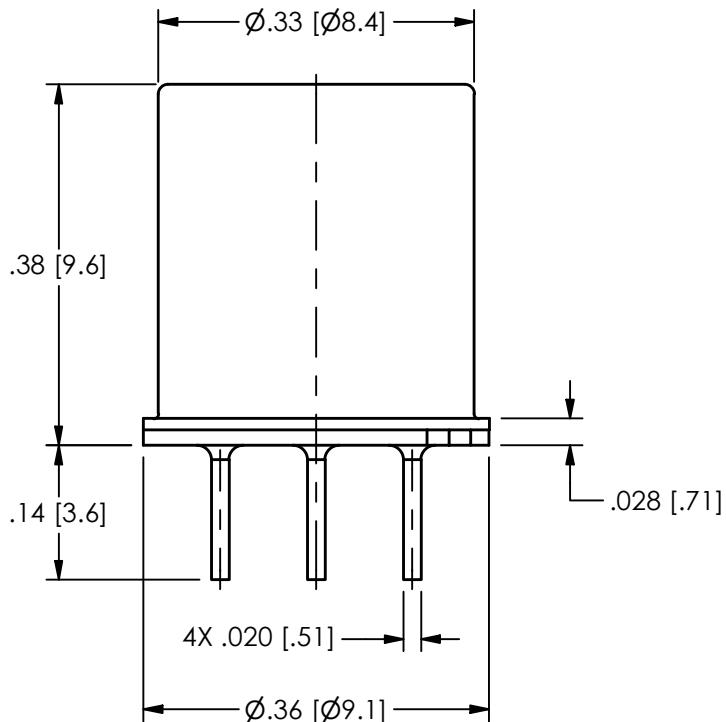
All specifications are at room temperature unless otherwise specified.  
In the interest of constant product improvement, we reserve the right to change specifications without notice.

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## REVISIONS

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



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

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		DRAWN		CHECKED		ENGINEER			
DIMENSIONS IN INCHES		DIMENSIONS IN MILLIMETERS [IN BRACKETS]		AME	5/1/25	JDM	5/1/25	LAB	5/1/25
DECIMALS XX ±.03 XXX ±.010 ANGLES ± 2 DEGREES		DECIMALS X ± 0.8 XX ± 0.25 ANGLES ± 2 DEGREES		TITLE OUTLINE DRAWING MODEL 660 SERIES LOW POWER 3-WIRE ACCELEROMETER					
CABLE TOLERANCES IN ENGLISH		CABLE TOLERANCES IN METRIC							
1" ≤ LENGTH < 1'		= +1" / -0		2.54cm ≤ LENGTH < 30.5cm	= +2.54cm / -0	CODE IDENT. NO. 52681			
1' ≤ LENGTH < 5'		= +2" / -0		30.5cm ≤ LENGTH < 15.2cm	= +5.1cm / -0				
5' ≤ LENGTH < 100'		= +6" / -0		1.5m ≤ LENGTH < 30.5m	= +15.2cm / -0	SIZE DWG. NO. A			
100' ≤ LENGTH		= +1" / -0		30.5m ≤ LENGTH	= +30.5cm / -0				
FILLETS AND RADII		FILLETS AND RADII		SCALE: 5X					
.003 - .005		.07 - 0.13							SHEET 1 OF 1

 **PCB PIEZOTRONICS**  
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CODE  
IDENT. NO.  
52681

SIZE  
DWG. NO.  
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