



Model 66213RPZ1

Low cost embeddable accelerometer, 3-wire, MicroPower, 100 mV/g, 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
66213RPZ1

3 WIRE LOW POWER EMBEDDABLE INDUSTRIAL ACCELEROMETER

Revision: NR
ECN #: 54702

Performance

Sensitivity($\pm 20\%$)	100 mV/g	10.2 mV/(m/s ²)	[1][2]
Measurement Range	± 12.5 g	± 123 m/s ²	
Frequency Range(± 3 dB)	2 to 12.5k Hz	2 to 12.5k Hz	[3][4]
Resonant Frequency	> 25 kHz	> 25 kHz	[4]
Broadband Resolution	400 μ g	3.9 mm/s ²	[5]
Non-Linearity	$\leq 1\%$	$\leq 1\%$	[6]
Transverse Sensitivity	$\leq 7\%$	$\leq 7\%$	

Environmental

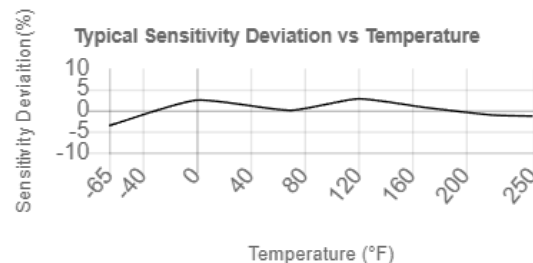
Overload Limit(Shock)	5,000 g pk	49k m/s ² pk	
Temperature Range(Operating)	-65 to +250 °F	-54 to +121 °C	
Temperature Response	See Graph	See Graph	[5]

Electrical

Settling Time(Within 10% of the output bias)	350 μ s	350 μ s	[5]
Discharge Time Constant	≥ 0.08 sec	≥ 0.08 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)	24 μ g/ $\sqrt{\text{Hz}}$	235 ($\mu\text{m/sec}^2$)/ $\sqrt{\text{Hz}}$	[5]
Spectral Noise(100 Hz)	8 μ g/ $\sqrt{\text{Hz}}$	78 ($\mu\text{m/sec}^2$)/ $\sqrt{\text{Hz}}$	[5]
Spectral Noise(1 kHz)	4 μ g/ $\sqrt{\text{Hz}}$	39 ($\mu\text{m/sec}^2$)/ $\sqrt{\text{Hz}}$	[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 m/s².
- [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	78745

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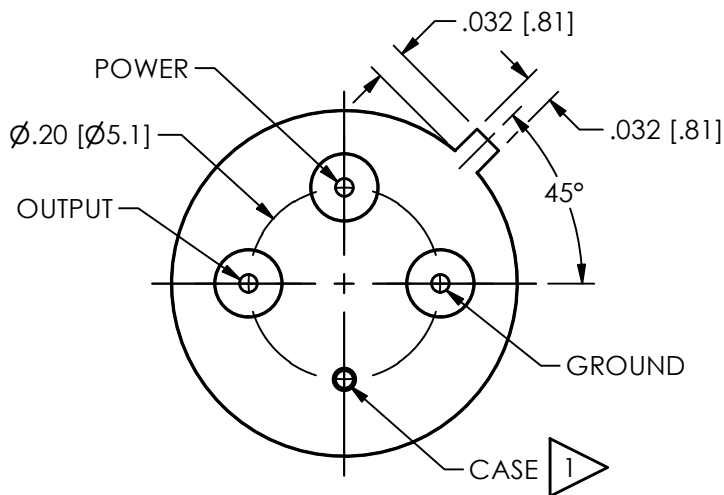
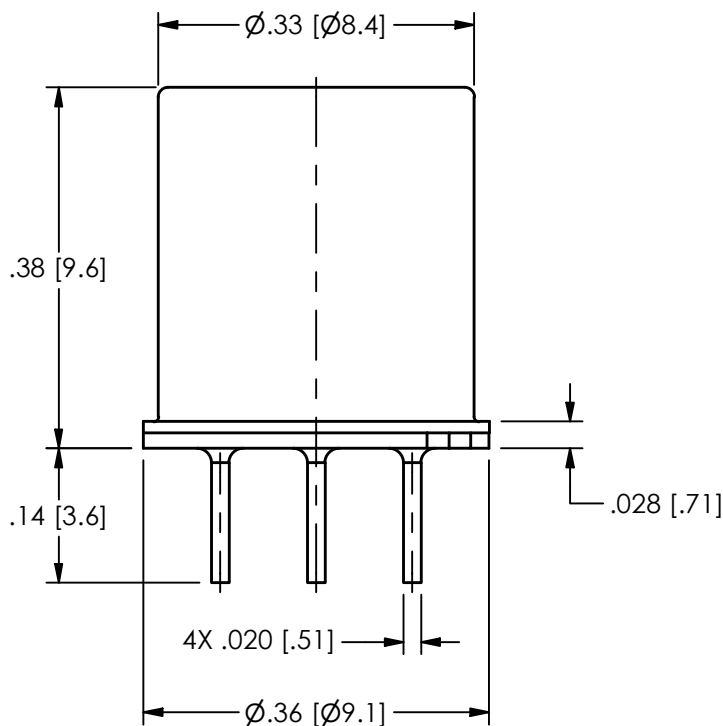
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REVISIONS

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

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