

Millivolt Output Pressure Sensors



Package A

Features

- Temperature Compensated
- Calibrated Zero and Span



Package M

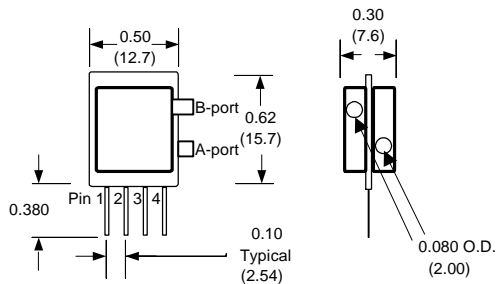
Applications

- Non Invasive Blood Pressure

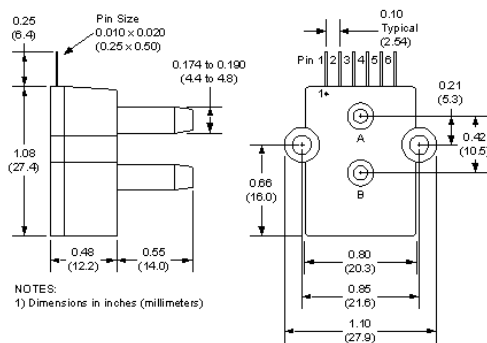
General Description

This data sheet describes two package configuration of pressure sensors for use in non invasive blood pressure measurement.

The output voltage is ratiometric to the supply voltage and is offered in either millivolt or amplified output configuration.



- pin 1: +V supply**
- pin 2: Ground**
- pin 3: +Voutput**
- pin 4: -N/C**



- pin 1: N/C**
- pin 2: +V supply**
- pin 3: +Voutput**
- pin 4: -Vsupply**
- pin 5: -Voutput**
- pin 6: N/C**



Pressure Sensor Characteristics Maximum Ratings

Supply Voltage VS	see below
Proof Pressure	1500mmHg
Lead Temperature (soldering 2-4 sec.)	250°C

Environmental Specifications

Temperature Ranges	
Compensated	10 to 50° C
Operating	-25 to 85° C
Storage	-40 to 125° C
Humidity Limits	0 to 95% RH (non condensing)

Standard Package Types

Part Number-Side Port	Package Type	Nominal Span	Supply Voltage
BP01-D-MV	A	15mV	5 volts
BP01-G-4V-MINI	M	4.2 volts	5 volts

Performance Characteristics for BP01-D-MV

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure		300		mmHg
Output Span, note 4	14.85	15.0	15.15	mV
Offset Voltage @ zero pressure		0	±5	mmHg
Offset Temperature Shift (10°C-50°C), note 2			±0.2	mmHg/°C
Linearity, hysteresis error 0 - 200 mmHg, note 3			±0.1	%fs
Linearity, hysteresis error 0 - 300 mmHg, note 3			±0.2	%fs
Span Shift (10°C-50°C), note 2			±0.5	%fs

Performance Characteristics for BP01-G-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure		300		mmHg
Output Span, note 4	4.1	4.2	4.3	V
Offset Voltage @ zero pressure	0.18	0.25	0.32	V
Offset Temperature Shift (10°C-50°C), note 2			±0.2	mmHg/°C
Linearity, hysteresis error 0 - 200 mmHg, note 3			±0.1	%fs
Linearity, hysteresis error 0 - 300 mmHg, note 3			±0.2	%fs
Span Shift (10°C-50°C), note 2			±0.5	%fs

Specification Notes

NOTE 1: ALL PARAMETERS ARE MEASURED AT ROOM TEMPERATURE UNLESS OTHERWISE SPECIFIED. PRESSURE MEASUREMENTS ARE WITH POSITIVE PRESSURE APPLIED TO PORT B.

NOTE 2: SHIFT IS RELATIVE TO 25°C READINGS TAKEN AT 10°C AND 50°C.

NOTE 3: MEASURED AT ONE-HALF FULL SCALE RATED PRESSURE USING BEST STRAIGHT LINE CURVE FIT.

NOTE 4: THE VOLTAGE ADDED TO THE OFFSET VOLTAGE AT FULL SCALE PRESSURE.

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