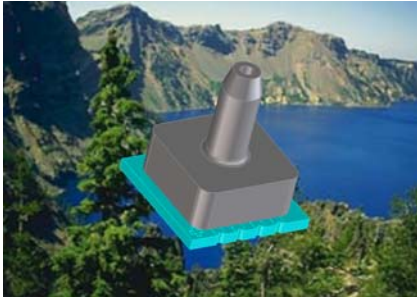


Surface Mount Basic Pressure Sensors



Features

- 0-100 psi Pressure Ranges
- 0.5 % linearity

Applications

- Medical Instrumentation
- Environmental Controls
- HVAC

General Description

The BASIC Series of pressure sensors use a silicon micromachined (MEMS) pressure sensor in the most basic configuration. The package is a ceramic surface mount configuration to provide the smallest footprint possible.

Best temperature compensation is realized when the sensor has a constant current excitation.

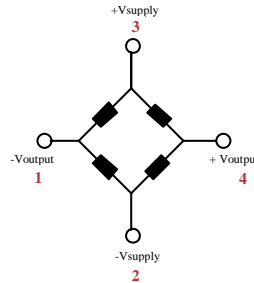
This series is intended for use with non-corrosive, non-ionic working fluids such as air, dry gases and the like.

Specifications are written for constant voltage of 3.0 volts.

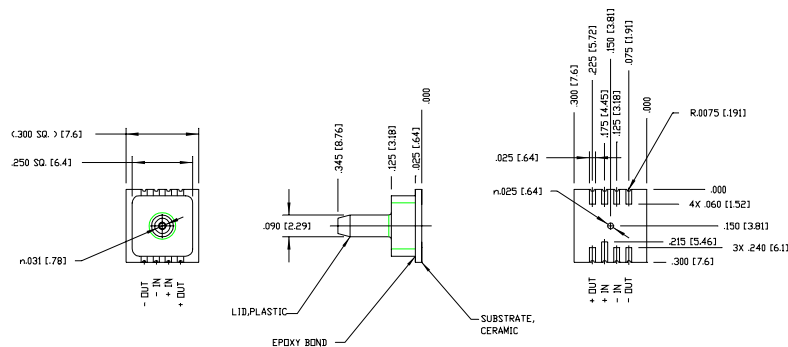
The output of the device is ratiometric to the supply voltage..

Equivalent Circuit

Input Resistance	3.3 k ohm
Output Resistance	3.3 k ohm
TCR	2600 ppm/° C
TCS	-2200 ppm/° C



Physical Dimensions



Pressure Sensor Characteristics Maximum Ratings

Supply Voltage VS	6 Vdc
Lead Temperature (soldering 2-4 sec.)	250°C

Environmental Specifications

Temperature Ranges	
Compensated	0 to 70° C
Operating	-25 to 85° C
Storage	-40 to 125° C
Humidity Limits	0 to 95% RH (non condensing)

Standard Pressure Ranges

One Port	note 1: Pressure		
Part Number	Operating Pressure	Sensitivity (mv/psi)	Proof Pressure
5 PSI-GF-BASIC-SMT	0 - 5 PSI	10.8 ± 1.8	15 PSI
15 PSI-GF-BASIC-SMT	0 - 15 PSI	5.3 ± 1.6	45 PSI
30 PSI-GF-BASIC-SMT	0 - 30 PSI	2.6 ± 0.8	100 PSI
100 PSI-GF-BASIC-SMT	0 - 100 PSI	1.05 ± 0.30	200 PSI

Common Performance Characteristic

Parameter, note 1	Minimum	Nominal	Maximum	Units
Offset Voltage			±25	mv
Temperature Effect on Offset, note 2			±2.0	% span
Temperature Effect on Resistance, note 2		2600		ppm/°C
Temperature Effect on Span, note 2		-2200		ppm/°C
Linearity, hysteresis error, note 4		0.1	±0.5	% span
Input Resistance		3.3		kohms
Output Resistance		3.3		kohms
Long term stability of span, note 3		0.1		% span

Specification Notes

NOTE 1: ALL PARAMETERS ARE MEASURED AT 3.0 VOLT EXCITATION, FOR THE NOMINAL FULL SCALE PRESSURE AND ROOM TEMPERATURE

UNLESS OTHERWISE SPECIFIED. PRESSURE MEASUREMENTS ARE WITH NEGATIVE PRESSURE TO THE SINGLE PORT CONFIGURATION.

NOTE 2: SHIFT IS RELATIVE TO 25°C.

NOTE 3: SHIFT IS WITHIN THE FIRST YEAR OF OPERATION.

NOTE 4: MEASURED AT ONE-HALF FULL SCALE RATED PRESSURE USING BEST STRAIGHT LINE CURVE FIT.

NOTE 5: THE VOLTAGE ADDED TO THE OFFSET VOLTAGE AT FULL SCALE PRESSURE.

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