



- PC Board Mountable Pressure Sensor
- 0-60 mV Output
- Voltage Excitation
- Absolute Pressure
- Low Cost
- OEM Applications

DESCRIPTION

The 50 is a piezoresistive silicon pressure sensor packaged in a TO-5 configuration. Absolute pressure ranges from 0-15 to 0-500 psi are available. It is intended for high volume applications where small size, light weight, and low cost are required. This design is intended for non-corrosive gases and is not recommended for liquids. A gel filling can be applied to provide mild protection against humidity and dust. The devices are shipped in plastic anti-static shipping tubes for use with automated production equipment. For high volume gage applications, contact the factory.

FEATURES

- T0-5 Package
- -40°C to +125°C Operating Range
- ±0.25% Pressure Non Linearity
- Solid State Reliability

APPLICATIONS

- Tire Pressure Sensor
- Consumer Appliances
- Medical Instrumentation
- Altitude Measurement
- Barometric Pressure

STANDARD RANGES

| Range | psia |
|----------|------|
| 0 to 15 | • |
| 0 to 30 | • |
| 0 to 50 | • |
| 0 to 100 | • |
| 0 to 250 | • |
| 0 to 500 | • |

PERFORMANCE SPECIFICATIONS

Supply Voltage: 3 Vdc

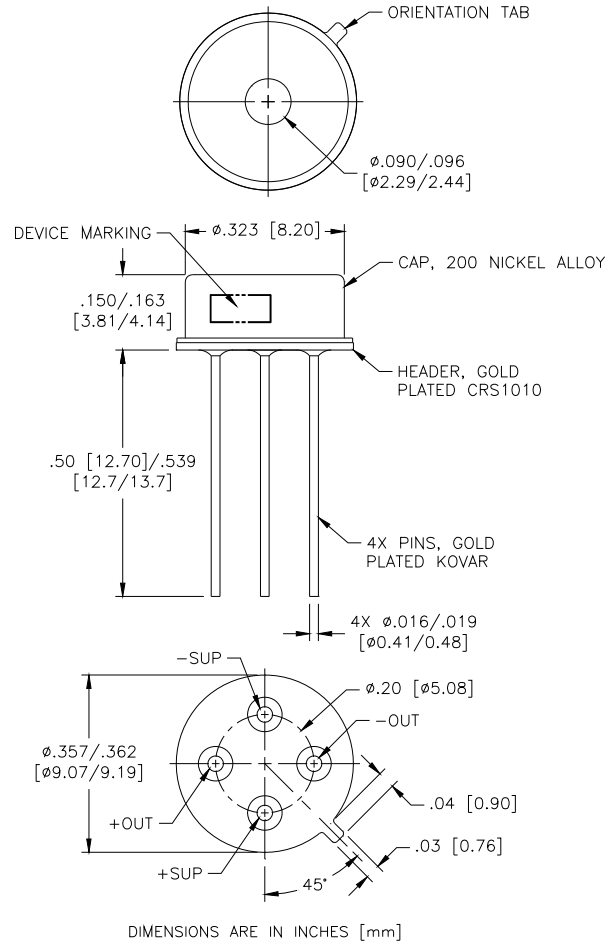
Ambient Temperature: 25°C (unless otherwise specified)

| PARAMETERS | MIN | TYP | MAX | UNITS | NOTES |
|--------------------------------------|---|-------|------|--------|-------|
| Span | 30 | 60 | 120 | mV | 1 |
| Zero Pressure Output | -25 | | 25 | mV | |
| Pressure Non Linearity | -0.25 | | 0.25 | %Span | 2 |
| Pressure Hysteresis | -0.1 | | 0.1 | %Span | |
| Input & Output Resistance | 3500 | 5000 | 6000 | Ω | |
| Temperature Coefficient – Span | | -0.13 | | %/°C | 3 |
| Temperature Coefficient – Zero | | 0.05 | | %/°C | 3 |
| Temperature Coefficient – Resistance | | 0.15 | | %/°C | 3 |
| Thermal Hysteresis – Zero | -0.2 | | 0.2 | %Span | 3 |
| Supply Voltage | | 3.0 | 12.0 | Vdc | |
| Response Time (10% to 90%) | | 1.0 | | mS | 4 |
| Output Noise (10Hz to 1kHz) | | 1.0 | | μV p-p | |
| Long Term Stability (Offset & Span) | | 0.5 | | %Span | 5 |
| Pressure Overload | | | 3X | Rated | 6 |
| Operating Temperature | -40 | | +125 | °C | |
| Storage Temperature | -50 | | +150 | °C | |
| Weight | | | 1 | grams | |
| Soldering Temperature | 250°C Max 5 Sec. | | | | |
| Media | Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Gold, Nickel, and Aluminum | | | | |

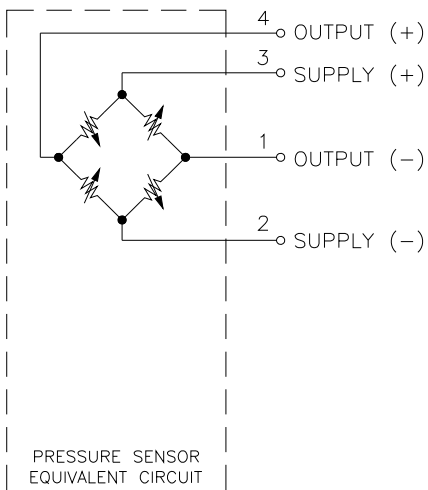
Notes

1. Ratiometric to supply voltage. For 250psi devices, the minimum span value is 25mV.
2. Best fit straight line.
3. Over the temperature range 0-50°C with respect to 25°C.
4. For a zero-to-full scale pressure step change.
5. Long term stability over a one year period with constant voltage and temperature.
6. 3X or 500 psi max.

DIMENSIONS

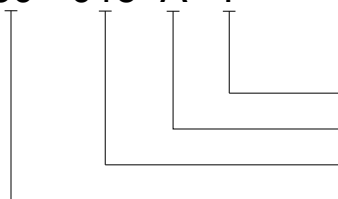


CONNECTIONS



ORDERING INFORMATION

50 - 015 A - F



Coating (F = Gel Fill, Blank = No Coating)

Type (A = Absolute)

Pressure Range

Model

NORTH AMERICA

Measurement Specialties
45738 Northport Loop West
Fremont, CA 94538
Tel: 1-800-767-1888
Fax: 1-510-498-1578
Sales: pfg.cs.amer@meas-spec.com

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