

MS4425

SPECIFICATIONS

- ◆ PC Board Mountable Pressure Sensor
- ◆ 0-100 mV Output
- ◆ Voltage Excitation
- ◆ Differential, Gage, and Absolute
- ◆ Temperature Compensated

The MS4425 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration and intended for cost sensitive applications where excellent performance and long-term stability are required.

Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. The pressure sensor is available in absolute, gage or differential pressure ranges from 0-1 to 0-300 psi. The pressure ports are 1/8" barbed ports which mate with 3/32" ID tubing. These tubes are parallel to the printed circuit board to allow other boards to be located above the sensor. For a vertical mounted tube in gage or absolute pressure, refer to the MS4426.

FEATURES

Dual-in-Line Package
0°C to 50°C Compensated
Temperature Range
±0.15% Pressure Non Linearity
Solid State Reliability

APPLICATIONS

Medical Instruments
Altitude and Airspeed Measurements
Process Control
Factory Automation
Leak Detection

STANDARD RANGES

Range	psid	psig	psia
0 to 1	+	+	
0 to 5	+	+	
0 to 15	+	+	+
0 to 30	+	+	+
0 to 50	+	+	+
0 to 100	+	+	+
0 to 150	+	+	+
0 to 300	+	+	+

PERFORMANCE SPECIFICATIONS

Supply Voltage: 12V

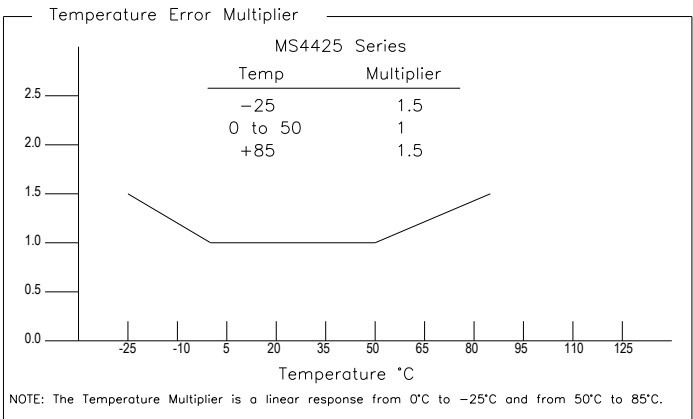
Ambient Temperature: 25°C (unless otherwise specified)

Pressure applied to Port 2

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span (0-1 psi)	17.6	18	18.4	mV	1
Span (0-5 psi)	58	60	62	mV	1
Span (0-15 to 0-50 psi)	88	90	92	mV	1
Span (0-100 & 0-300 psi)	98	100	102	mV	1
Span (0-150 psi)	148	150	152	mV	1
Zero Pressure Output	-1	±0.2	1	mV	1
Pressure Non Linearity (Gage & Absolute)	-0.15		0.15	% Span	2
Pressure Non Linearity (Differential)	-0.25		0.25	% Span	2
Pressure Hysteresis	-0.20	±0.05	0.20	% Span	
Input Resistance	5	15	25	KΩ	
Output Resistance	3500	5000	6500	Ω	
Temperature Error – Span	-1	0.3	1	% Span	3
Temperature Error – Zero	-0.75	±0.2	0.75	mV	3
Supply Voltage		12	20	V	
Long Term Stability (Offset & Span)		±0.1		mV	4
Pressure Overload (Differential)			3X	Rated	5
Common Mode Pressure			400	psi	
Compensated Temperature	0		50	°C	
Operating Temperature	-25		85	°C	
Storage Temperature	-40		125	°C	
Humidity	0		85	% RH	
Weight			3	grams	
Solder Temperature	260°C Max 5 Sec.				6
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Ceramic & Gold				

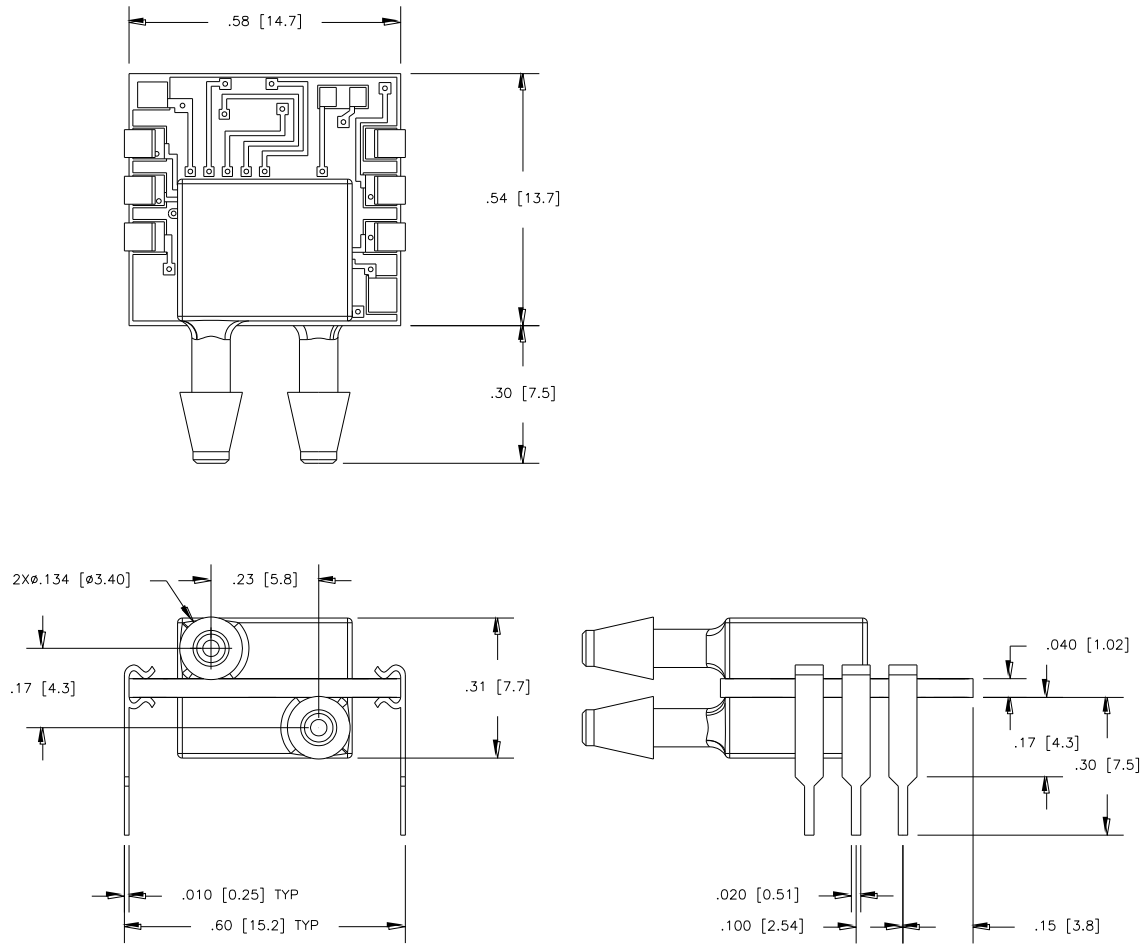
Notes

1. Ratiometric to supply voltage.
2. Best fit straight line. Non linearity for 5 psi Differential devices is 0.75%.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C. For errors beyond the compensated temperature, see Temperature Error Multiplier Chart below.
4. Long term stability over a one year period with constant voltage and temperature.
5. 3X or 400 psi max, whichever is less.
6. For more details refer to 4425/4426 Mounting Application Note.



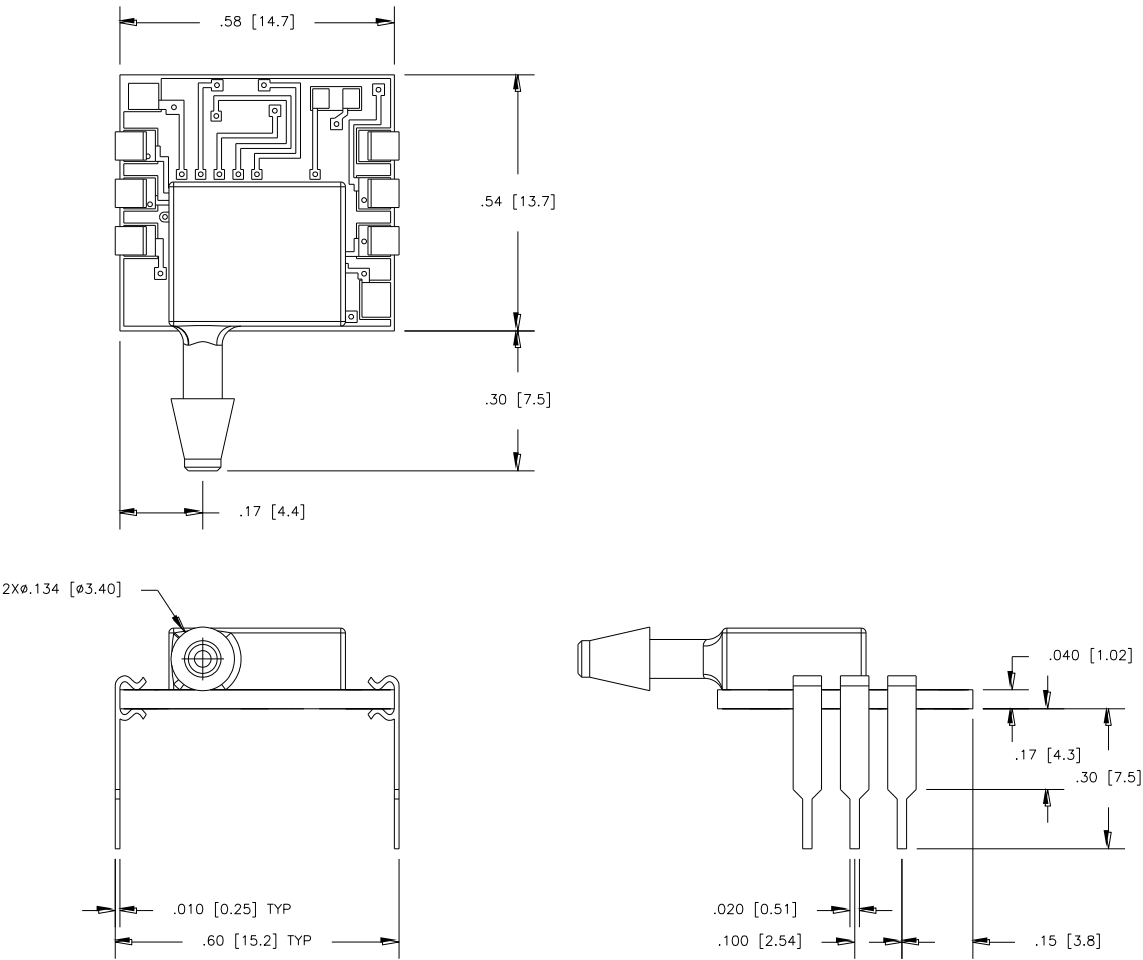
DIMENSION

DIMENSIONS ARE IN INCHES [mm]



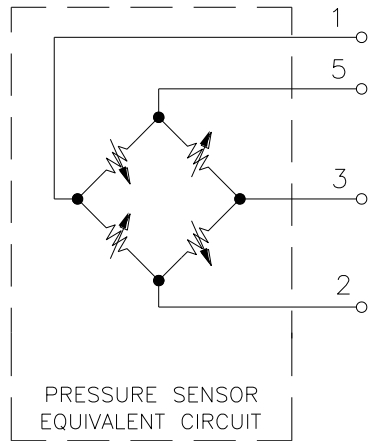
MS4425-xxxDy

DIMENSIONS ARE IN INCHES [mm]

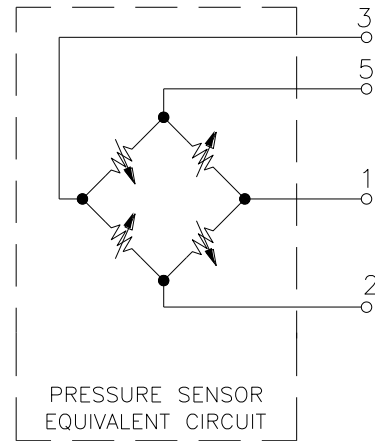


MS4425-xxxA/Gy

CONNECTIONS

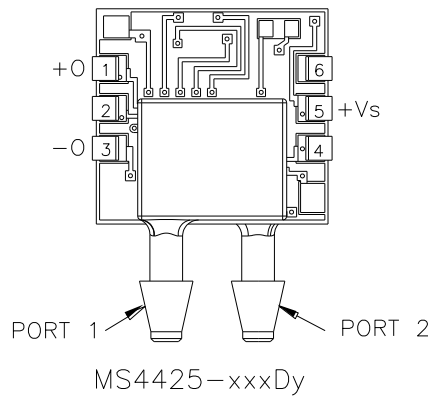


MS4425-XXXD

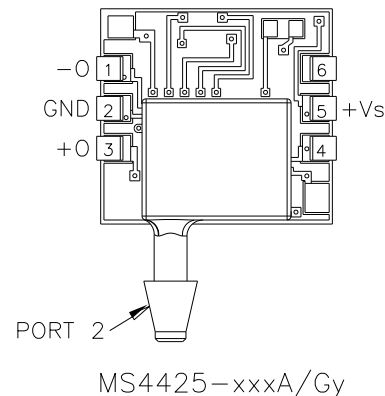


MS4425-XXXA/G

PACKAGE STYLE, PINOUT, AND PORT DESIGNATION



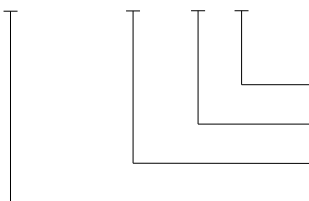
MS4425-xxxDy



MS4425-xxxA/Gy

ORDERING INFORMATION

4425 - 005 D F



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

Type (D = Differential, A = Absolute, G = Gage)

Pressure Range

Model

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