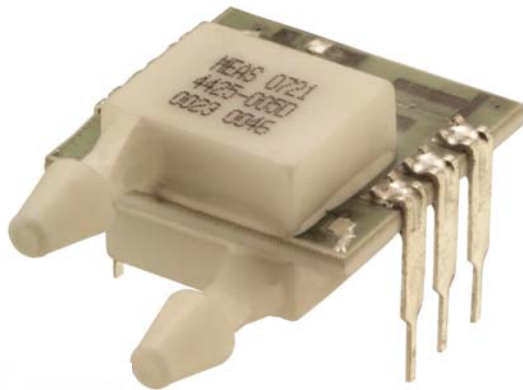


MS4425



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

DESCRIPTION

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
- $\pm 0.15\%$ 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	•	•	•

MS4425

PERFORMANCE SPECIFICATIONS

Supply Voltage: 12V

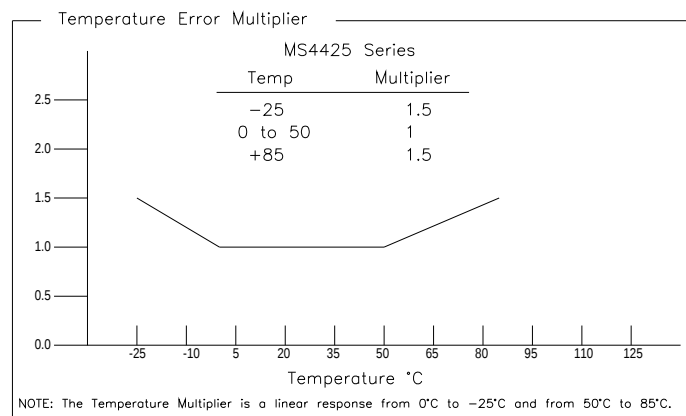
Ambient Temperature: 25°C (unless otherwise specified)

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

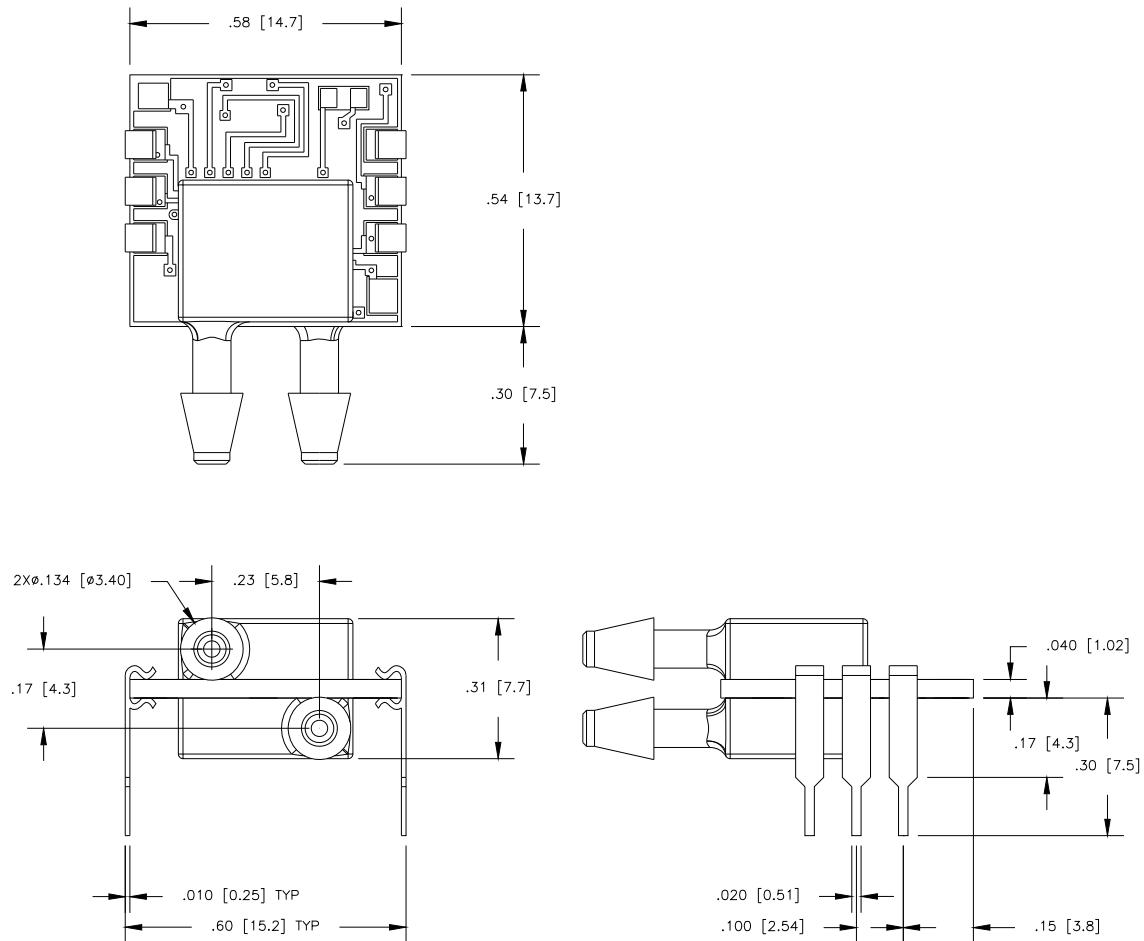
1. Ratiometric to supply voltage.
2. Best fit straight line. Non linearity for 5 psi Differential devices is 0.75%.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C. For errors beyond the compensated temperature, see Temperature Error Multiplier Chart below.
4. Long term stability 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.



MS4425

DIMENSION

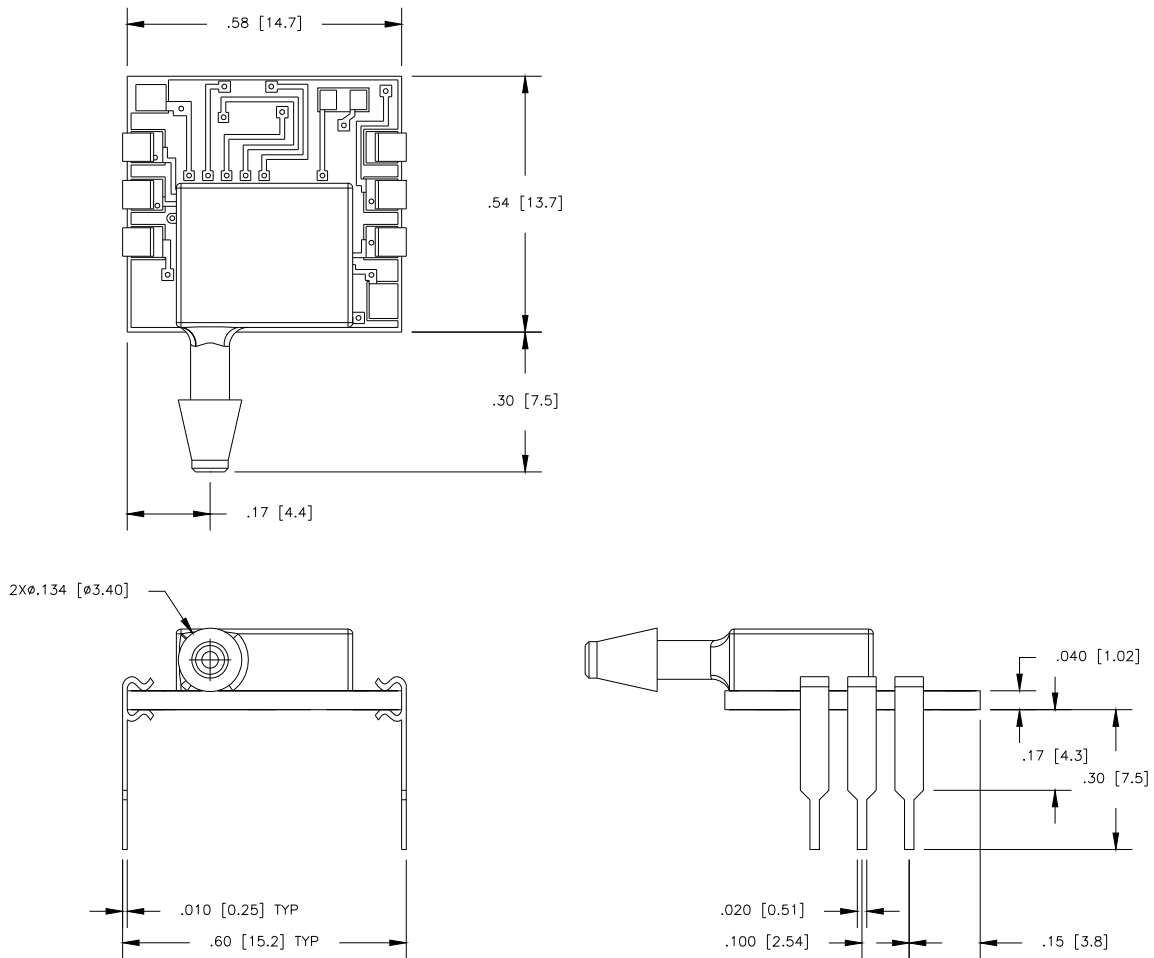
DIMENSIONS ARE IN INCHES [mm]



MS4425-xxxDy

MS4425

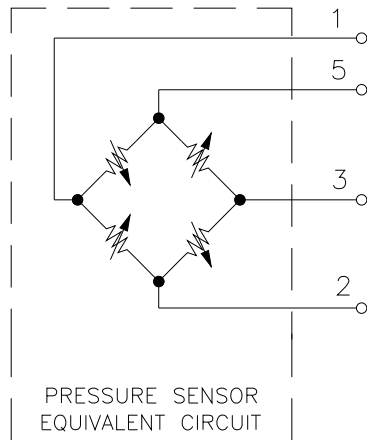
DIMENSIONS ARE IN INCHES [mm]



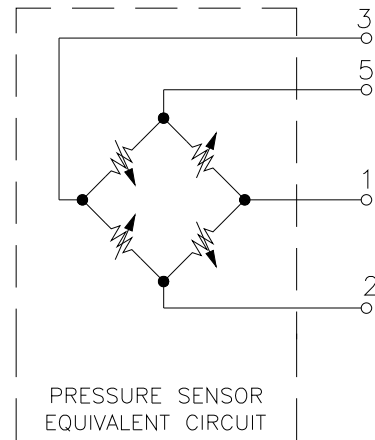
MS4425-xxxA/Gy

MS4425

CONNECTIONS

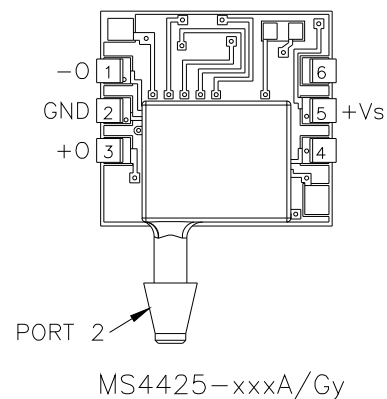
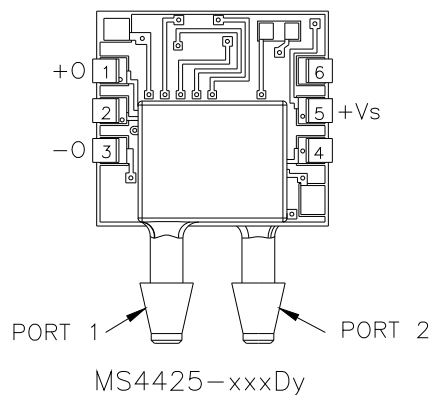


MS4425-XXxD



MS4425-XXxA/G

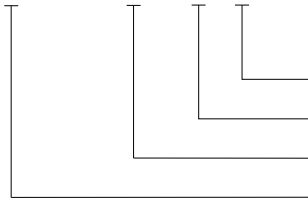
PACKAGE STYLE, PINOUT, AND PORT DESIGNATION



MS4425

ORDERING INFORMATION

4425 - 005 D F



Coating (F - Gel Fill, Blank = No Coating)
Type (D = Differential, A = Absolute, G = Gage)
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

EUROPE

Measurement Specialties
(Europe), Ltd.
26 Rue des Dames
F78340 Les Clayes-sous-Bois,
France
Tel: +33 (0) 130 79 33 00
Fax: +33 (0) 134 81 03 59
Sales: pfg.cs.emea@meas-spec.com

ASIA

Measurement Specialties
(China), Ltd.
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
Sales: pfg.cs.asia@meas-spec.com

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