# **Model 4425**





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

### **DESCRIPTION**

The 4425 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-inline 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 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 model 4426. For pressures below 1 psi, refer to the model 4415/4416.

### **FEATURES**

- Dual-in-Line Package
- 0°C to 50°C Compensated Temperature Range
- ±0.25% Pressure Non Linearity
- Solid State Reliability

#### **APPLICATIONS**

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

#### STANDARD RANGES

Range	psid	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	•	•

# **Model 4425**



## 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	-0.25		0.25	% Span	2	
Pressure Hysteresis		±0.2		% Span		
Input Resistance	5	15	25	ΚΩ		
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			500	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 Se	ec.			6	
Media		Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Ceramic & Gold				

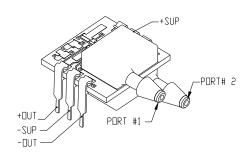
#### Notes

- Ratiometric to supply voltage.
- 2. Best fit straight line. Non linearity for 5 psi devices is 0.75%.
- 3. Maximum temperature error between 0°C and 50°C with respect to 25°C.
- 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.

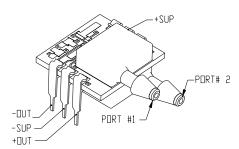


## **DIMENSIONS**

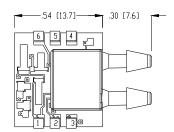
MODEL 4425-XXXD

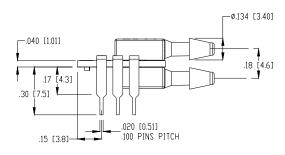


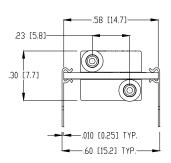
MODEL 4425-XXXA



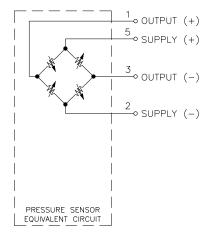
DIMENSIONS IN INCHES [mm]





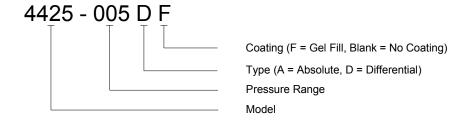


## **CONNECTIONS**





#### ORDERING INFORMATION



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