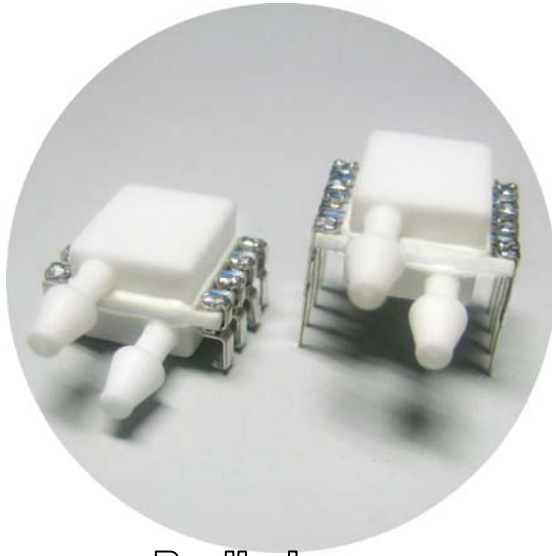


4525



Preliminary

- PCB Mounted Pressure Transducers
- Amplified Ratiometric Output
- Differential & Gauge & Absolute
- Temperature Compensated
- 3.3V or 5.0 Vdc Supply Voltage

DESCRIPTION

The 4525 is a small, ceramic based, PCB mounted pressure transducer from Measurement Specialties. The transducer is built using Measurement Specialties' proprietary UltraStable™ process and the latest CMOS sensor conditioning circuitry to create a low cost, high performance transducer designed to meet the strictest requirements from OEM customers.

The 4525 is fully calibrated and temperature compensated with a total error band (TEB) of less than 1.0% over the compensated range. The sensor operates from single supply of either 3.3 or 5.0Vdc.

The rugged ceramic transducer is available in side port and top port version and can measure absolute, gauge, or differential pressure from 0-1 to 0-150 psi. The 1/8" barbed pressure ports mate securely with 3/32" ID tubing.

FEATURES

- PSI Pressure Ranges
- PCB Mountable
- High Level Analog Output
- Barbed Pressure Ports

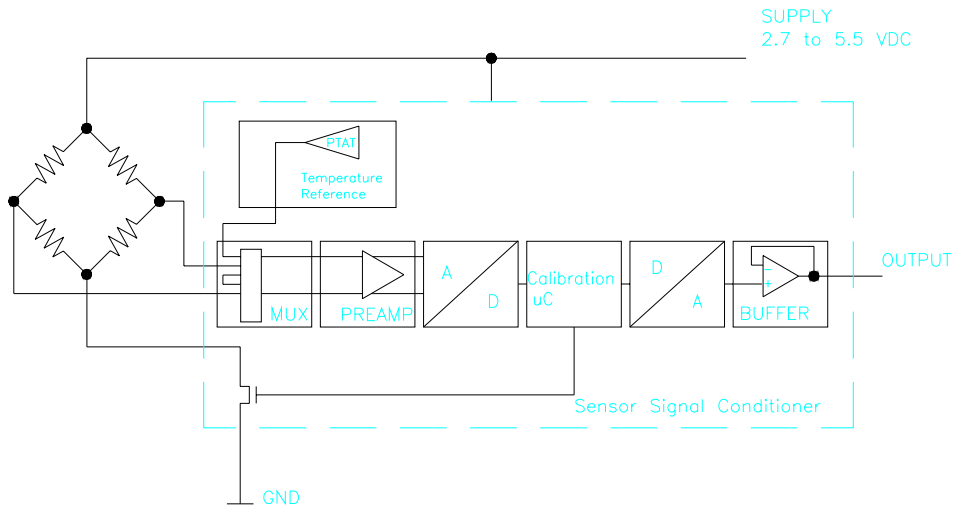
APPLICATIONS

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

STANDARD RANGES

Range	Absolute	Gauge	Differential
0 to 1		•	•
0 to 5		•	•
0 to 15	•	•	•
0 to 30	•	•	•
0 to 50	•	•	
0 to 100	•	•	
0 to 150	•	•	

BLOCK DIAGRAM



APPLICATION SCHEMATIC

ABSOLUTE MAXIMUM RATINGS

Parameter	Conditions	Min	Max	Unit	Notes
Supply Voltage	$T_A = 25^\circ\text{C}$	2.7	5.7	V	1
Output Current	$T_a = 25^\circ\text{C}$		3	mA	
Storage Temperature		-40	+125	$^\circ\text{C}$	
Humidity	$T_A = 25^\circ\text{C}$		95		Non Condensing
Overpressure	$T_A = 25^\circ\text{C}$, both Ports		100	psi	
Burst Pressure	$T_A = 25^\circ\text{C}$, Port 2		3X		
ESD	HBM	-4	+4	kV	
Solder Temperature		250 $^\circ\text{C}$, 5 sec max.			

ENVIRONMENTAL SPECIFICATIONS

Parameter	Conditions
Mechanical Vibration	Mil Spec 202F, Method 213B, Condition C, 3 Drops
Mechanical Shock	Mil Spec 202F, Method 214A, Condition 1E, 1Hr Each Axis
Thermal Shock	100 Cycles over Operating Temperature, 30 minute dwell
Life	1 Million FS Cycles,

PERFORMANCE SPECIFICATIONS

Supply Voltage¹ : 5.00V or 3.3 Vdc

Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Accuracy	-0.25		0.25	%Span	2
Total Error Band (TEB)	-1.0		1.0	%Span	3
Supply Current		3		mA	
Compensated Temperature	-10		+85	°C	
Operating Temperature	-25		+105	°C	
Response Time		1		mS	4
Start Time to Data Ready			6	mS	4
Weight		3		grams	

Media Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Gold, Ceramic, Nickel, and Aluminum

Notes

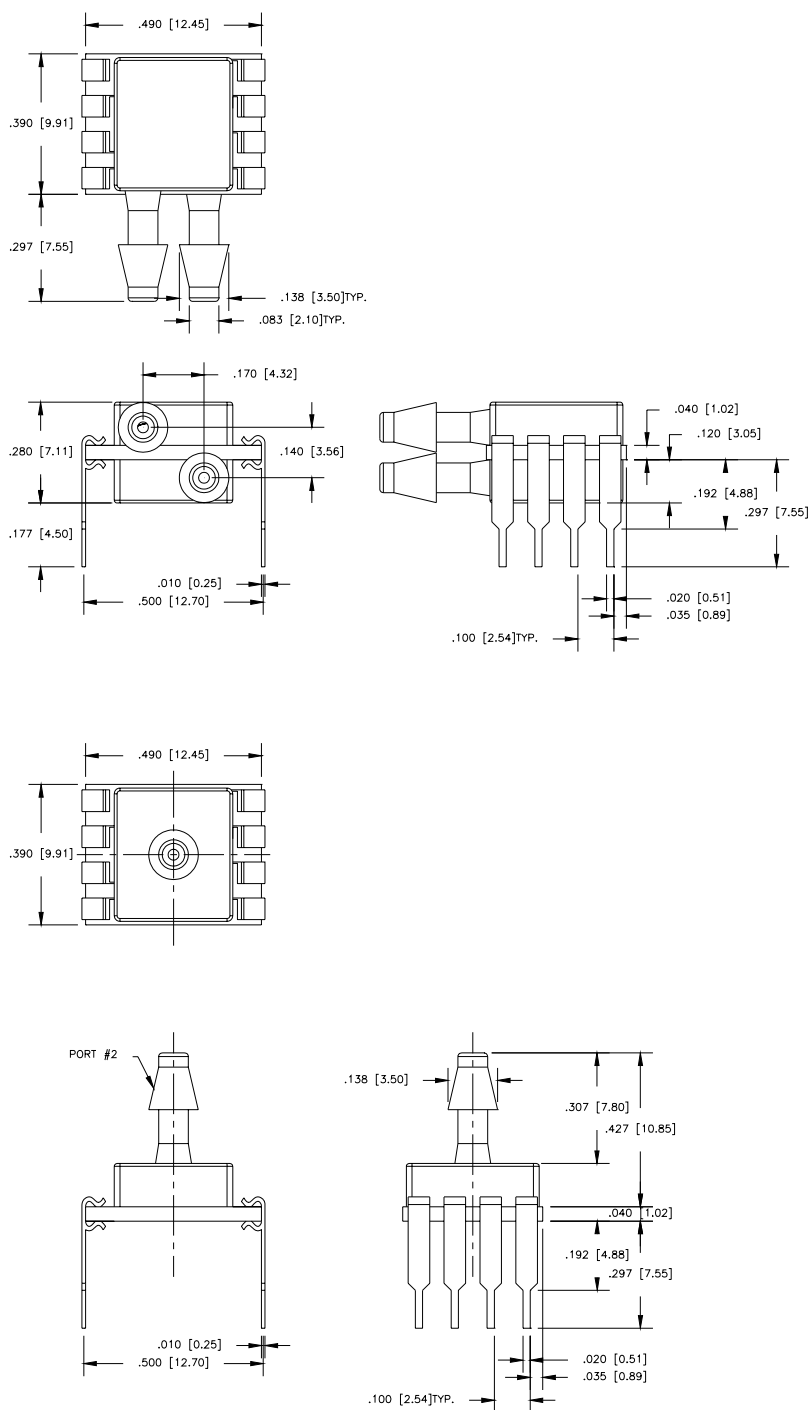
1. Output is ratiometric to supply voltage.
2. Accuracy: The maximum deviation from a best fit straight line (BFSL) fitted to the output measured over the pressure range at 25C. Includes all errors due to pressure non linearity, hysteresis, and non repeatability.
3. Total error band includes all accuracy errors, thermal errors over the compensated temperature range, and span and offset calibration tolerances..
4. This product can be configured for custom OEM requirements, contact factory for lower power consumption or higher accuracy.

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DIMENSIONS

MODEL 4525-PSZ-XXXYP (with through hole pins)

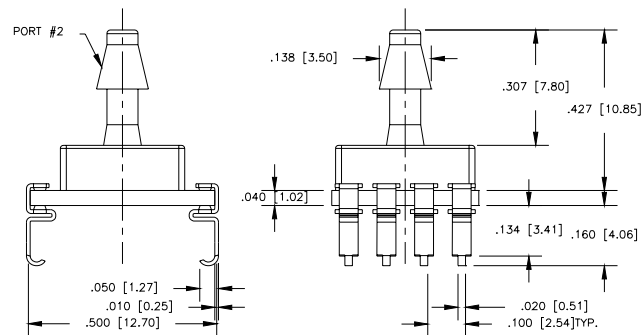
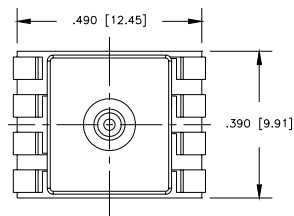
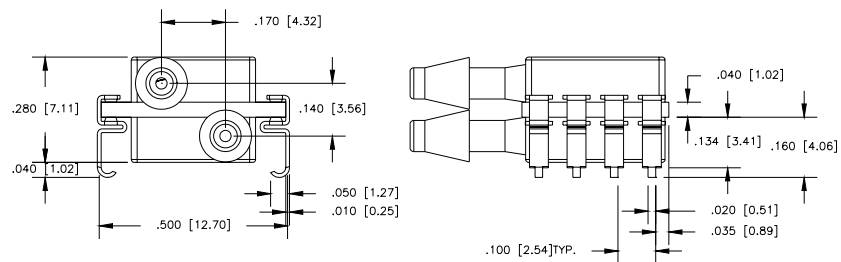
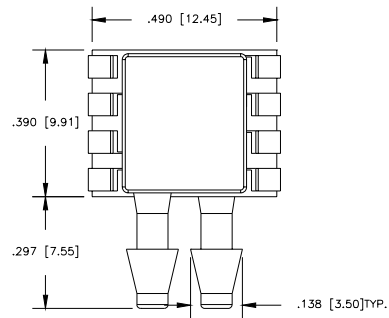
DIMENSIONS ARE IN INCHES [mm]



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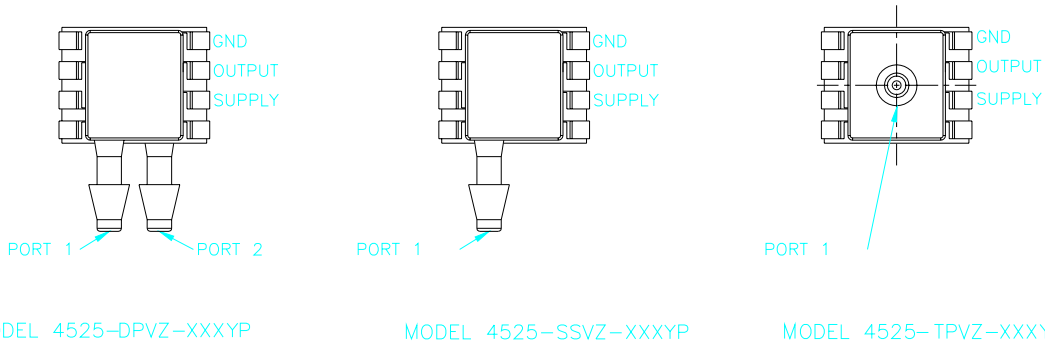
MODEL 4525-PSZ-XXXYS (with J lead pins)

DIMENSIONS ARE IN INCHES [mm]



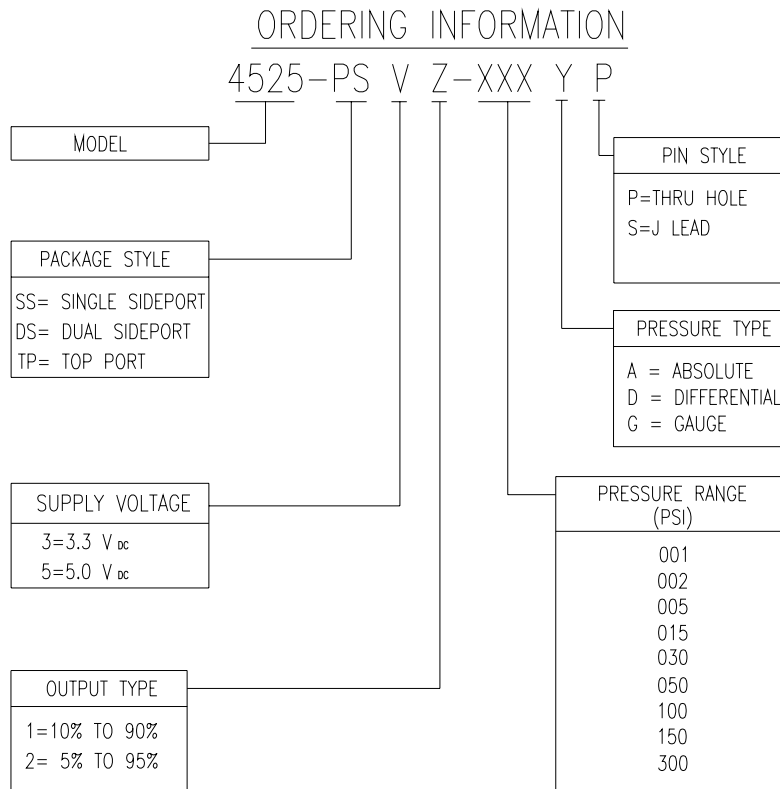
4525

PIN CONFIGURATION



Pin Name	Pin	Function
SUPPLY	2	Positive Supply Voltage
OUTPUT	3	Analog Output
GND	4	Ground

ORDERING INFORMATION



4525

Pressure Type	Description
Absolute	Output is proportion to the difference between vacuum reference and pressure applied to Port 1.
Differential	Output is 50% of supply voltage when Port 1=Port 2. Output swings positive when Port 1 > Port 2
Gauge	Output is proportional to difference between ambient pressure and Port 1. Output swings positive when Port 1 > Port 2