



Digital Board Level Pressure Sensor



- Differential/Gauge Pressure Sensor
- -10°C - 85°C Operating Temperature
- Compact Size – 8 Pin DIP
- ± 0.25% Linearity FS
- 14 Bit Digital Output – SPI/I2C
- Pressure Range: 2-30" H2O
- Resolution: .01 %
- Output - .5-4.5V
- Accuracy: ± 1 %
(includes-Hysteresis, NL, TC)

DESCRIPTION

The PPS41 is an amplified digitally compensated pressure sensor in a compact 8-pin package. This silicon pressure sensor was designed for accurate pressure applications.

The PPS41 series utilizes MEMS piezo-resistive sensors pressurized on the passive backside of the pressure die and is isolated from the substrate with an RTV for long term stability and accuracy.

Please contact the factory for Custom design availability.

APPLICATIONS

- Flow Meters
- Gas chromatography
- HVAC
- Pneumatic Controls
- Aviation
- Medical Equipment

Maximum Environmental Ratings

Operating Temperature -25°C to 85°C
 Storage Temperature Range-40°C to 100°C

Proof pressure 2.5x full scale pressure
 Burst pressure 4x full scale pressure

Package

The PPS41 is housed in an 8 PIN ceramic package with DIP or SMT leads. The covers are ABS plastic. There are several port options.

Stability

The silicon MEMS pressure sensor has a SiO₂ base and is mounted to a ceramic base with RTV and is sealed with a ceramic cover. The special die attach material helps reduce the mechanical stress which results in greater stability over time and temperature.

Additional stability is gained from factory stabilization of all sensors.

Pressure port

The PPS41-1 has a strong ceramic barbed port to protect against undue stress during manufacturing.

Media

The pressure port is tolerant to most media including but not limited to air, gas, and most non-corrosive media.

Wetted parts

The wetted surfaces are silicon, RTV, epoxy, ceramic (Alumina) and high temperature polyimide.



Automated Oil/Gas Valves



Process Equipment

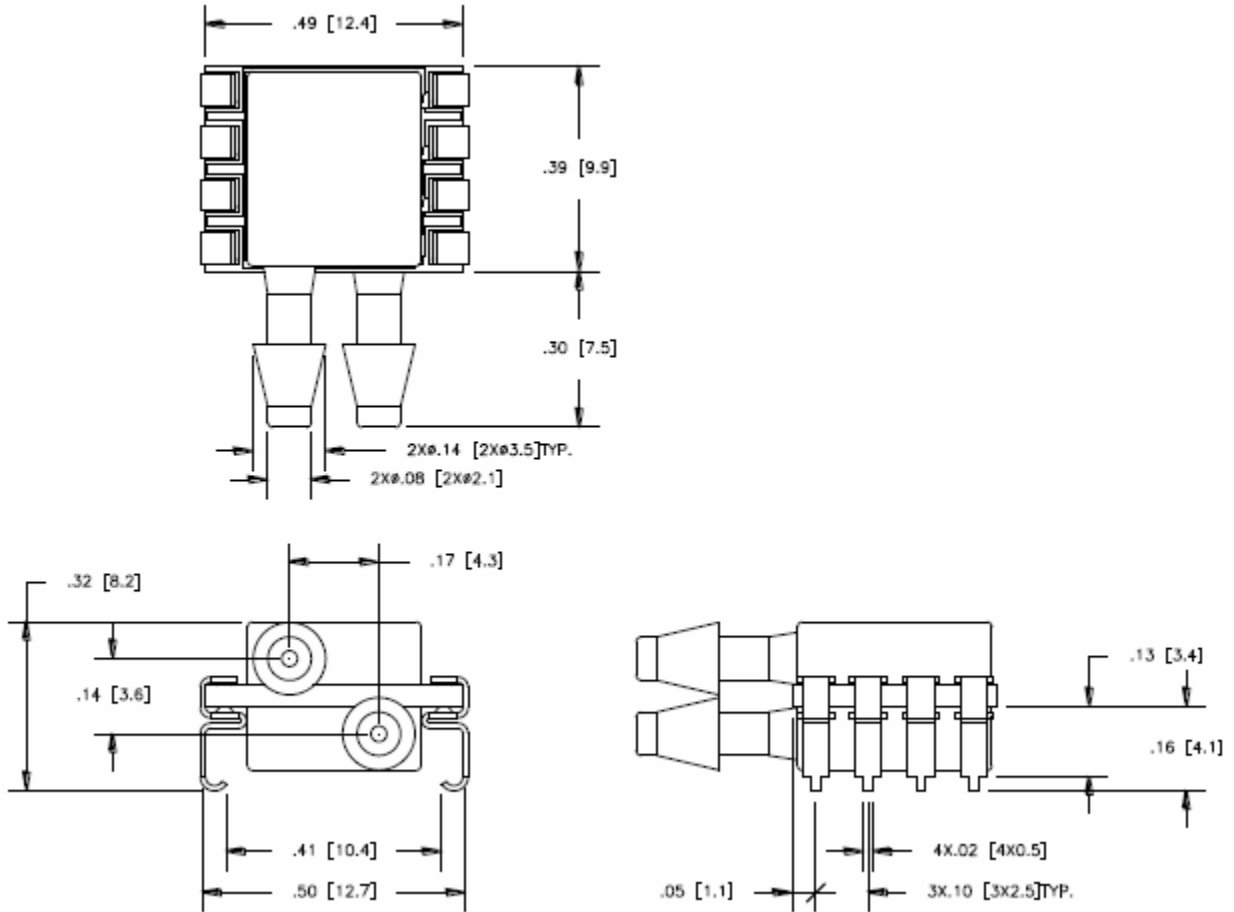
PPS41-1 Analog Output Operational Characteristics

$V_+ = 5V$, $V_- = 0V$, Temperature = 25°C

PARAMETER	SYMBOL	Min	Typ	Max	UNITS
Supply Voltage (note 3)	V_{DD}	3	5	5.2	V
Operating Temperature	T_s	-10		60	°C
Supply Current (Note 1)	I_{DD}	70	120	2500	μA
Output	V	.5		4.5	V
Compensated Temperature Range	C	0		60	°C
Accuracy					
Total Error Band		-1		1	%Full Scan
Non-Linearity (Note 2)		-0.25		0.25	%Full Scan
Response Time	t_R	1	2	20	ms
Analog-to-Digital					
Resolution			14 Bit		Full Scale
Pin Connections					
Supply	Pin	2			Positive Supply Voltage
GND	Pin	4			Ground
Output	Pin	3			Analog Output (.5-4.5V)
N/A	Pin	1, 5-8			No Connection

Notes: 1) Measured at zero pressure. 2) Defined as best straight line 3) 3V Supply is an option.

Surface Mount J-Clips

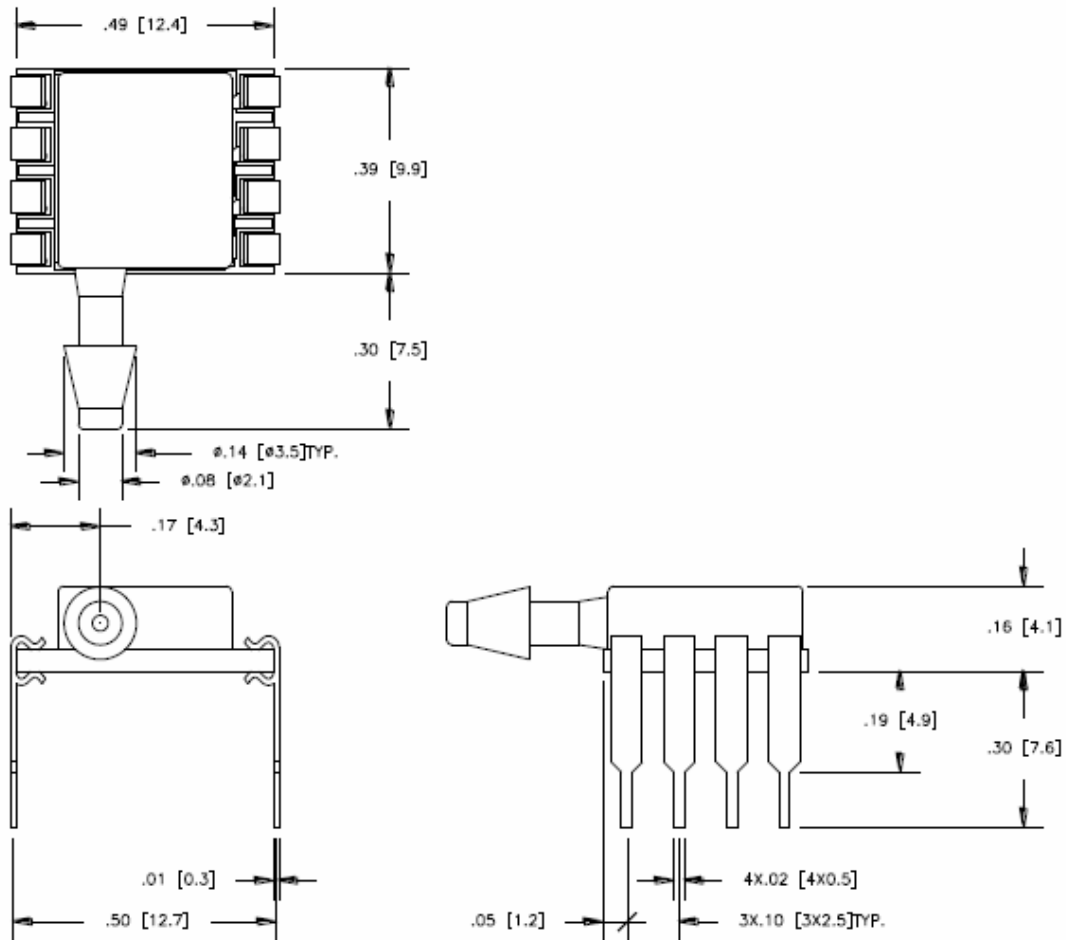


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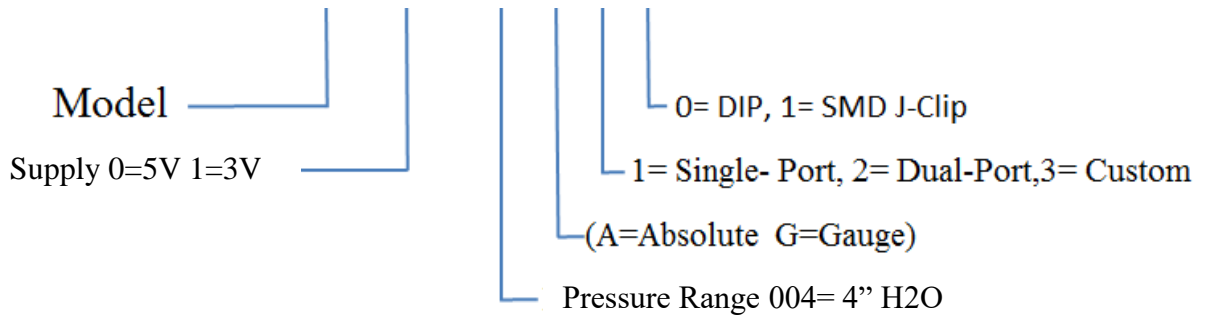
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Surface Mount DIP Package



Part Number Configuration

PPS41-1 – 004 G 2 0



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