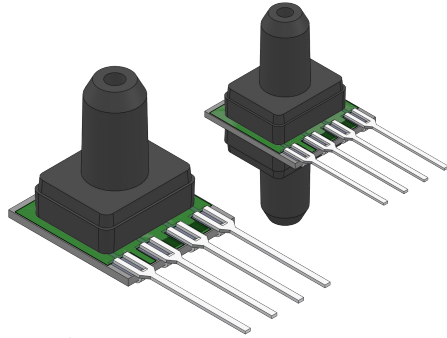


BCPC BASIC PRESSURE SENSORS



Features

- 0 to 15 PSI Differential
- Calibrated Offset Voltage
- Small Footprint

Applications

- Medical Instrumentation
- Environmental Controls
- HVAC

General Description

The BCPC series pressure sensors are based upon a proprietary technology to reduce the size of the sensor and yet maintain a high level of performance. This model provides a basic sensing element with pre-trimmed offset compensation. Stability to warm-up, stability to long time period, and position sensitivity are all significantly reduced when compared to conventional basic sensors. In addition the sensor utilizes a silicon, micro-machined, stress concentration enhanced structure to provide a very linear output to measured pressure.

This series is intended for use with non-corrosive, non-ionic working fluids such as air, dry gases and the like. The output of the device is ratiometric to the supply voltage and operation from any D.C. supply voltage.

Standard Pressure Ranges

	Operating Pressure ^A		Color Code	Proof Pressure		Burst Pressure	
	PSIG	kPa		PSI	kPa	PSI	kPa
15 PSI-D-MINI-BASIC	±15	105	Purple	45	310	75	517
15 PSI-GF-MINI-BASIC	0 to 15	105	Purple	45	310	75	517
15 PSI-D-MINI-BASIC-P	±15	105	Purple	45	310	75	517
15 PSI-GF-MINI-BASIC-P	0 to 15	105	Purple	45	310	75	517

Note A: Operating pressure in kPa is expressed as an approximate value.

Pressure Sensor Maximum Ratings	Equivalent Circuit
<p>Supply Voltage (Vs) 8 Vdc</p> <p>Lead Temperature (soldering 2-4 sec.) 270°C</p> <p>Common Mode Pressure 25 PSI G</p>	
<p>Environmental Specifications</p> <p>Temperature Ranges</p> <p>Operating -25 to 85° C</p> <p>Storage -40 to 125° C</p> <p>Humidity Limits (non condensing) 0 to 95% RH</p>	



Common Performance Characteristics for BCPC Devices

ALL PARAMETERS ARE MEASURED AT 5.0V \pm 5% VOLT EXCITATION, FOR THE NOMINAL FULL SCALE PRESSURE AND ROOM TEMPERATURE UNLESS OTHERWISE SPECIFIED. PRESSURE MEASUREMENTS ARE WITH POSITIVE PRESSURE APPLIED TO FRONT PORT.

Parameter	Minimum	Typical	Maximum	Units	Specification Notes
Output Span	35	55	75	mV	2
Offset Voltage @ Zero Differential Pressure	-	-	\pm 10	mV	-
Temperature Coefficient of Offset	-	\pm 25	-	μ V/V $^{\circ}$ C	-
Offset Warm-up Shift	-	-	\pm 0.5	mV	3
Linearity, Hysteresis Error	-	-	\pm 0.5	%FSS	1
Temperature Coefficient of Span	-	-2,000	-	ppm $^{\circ}$ C	-
Temperature Coefficient of Bridge Resistance	-	2,800	-	ppm $^{\circ}$ C	-
Input Resistance	-	3.3	-	k Ω	-
Output Resistance	-	3.3	-	k Ω	-

Specification Notes

NOTE 1: MEASURED AT ONE-HALF FULL SCALE RATED PRESSURE USING BEST STRAIGHT LINE CURVE FIT.

NOTE 2: THE SPAN IS THE ALGEBRAIC DIFFERENCE BETWEEN FULL SCALE OUTPUT VOLTAGE AND THE OFFSET VOLTAGE.

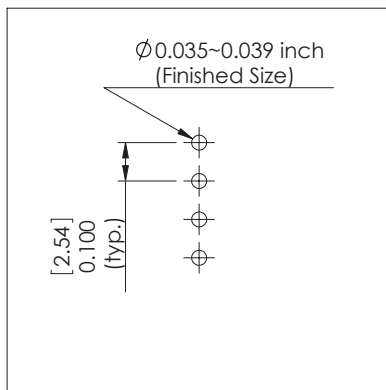
NOTE 3: SHIFT IS WITHIN THE FIRST HOUR OF EXCITATION APPLIED TO THE DEVICE.

Coating

Parylene Coating: Parylene coating provides a moisture barrier and protection from some harsh media. Consult factory for applicability of Parylene for the target application and sensor type.

Ordering with parylene coating is indicated by the part number ending in -P.

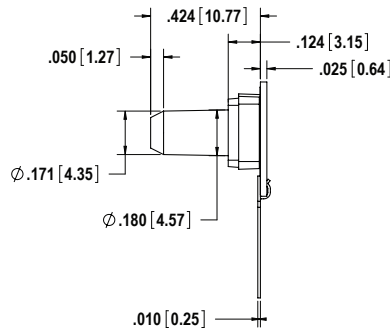
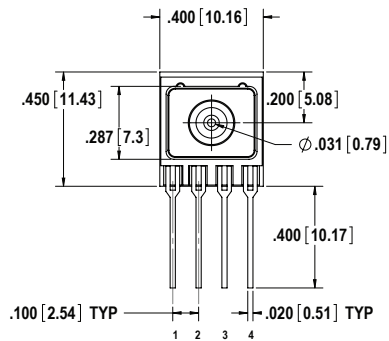
Suggested Pad Layout



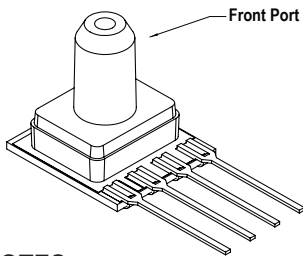
PAD-01

Package Drawings

BCPC-GF Package



Pin	Definition
1	GND
2	Vout+
3	Vs
4	Vout-



NOTES

- 1) Dimensions are in inches [mm].
- 2) For suggested pad layout, see drawing: PAD-01.

All Sensors

TITLE:

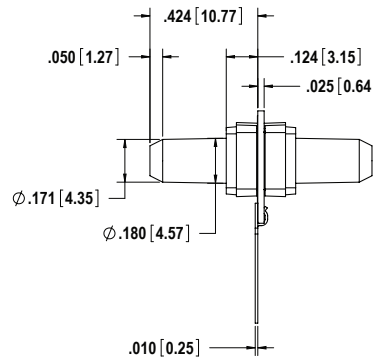
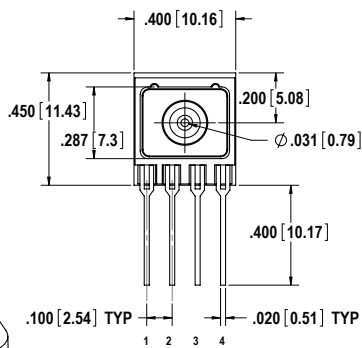
BCPC-GF Package

SIZE FILE NAME

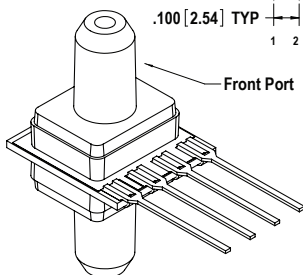
A

BCPC-GF Package

BCPC-D Package



Pin	Definition
1	GND
2	Vout+
3	Vs
4	Vout-



NOTES

- 1) Dimensions are in inches [mm].
- 2) For suggested pad layout, see drawing: PAD-01.

All Sensors

TITLE:

BCPC-D Package

SIZE FILE NAME

A

BCPC-D Package

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