

# Solid State Pressure Sensor

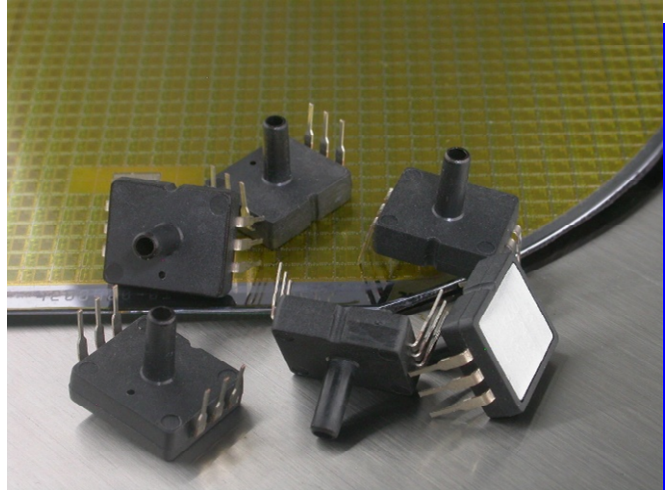
## SPD SERIES – Model 34D

### FEATURES

- Low Cost
- Rigid Plastic DIP
- High Level Output
- High Impedance

### APPLICATION

- White Goods
- Medical
- Process Control



### DESCRIPTION

The SPD 34A Series is a piezoresistive silicon pressure sensor in 6-pin plastic DIP package. The series provides a digital output of pressure through a proprietary 1-wire interface.

The pressure sensor consists of gage pressure chip that is attached to the housing directly. Pressure is applied to the back side of chip. It is designed to operate with non-corrosive media, such as air and fluid. A simple pressure interface is provided through the molded pressure port.

The SPD Series is amplified and temperature compensated via the latest ASIC technology. Calibration coefficients are stored via an on chip EEPROM. Customization is available, please contact the factory for details.



# Characteristics

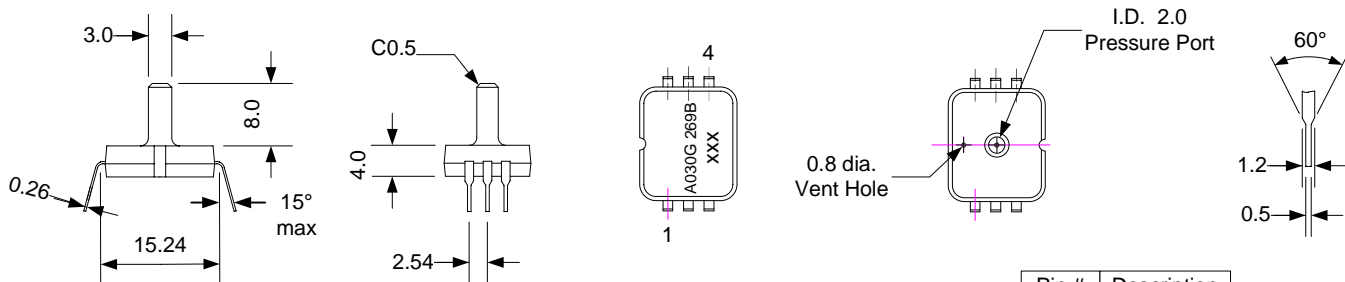
Unless otherwise specified, all parameters are measured at 60% RH, 25 °C and 5 Vdc excitation

Parameters	Min	Typ	Max	Unit
Supply Voltage <sup>NOTE 1</sup>	2.7 to 3.3		4.5 to 5.5	Vdc
Supply Current			2.5	mA
Pressure range <sup>Note 5</sup>	5		150	psi
Resolution		14		Bit
Accuracy <sup>NOTE 3</sup>		±1.8		%FS, +1 LSB
Zero Output		0666		Hex
Full Scale Output		3996		Hex
Warmup Time <sup>NOTE 4</sup>		1	2	sec
Start-Up Time			10	ms
Sampling Rate		1000		Hz
Temp - Compensated	0		50	°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C
Over Pressure <sup>Note 6</sup>			2X	FS

**Notes:**

1. Specify desired operating voltage range when ordering. Output is ratiometric to supply voltage
2. Wetted material contains RTV, PPA, glass and silicon
3. Accuracy includes non-linearity, hysteresis, TCS and TCO inside the compensated temperature range, best fit straight line definition
4. Zero fluctuation below 0.15%
5. See ordering guide for list of available pressure ranges
6. Over pressure is 1.3x for 150 psi range

## Dimensions



Solder reflow max. 250 °C 5 seconds

Delivery : 64 pcs per tray

Pin #	Description
6	Vss
5	Sig
4	Vdd
3	N.C.
2	Vss/N.C.*
1	N.C.

**NOTE:**

- 1) N.C. pins must be left floating
- 2) A 0.1 uF capacitor between Vdd and Vss is required

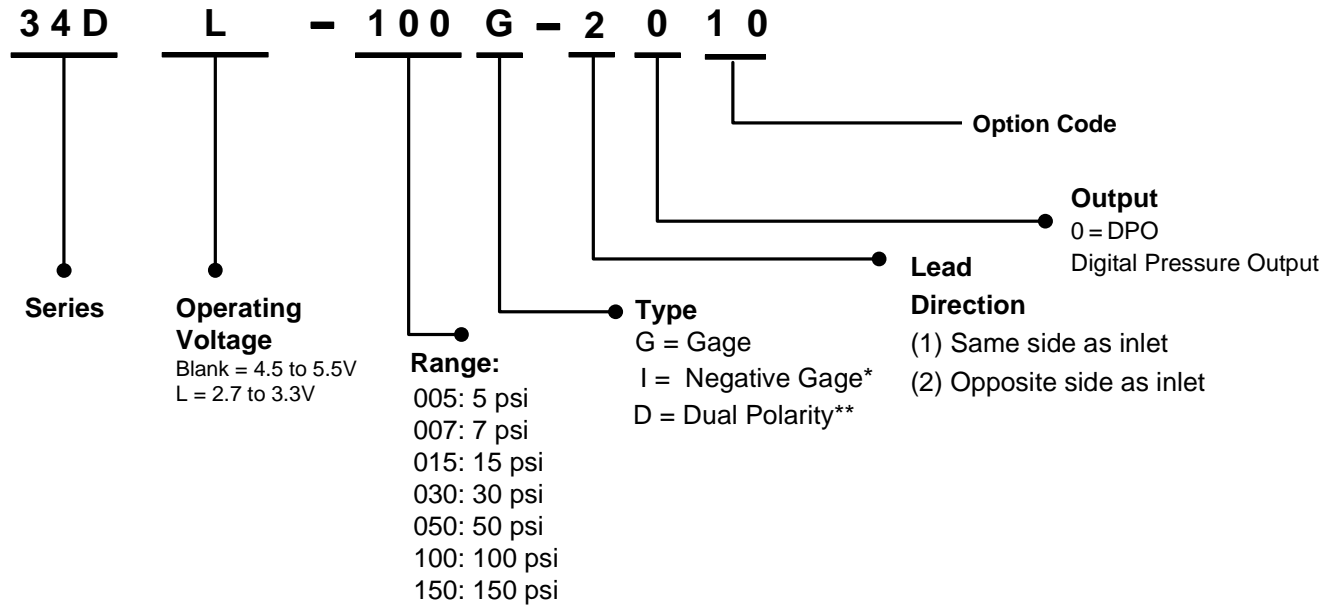
\* For 5 and 7 psi ranges Pins 2 & 6 must be connected. For other ranges Pin 2 must be N.C.



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## Ordering Information



### Notes

\* Negative Gage Output has -XXX psi as the Full Scale output and 0 psi as the Offset. Maximum negative gage pressure is -15 psi

\*\* Dual Polarity has +XXX psi as the Full Scale Output and -XXX psi as the Offset. Maximum Dual Polarity pressure is 30 psi

### Disclaimer/Warranty/Notice

Senphire Ltd products are not authorized for use in applications where failure could result in loss of life or injury. While Senphire provides application assistance personally, through our literature and website, it is the responsibility of the customer to determine the suitability of the product for the intended application.

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