

# Solid State Pressure Sensor

DIGITAL  
OUTPUT



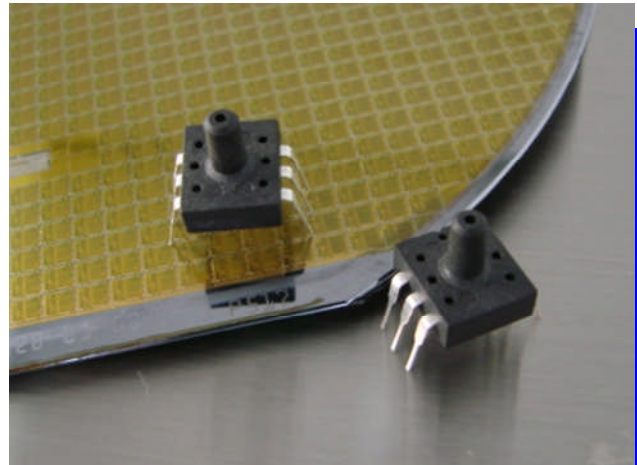
## SLP Series - Model 33D Low Pressure

### FEATURES

- Easy Design-in
- Temperature Compensated
- Calibrated & Amplified Output
- Low Cost

### APPLICATIONS

- Process Control
- HVAC
- Consumer Electronics
- Medical Devices



### DESCRIPTION

The SLP 33D Series incorporates a silicon piezoresistive pressure sensor and signal conditioning ASIC in a 6-pin DIL plastic housing for easy through hole board assembly. A surface mount version is also available. Digital output of pressure is provided through a proprietary 1-wire interface. The Series provides a temperature compensated, calibrated digital pressure solution for high volume applications at an affordable cost. Pressure ranges are available from 0.3 to 100 psig. The low voltage version operates from 2.7 to 3.3V while the regular version operates from 4.5 to 5.5V. Pressure connection is through Tygon tube on the pressure port.

Custom calibrations are available please contact the factory for details.

# Characteristics

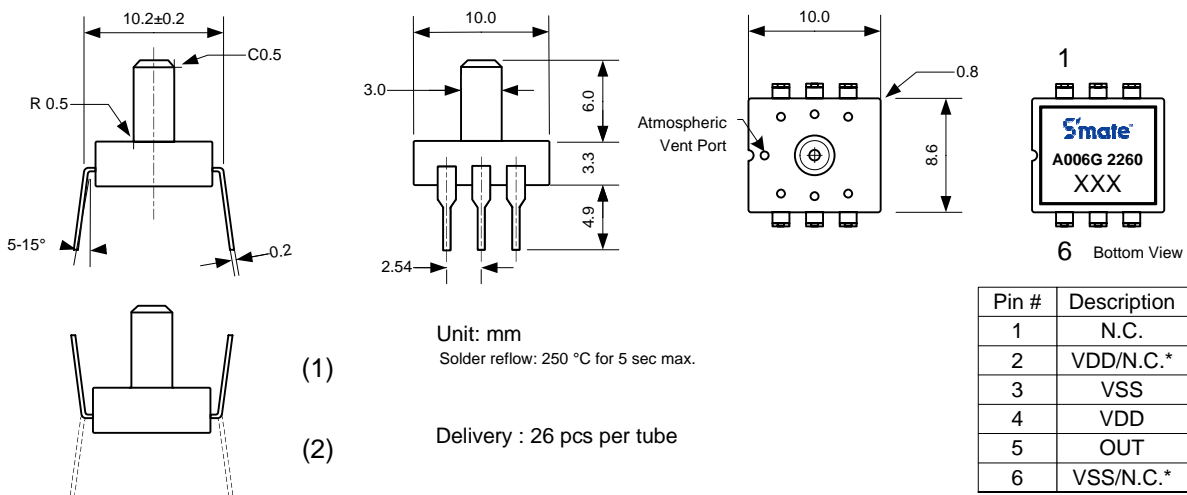
Unless otherwise specified, all parameters are measured at 25 °C, 60% RH and 5 Vdc excitation

Parameters	Min	Typ	Max	Unit
Supply Voltage <sup>NOTE 1</sup>	2.7 to 3.3V		4.5 to 5.5	Vdc
Supply Current			2.5	mA
Pressure range <sup>Note 5</sup>	0.3		3.0	psi
Resolution		14		Bit
Accuracy <sup>NOTE 3</sup>		±4.5		%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>Note6</sup>			2.5 psi or 3x	Rated Pressure

**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. Whichever is higher

## Dimensions

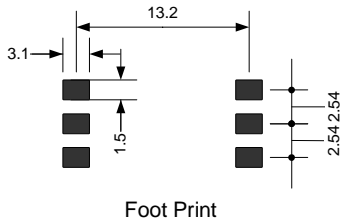
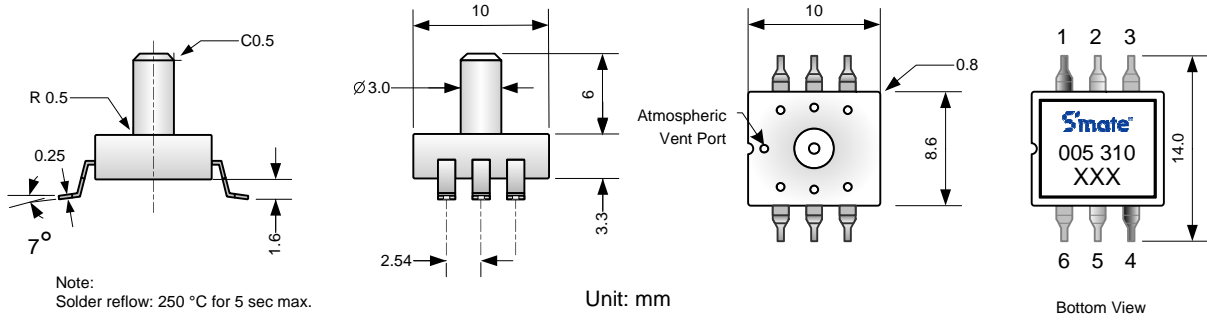


**NOTE:**

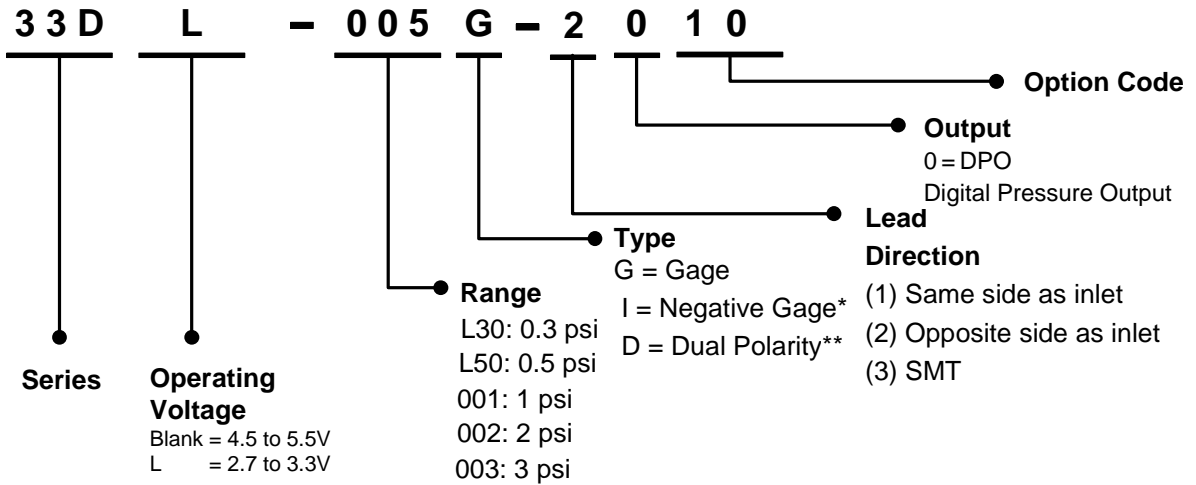
Pin 1 must be left floating.  
A 0.1uF capacitor must be connected between Vdd and Vss  
\*For the 2, 3, 5 and 7 psi range, Pins 2 & 4 and Pins 3 & 6 must be shorted. Pins 2 and 6 must be N.C when using other ranges.



10, Industries E. Rd. III, Lukang,  
Chang Hua, Taiwan 50544  
Tel: +8864 7811839 Fax: +8864 7811837  
www.sensormateonline.com



## 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