

**The SMD Series** is a surface-mountable pressure monitoring device suitable for low to medium pressure applications.

**COMPANY:** Merit Sensor is a leader in piezoresistive pressure sensing and partners with clients to create high performing solutions for a variety of applications and industries.

**SENTIUM:** Merit Sensor products incorporate a proprietary Sentium® technology developed to provide a best-in-class operating temperature range (-40°C to 85°C) and superior stability.

**TECHNOLOGY:** Merit Sensor utilizes a piezoresistive Wheatstone bridge in a design that anodically bonds glass to a chemically etched silicon diaphragm. All products are RoHS compliant.



**CAPABILITIES:** Merit Sensor designs, engineers, fabricates, dices, assembles and tests all products from a state-of-the-art facility near Salt Lake City, Utah.

### FEATURES

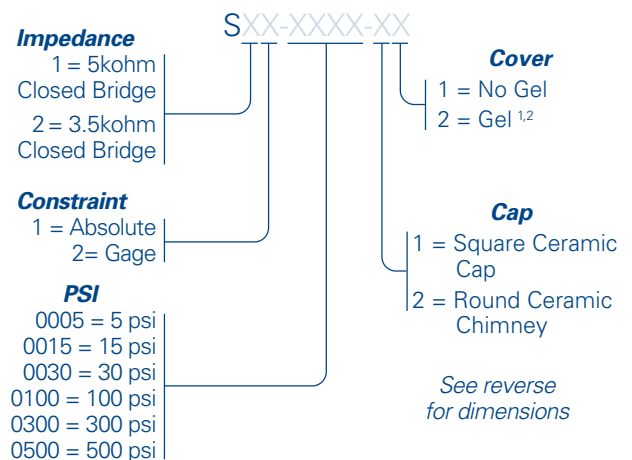
<b>Range</b>	5 to 500 psi (0.34 to 34.5 bar; 34.5 to 3,447 KPa)
<b>Type</b>	Absolute, gage
<b>Media</b>	Clean, dry air and non-corrosive gases
<b>Packaging</b>	Bulk
<b>Flexibility</b>	Sensitivity, resistance, bridge, constraint, etc.

### BENEFITS

<b>Performance</b>	Enjoy best-in-class performance due to Merit's proprietary Sentium technology.
<b>Cost</b>	Save money over time with high-performing die
<b>Security</b>	Feel confident doing business with an experienced company backed by a solid parent company (NASDAQ: MMSI)
<b>Speed</b>	Get to market quickly with creative and flexible solutions.
<b>Service</b>	Experience prompt, personal, and professional support.



### SMD Series Part Number Configurator



**Example:** S11-0015-11 offers 5kohm Impedance, Closed Bridge, Absolute Constraint, 15 psi, Square Ceramic Cap, No Gel

<sup>1</sup> Not available with cap. <sup>2</sup> Not available above 100 psi.

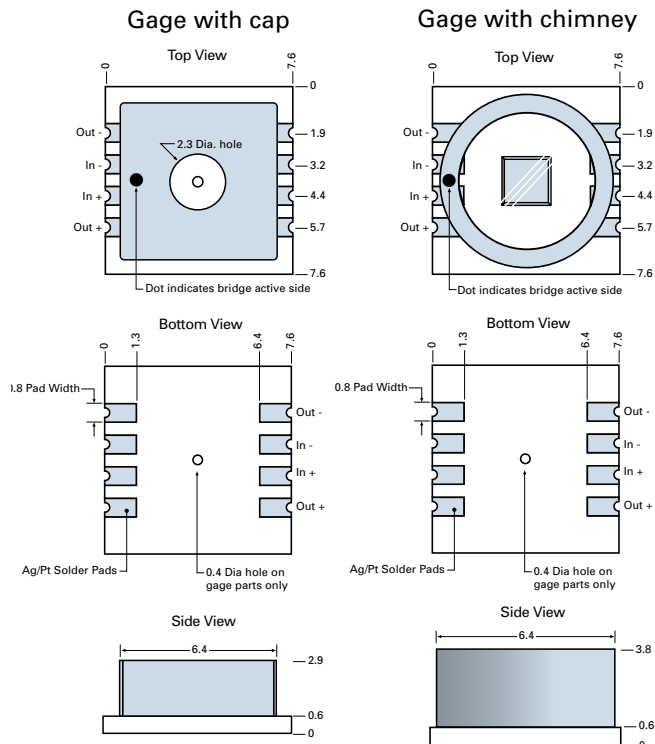
### SMD Series Standard Part Numbers

S11-0005-11	S22-0300-11	S21-0005-21
S11-0015-11	S22-0500-11	S21-0015-21
S11-0030-11	S11-0005-21	S21-0030-21
S11-0100-11	S11-0015-21	S21-0100-21
S11-0300-11	S11-0030-21	S21-0300-21
S11-0500-11	S11-0100-21	S21-0500-21
S12-0005-11	S11-0300-21	S22-0005-21
S12-0015-11	S11-0500-21	S22-0015-21
S12-0030-11	S12-0005-21	S22-0030-21
S12-0100-11	S12-0015-21	S22-0100-21
S12-0300-11	S12-0030-21	S22-0300-21
S12-0500-11	S12-0100-21	S22-0500-21
S21-0005-11	S12-0300-21	S21-0005-22
S21-0015-11	S12-0500-21	S21-0015-22
S21-0030-11	S11-0005-22	S21-0030-22
S21-0100-11	S11-0015-22	S21-0100-22
S21-0300-11	S11-0030-22	S22-0005-22
S21-0500-11	S11-0100-22	S22-0015-22
S22-0005-11	S12-0005-22	S22-0030-22
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S22-0030-11	S12-0030-22	
S22-0100-11	S12-0100-22	

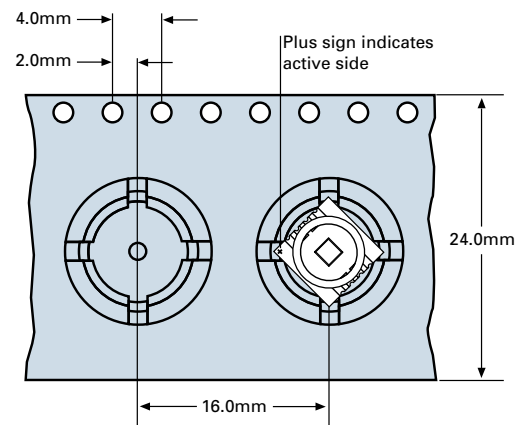
## SPECIFICATIONS

Parameter	Minimum	Typical	Maximum	Units	Notes
<b>Electrical &amp; Environmental</b>					
Excitation (In)		5	15	V	Maximum: 3 mA
Impedance	4000	5000	6000	$\Omega$	Optional: 3,500 +/- 500
Operating Temperature	-40		85	$^{\circ}\text{C}$	Sentium <sup>®</sup> technology
Storage Temperature	-55		160	$^{\circ}\text{C}$	
<b>Performance</b>					
Offset	-10	0	10	mV/V	Zero pressure; gage only; @25 $^{\circ}\text{C}$
Non-linearity	-0.2	0	0.2	% FSO	Best Fit Straight Line; @25 $^{\circ}\text{C}$
Pressure Hysteresis	-0.1	0	0.1	% FSO	@25 $^{\circ}\text{C}$
Temp Coeff – Zero	-25	0	25	$\mu\text{V/V}/^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Temp Coeff – Resistance	2300	2800	3300	PPM/ $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Temp Coeff – Sensitivity	-1500	-2200	-2500	PPM/ $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Thermal Hysteresis	-0.2	0	0.2	% FSO	Zero pressure
Burst Pressure	2X				Room Temperature
<b>Full-Scale Output (@ 5 volts Excitation)</b>					
5 psi (0.34 bar; 34.5 KPa)	60	75	90	mV	Closed Bridge only
15 psi (1 bar; 103 KPa)	125	150	175	mV	
30 psi (2.1 bar; 207 KPa)	120	150	180	mV	
100 psi (6.9 bar; 689 KPa)	120	150	180	mV	
300 psi (20.7 bar; 2068 KPa)	120	150	180	mV	
500 psi (34.5 bar; 3447 KPa)	140	175	210	mV	

## DIMENSIONS AND ELECTRICAL (millimeters)



## PACKAGING AND SHIPPING (millimeters)



Absolute and Gage available