

# DATA SHEET

# **SMD Series**

**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**

Range 5 to 500 psi (0.34 to 34.5 bar; 34.5

to 3,447 KPa)

Pressure Absolute, gage, differential, vacuum

Media Clean, dry air and non-corrosive gases (No Gel)

Liquids compatible with silicone (Gel option)

Packaging Tape & Reel

Flexibility Sensitivity, bridge, type, etc.

## **BENEFITS**

Performance Enjoy best-in-class performance due to Merit's

proprietary Sentium technology.

Cost Save money over time with high-performing MEMS

**Security** Feel confident doing business with an experienced

company backed by a solid parent company

(NASDAQ: MMSI)

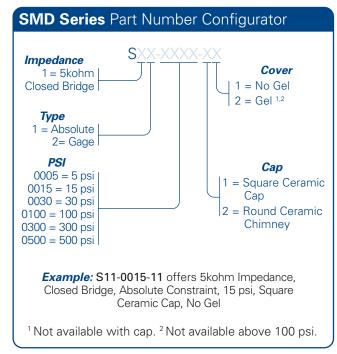
Speed Get to market quickly with creative and

flexible solutions.

Service Experience prompt, personal, and

professional support.







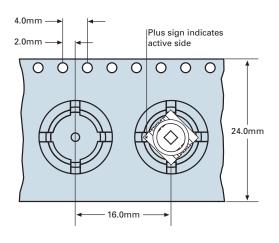
#### **SPECIFICATIONS**

Parameter	Minimum	Typical	Maximum	Units	Notes
Electrical & Environmental					
Excitation (In)		5	15	V	Maximum: 3 mA
Impedance	4000	5000	6000	Ω	
Operating Temperature	-40		85	°C	Sentium® technology
Storage Temperature	-55		160	°C	
Performance					
Offset	-10	0	10	mV/V	Zero pressure; gage only; @25°C
Non-linearity	-0.2	0	0.2	% FSO	Best Fit Straight Line; @25°C
Pressure Hysteresis	-0.1	0	0.1	% FSO	@25°C
Temp Coeff – Zero	-25	0	25	μV/V/°C	-40°C to 85°C
Temp Coeff – Resistance	2300	2800	3300	PPM/°C	-40°C to 85°C
Temp Coeff – Sensitivity	-1500	-2200	-2500	PPM/°C	-40°C to 85°C
Thermal Hysteresis	-0.2	0	0.2	% FSO	Zero pressure
Burst Pressure	2X				Room Temperature
Full-Scale Output (@ 5 volts Excitation)					
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)

# Round chimney Ceramic cap Top View Top View Plus sign indicates active side **Bottom View** Bottom View ).8 Pad Width 0.8 Pad Widtl Ag/Pt Solder Pads Ag/Pt Solder Pads 0.4 Dia hole on gage parts only 0.4 Dia hole on gage parts only Side View Side View - 2.9 -0.6

### **PACKAGING AND SHIPPING (millimeters)**



Absolute and Gage available

# **X-ON Electronics**

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TSCSAAN100PDUCV NBPDANN015PGUNV NBPLLNS150PGUNV 142PC100D