



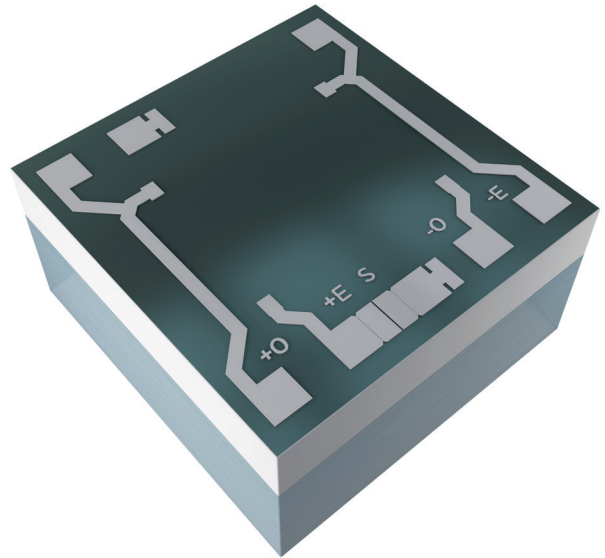
The **S Series**, designed with Merit Sensor’s new proprietary MeritUltra™ technology, is an ideal pressure-sensing solution for applications with low to medium pressure.

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.

MeritUltra™: Merit Sensor’s new proprietary MeritUltra™ technology provides a best-in-class operating temperature range (-40°C to 150°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 and REACH compliant.

CAPABILITIES: Merit Sensor designs, engineers, fabricates, singulates, assembles, tests, sells, and services die and packaged products from a state-of-the-art facility near Salt Lake City, Utah.



FEATURES

Range	1 to 300 psi / 0.07 to 21 bar / 6.9 to 2,068 kPa
Type	Absolute or gage
Media	Clean dry air and non-corrosive gases
Shipping	Wafers on tape
Flexibility	Sensitivity, bridge resistance, half-closed and closed bridge, and bond-pad layout

BENEFITS

Performance	Enjoy best-in-class performance due to Merit Sensor’s new proprietary MeritUltra™ technology.
Cost	Save money over time with high-performing die.
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.

S Series Part Number Configurator

S1XX-XXXX-XXT

Bridge H = ½ Closed C = Closed K = Closed	Constraint A8 = 0.5 mm Absolute B2 = 0.5 mm Gage
Impedance 1 = 5kohm Bridge 2 = 3.5kohm Bridge	µV/V/psi 5333 = 1 psi or 3 psi 4000 = 5 psi 1333 = 15 psi 0667 = 30 psi 0300 = 70 psi 0200 = 100 psi 0067 = 300 psi

Example:
S1C1-1333-A8T offers Closed Bridge, 5kohm Bridge Impedance, 15 psi, and 0.5mm Absolute constraint

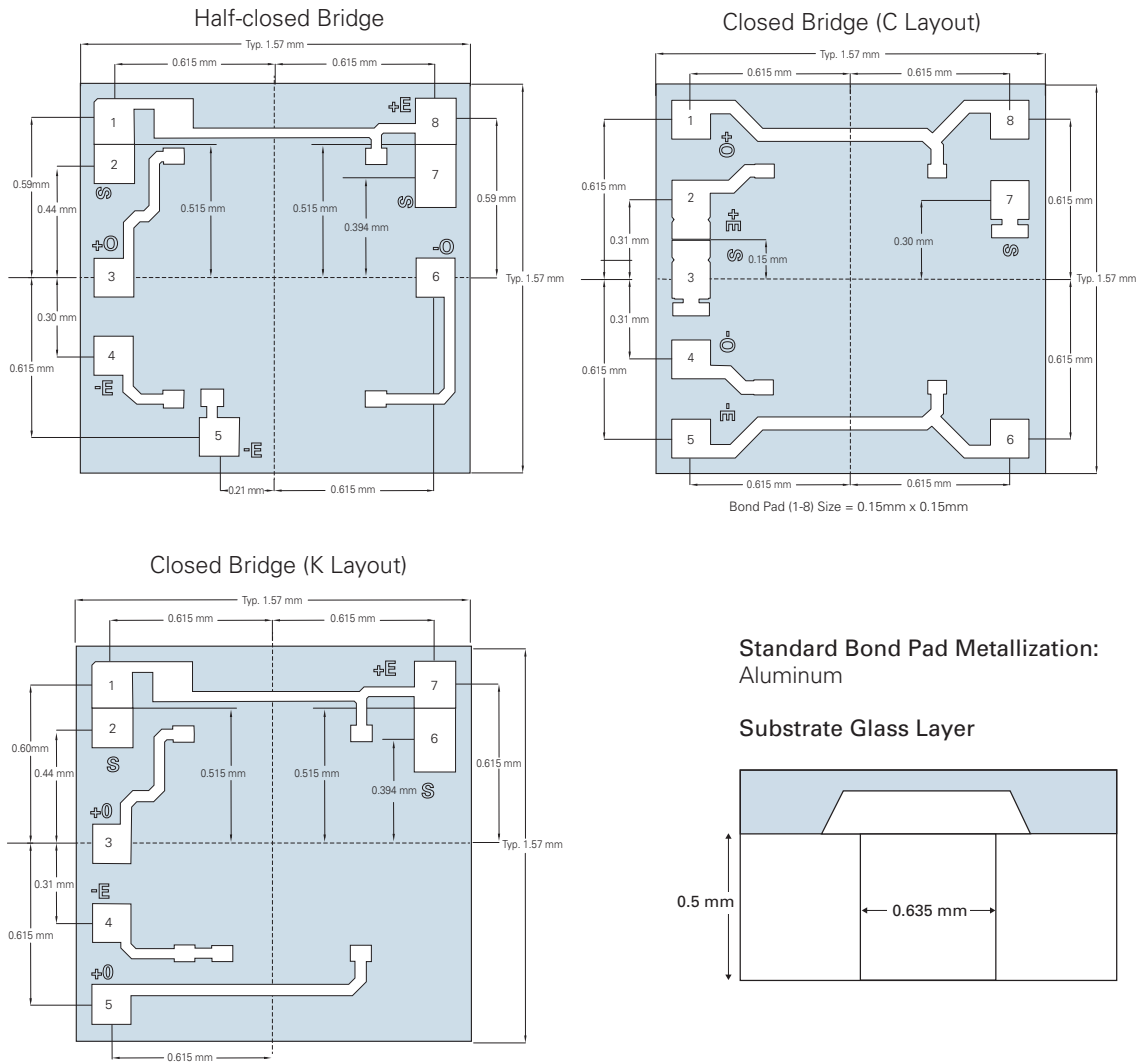
Note:

- Maximum sensitivity for C-layout is 4000 µV/V/psi
- Only 5kohm impedance is available for C-layout

SPECIFICATIONS

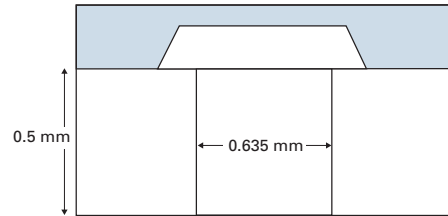
Parameter	Minimum	Typical	Maximum	Units	Notes
Electrical & Environmental					
Excitation (+IN)		5	10	V	Maximum: 2mA
Impedance	4000	5000	6000	Ω	@25°C
Operating Temperature	-40		150	°C	MeritUltra™ technology
Storage Temperature	-55		160	°C	
Performance					
Offset	-10	0	10	mV/V	Zero pressure; gage only; @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	-30	0	30	μV/V/°C	-40°C to 150°C
Temp Coeff – Resistance	2000	2500	3000	PPM/°C	-40°C to 150°C
Temp Coeff – Sensitivity	-1400	-1900	-2400	PPM/°C	-40°C to 150°C
Thermal Hysteresis	-0.2	0	0.2	% FSO	Zero pressure -40°C to 150°C
Long-Term Stability	-0.2	0	0.2	% FSO	-40°C to 150°C
Burst Pressure: Backside	4X				Full-scale pressure
Burst Pressure: Topside	10X				Full-scale pressure
Full-Scale Output (@ 5 volts excitation)					
3 psi (0.2 bar; 20.7 kPa)	60	80	100	mV	Typical output at 1 psi = 26.7mV @25°C
5 psi (0.34 bar; 34 kPa)	75	100	125	mV	
15 psi (1 bar; 103 kPa)	75	100	125	mV	
30 psi (2 bar; 207 kPa)	75	100	125	mV	
70 psi (4.8 bar; 483 kPa)	75	100	125	mV	
100 psi (7bar; 670 kPa)	75	100	125	mV	
300 psi (21 bar; 2070 kPa)	75	100	125	mV	

DIMENSIONS (millimeters, post-cut)



Standard Bond Pad Metallization:
Aluminum

Substrate Glass Layer



ELECTRICAL

