



The **3000 Series** is ideal for high-volume, low-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 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 compliant.

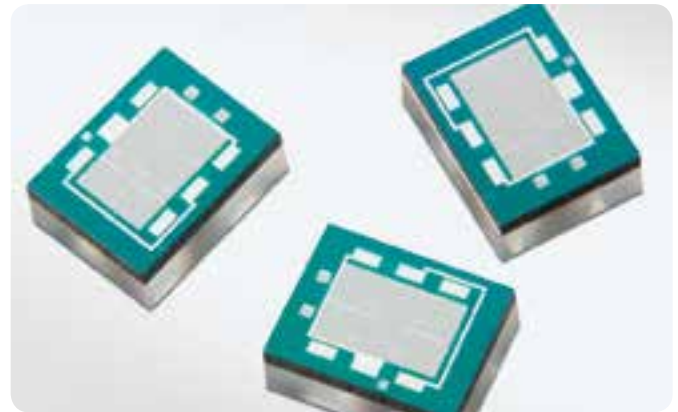
CAPABILITIES: Merit Sensor designs, engineers, fabricates, dices, assembles, and tests products from a state-of-the-art facility near Salt Lake City, Utah.

FEATURES

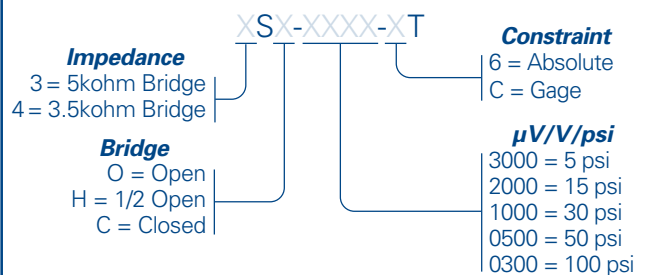
Range	5 to 100 psi (0.34 to 6.9 bar; 34.5 to 689 KPa)
Type	Absolute, gage, differential and vacuum
Media	Clean, dry air and non-corrosive gases
Shipping	Wafers on tape, waffle pack
Flexibility	Sensitivity, resistance, bridge, constraint, etc.

BENEFITS

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



3000 Series Part Number Configurator



Example: 3SO-3000-CT offers 5kohm Impedance, Open Bridge, 5 psi and Gage Constraint

Note: "T" in part number = sawn wafer on tape in metal frame

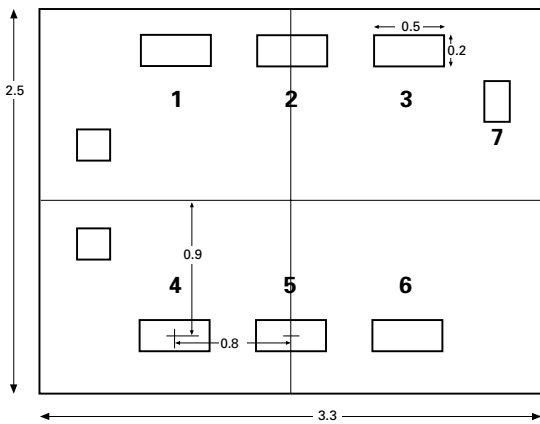
3000 Series Standard Part Numbers

3SO-3000-6T	3SC-3000-6T	4SH-3000-6T
3SO-2000-6T	3SC-2000-6T	4SH-2000-6T
3SO-1000-6T	3SC-1000-6T	4SH-1000-6T
3SO-0500-6T	3SC-0500-6T	4SH-0500-6T
3SO-0300-6T	3SC-0300-6T	4SH-0300-6T
3SO-3000-CT	3SC-3000-CT	4SH-3000-CT
3SO-2000-CT	3SC-2000-CT	4SH-2000-CT
3SO-1000-CT	3SC-1000-CT	4SH-1000-CT
3SO-0500-CT	3SC-0500-CT	4SH-0500-CT
3SO-0300-CT	3SC-0300-CT	4SH-0300-CT
3SH-3000-6T	4SO-3000-6T	4SC-3000-6T
3SH-2000-6T	4SO-2000-6T	4SC-2000-6T
3SH-1000-6T	4SO-1000-6T	4SC-1000-6T
3SH-0500-6T	4SO-0500-6T	4SC-0500-6T
3SH-0300-6T	4SO-0300-6T	4SC-0300-6T
3SH-3000-CT	4SO-3000-CT	4SC-3000-CT
3SH-2000-CT	4SO-2000-CT	4SC-2000-CT
3SH-1000-CT	4SO-1000-CT	4SC-1000-CT
3SH-0500-CT	4SO-0500-CT	4SC-0500-CT
3SH-0300-CT	4SO-0300-CT	4SC-0300-CT

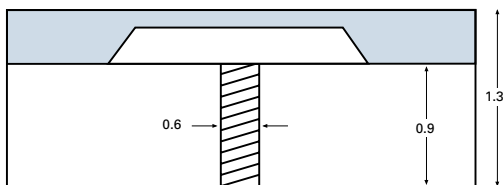
SPECIFICATIONS

Parameter	Minimum	Typical	Maximum	Units	Notes
Electrical & Environmental					
Excitation (In)		5	15	V	Maximum: 3 mA
Impedance	4000	5000	6000	Ω	Optional: 3,500 +/- 500
Operating Temperature	-40		150	$^{\circ}\text{C}$	Sentium [®] technology
Storage Temperature	-55		160	$^{\circ}\text{C}$	
Performance					
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	$\mu\text{V}/\text{V}/^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$
Temp Coeff – Resistance	2300	2800	3300	PPM/ $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$
Temp Coeff – Sensitivity	-1500	-2200	-2500	PPM/ $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$
Thermal Hysteresis	-0.2	0	0.2	% FSO	Zero pressure
Long-Term Stability	-0.2	0	0.2	% FSO	
Burst Pressure	3X				Full scale pressure
Full-Scale Output (@ 5 volts excitation)					
5 psi (.34 bar; 34.5 KPa)	60	75	90	mV	Other outputs available upon request
15 psi (1 bar; 103 KPa)	125	150	175	mV	
30 psi (2.1 bar; 207 KPa)	120	150	180	mV	
50 psi (3.4 bar; 345 KPa)	100	125	150	mV	
100 psi (6.9 bar; 689 KPa)	125	150	175	mV	

DIMENSIONS (millimeters, post-cut)

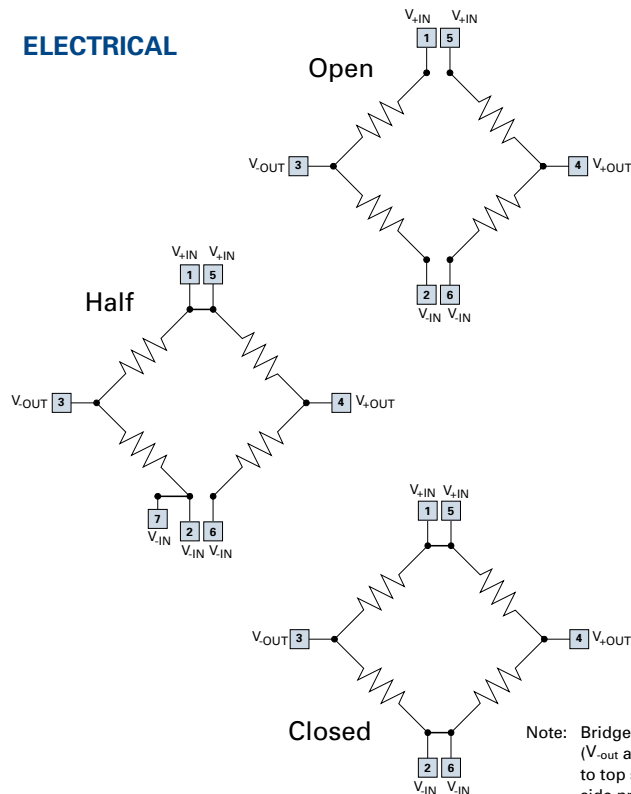


Standard Bond Pad Metallization = Aluminum



Absolute also; other constraints available

ELECTRICAL



Note: Bridge output bond pads (V_{-out} and V_{+out}) correspond to top side pressure. For back side pressure, the bridge outputs are reversed.