



The **7000 Series** is ideal for high-volume, 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 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.

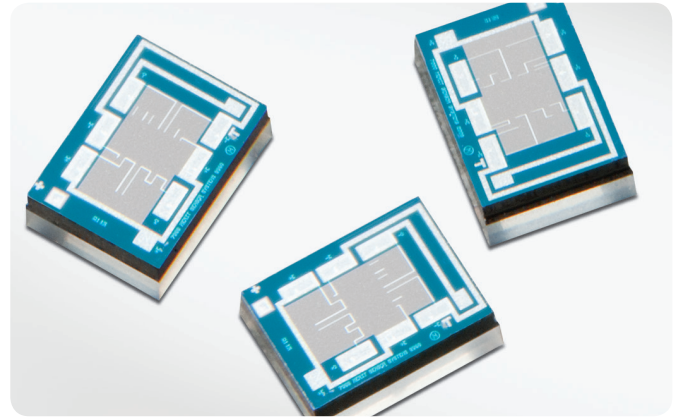
**CAPABILITIES:** Merit Sensor designs, engineers, fabricates, dices, assembles, and tests products from a state-of-the-art facility near Salt Lake City, Utah.

### FEATURES

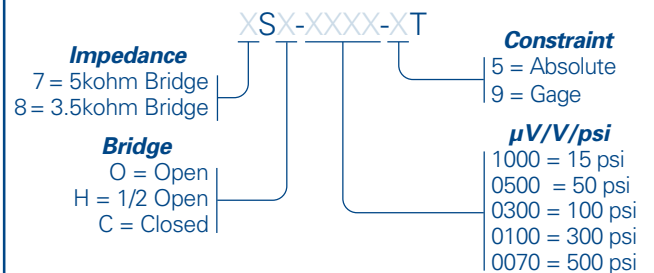
<b>Range</b>	15 to 500 psi (1 to 34.5 bar; 103 to 3,447 KPa)
<b>Type</b>	Absolute, gage, differential and vacuum
<b>Media</b>	Clean, dry air and non-corrosive gases
<b>Shipping</b>	Wafers on tape, waffle pack
<b>Flexibility</b>	Sensitivity, resistance, bridge, constraint, etc.

### 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.



### 7000 Series Part Number Configurator



**Example:** 7SO-0300-9T offers 5kohm Impedance, Open Bridge, 100psi and Gage Constraint

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

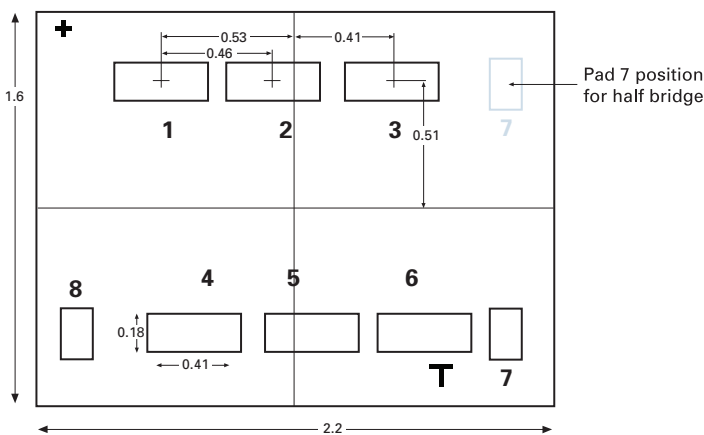
### 7000 Series Standard Part Numbers

7SO-1000-5T	7SC-1000-5T	8SH-1000-5T
7SO-0500-5T	7SC-0500-5T	8SH-0500-5T
7SO-0300-5T	7SC-0300-5T	8SH-0300-5T
7SO-0100-5T	7SC-0100-5T	8SH-0100-5T
7SO-0070-5T	7SC-0070-5T	8SH-0070-5T
7SO-1000-9T	7SC-1000-9T	8SH-1000-9T
7SO-0500-9T	7SC-0500-9T	8SH-0500-9T
7SO-0300-9T	7SC-0300-9T	8SH-0300-9T
7SO-0100-9T	7SC-0100-9T	8SH-0100-9T
7SO-0070-9T	7SC-0070-9T	8SH-0070-9T
7SH-1000-5T	8SO-1000-5T	8SC-1000-5T
7SH-0500-5T	8SO-0500-5T	8SC-0500-5T
7SH-0300-5T	8SO-0300-5T	8SC-0300-5T
7SH-0100-5T	8SO-0100-5T	8SC-0100-5T
7SH-0070-5T	8SO-0070-5T	8SC-0070-5T
7SH-1000-9T	8SO-1000-9T	8SC-1000-9T
7SH-0500-9T	8SO-0500-9T	8SC-0500-9T
7SH-0300-9T	8SO-0300-9T	8SC-0300-9T
7SH-0100-9T	8SO-0100-9T	8SC-0100-9T
7SH-0070-9T	8SO-0070-9T	8SC-0070-9T

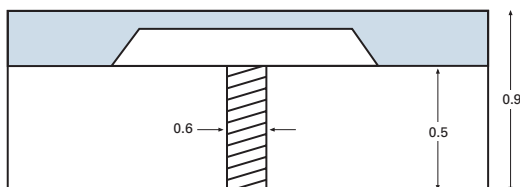
## SPECIFICATIONS

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		150	$^{\circ}\text{C}$	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 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		<0.075		$\pm$ % FSO	Zero pressure 25 $^{\circ}\text{C}$ to 125 $^{\circ}\text{C}$
Long-Term Stability		<0.1		$\pm$ % FSO	
Burst Pressure	3X				Full scale pressure
<b>Full-Scale Output (@ 5 volts excitation)</b>					
15 psi (1 bar; 103 KPa)	60	75	90	mV	Other outputs available upon request
50 psi (3.4 bar; 345 KPa)	100	125	150	mV	
100 psi (6.9 bar; 689 KPa)	120	150	180	mV	
300 psi (20.7 bar; 2,068 KPa)	120	150	180	mV	
500 psi (34.5 bar; 3,447 KPa)	140	175	210	mV	

### DIMENSIONS (millimeters, post-cut)



Standard Bond Pad Metallization = Aluminum



Absolute also; other constraints available

### ELECTRICAL

