



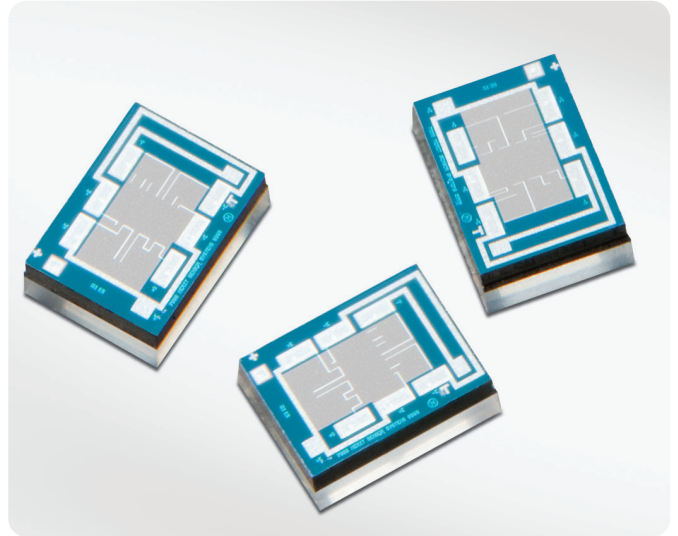
The **7000 Series** is ideal for high volume, from medium to high pressure applications.

**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.



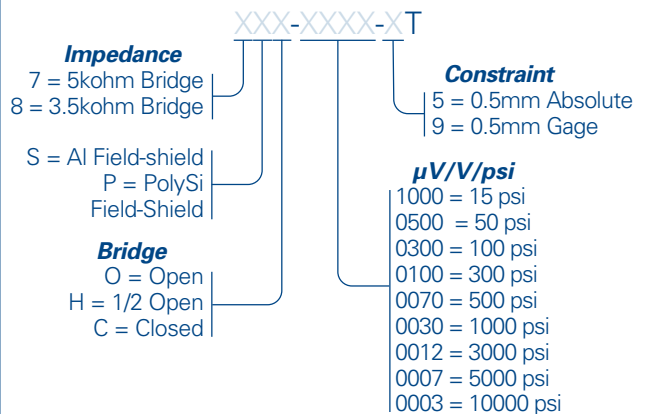
**FEATURES**

Range	15 to 10000 psi (1 to 689 bar; 103 to 68967 kPa)
Type	Absolute, gage, differential and vacuum
Media	Clean, dry air and non-corrosive gases
Shipping	Wafers on tape
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.

**7000 Series Part Number Configurator**



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

**Note:**

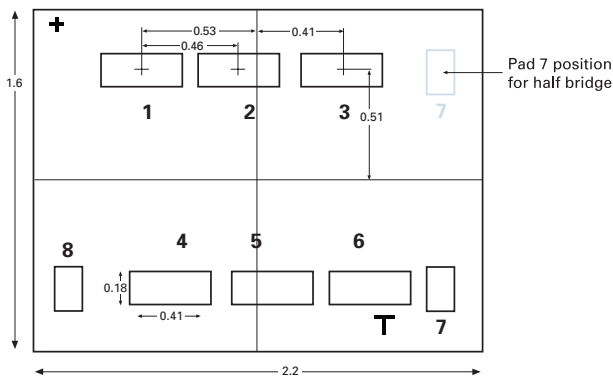
1. "T" in part number = sawn wafer on tape in metal frame.
2. Poly Fs is only available for sensitivities of 30 and below.

## SPECIFICATIONS

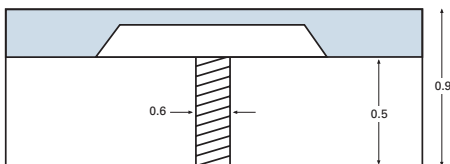
Parameter	Minimum	Typical	Maximum	Units	Notes
<b>Electrical &amp; Environmental</b>					
Excitation (In)		5	15	V	Maximum: 3 mA
Impedance	4000	5000	6000	$\Omega$	Optional: 3,500 +/- 500
Operating Temperature	-40		150	$^{\circ}\text{C}$	Sentium <sup>®</sup> technology
Storage Temperature	-55		160	$^{\circ}\text{C}$	
<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	$\mu\text{V}/\text{V}/^{\circ}\text{C}$	-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		$\pm$ % FSO	Zero pressure 25 $^{\circ}\text{C}$ to 125 $^{\circ}\text{C}$
Long-Term Stability		<0.2		$\pm$ % 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	
1000 psi (68.9 bar; 5,895 KPa)	120	150	180	mV	
3000 psi (206.9 bar; 20,684 KPa)	140	175	210	mV	
5000 psi (344.7 bar; 34,474 KPa)	140	175	210	mV	
10000 psi (689.5 bar; 68,948 KPa)	120	150	180	mV	

## DIMENSIONS (millimeters, post-cut)

Standard Bond Pad Metallization = Aluminum



Absolute also; other constraints available



## ELECTRICAL

