



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.

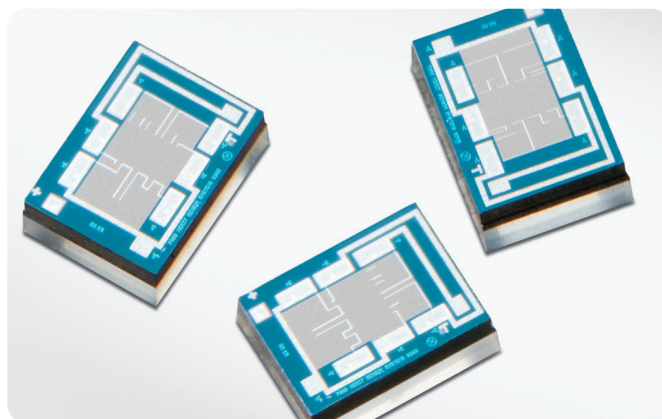
CAPABILITIES: Merit Sensor designs, engineers, fabricates, dices, assembles, and tests products from a state-of-the-art facility near Salt Lake City, Utah.

FEATURES

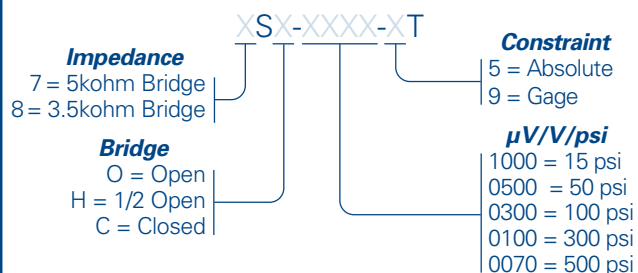
Range	15 to 500 psi (1 to 34.5 bar; 103 to 3,447 KPa)
Type	Absolute, gage, differential and vacuum
Media	Clean, dry air and non-corrosive gases
Shipping	Wafers on tape, waffle pack
Flexibility	Sensitivity, resistance, bridge, constraint, etc.

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.



7000 Series Part Number Configurator



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

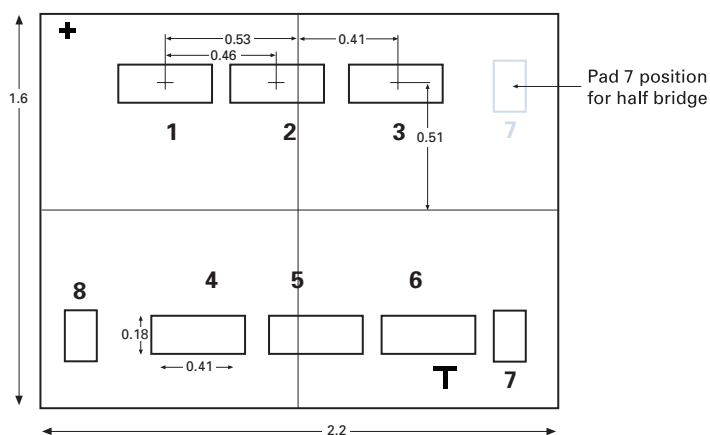
Note: "T" in part number = sawn wafer on tape in metal frame

7000 Series Standard Part Numbers

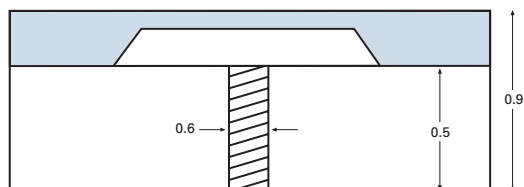
7SO-1000-5T	7SC-1000-5T	8SH-1000-5T
7SO-0500-5T	7SC-0500-5T	8SH-0500-5T
7SO-0300-5T	7SC-0300-5T	8SH-0300-5T
7SO-0100-5T	7SC-0100-5T	8SH-0100-5T
7SO-0070-5T	7SC-0070-5T	8SH-0070-5T
7SO-1000-9T	7SC-1000-9T	8SH-1000-9T
7SO-0500-9T	7SC-0500-9T	8SH-0500-9T
7SO-0300-9T	7SC-0300-9T	8SH-0300-9T
7SO-0100-9T	7SC-0100-9T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

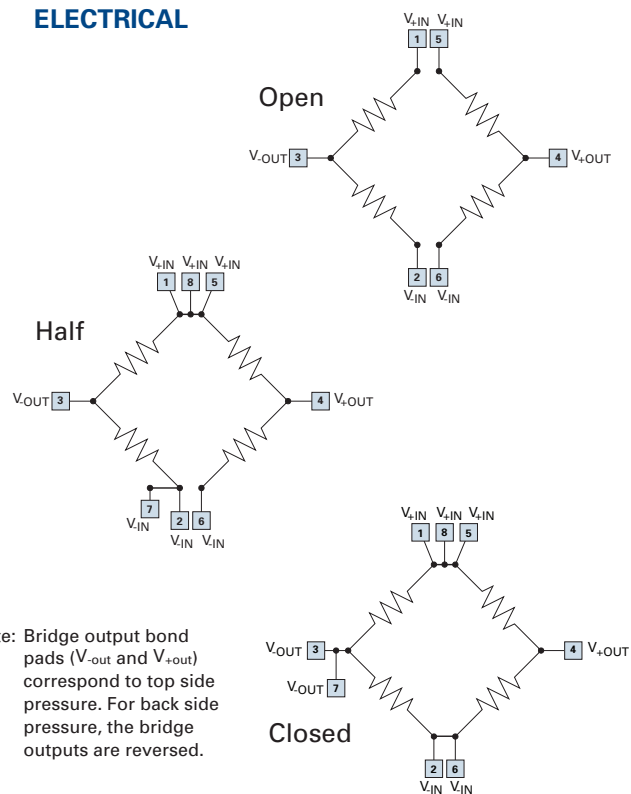
Parameter	Minimum	Typical	Maximum	Units	Notes
Electrical & Environmental					
Excitation (In)		5	15	V	Maximum: 3 mA
Impedance	4000	5000	6000	Ω	Optional: 3,500 +/- 500
Operating Temperature	-40		150	°C	Sentium® technology
Storage Temperature	-55		160	°C	
Performance					
Offset	-10	0	10	mV/V	Zero pressure; 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	$\mu\text{V/V}/^\circ\text{C}$	-40°C to 150°C
Temp Coeff – Resistance	2300	2800	3300	PPM/°C	-40°C to 150°C
Temp Coeff – Sensitivity	-1500	-2200	-2500	PPM/°C	-40°C to 150°C
Thermal Hysteresis		<0.075		$\pm$ % FSO	Zero pressure 25°C to 125°C
Long-Term Stability		<0.1		$\pm$ % FSO	
Burst Pressure	3X				Full scale pressure
Full-Scale Output (@ 5 volts excitation)					
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


Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Merit Sensor:

[7SO-1000-5W](#) [7SO-0070-5W](#) [7SO-0300-5W](#) [7SO-0100-5W](#)