



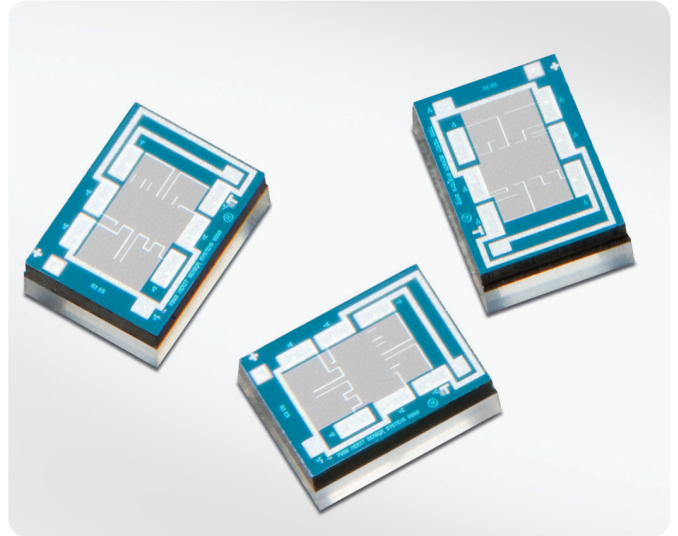
The **7000 Series** is ideal for high volume, from medium to high pressure applications.

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.



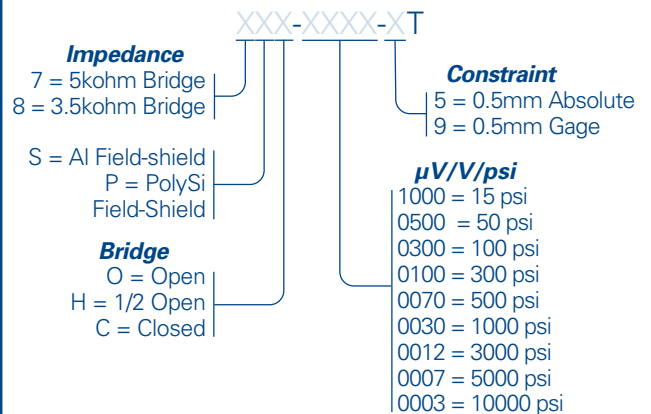
FEATURES

| | |
|--------------------|---|
| 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:

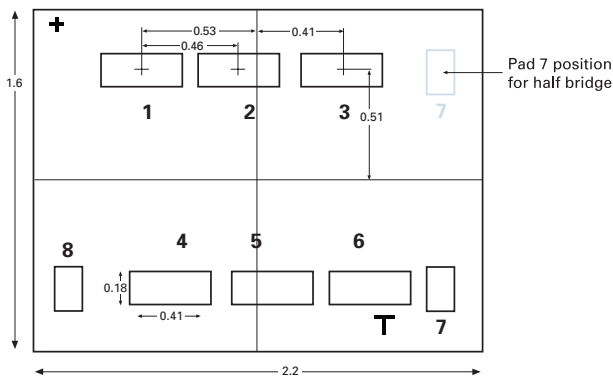
1. "T" in part number = sawn wafer on tape in metal frame.
2. Poly Fs is only available for sensitivities of 30 and below.

SPECIFICATIONS

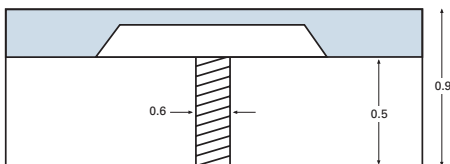
| Parameter | Minimum | Typical | Maximum | Units | Notes |
|---|---------|---------|---------|---|---|
| Electrical & Environmental | | | | | |
| Excitation (In) | | 5 | 15 | V | Maximum: 3 mA |
| Impedance | 4000 | 5000 | 6000 | Ω | Optional: 3,500 +/- 500 |
| Operating Temperature | -40 | | 150 | $^{\circ}\text{C}$ | 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 | | \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 |
| 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 | |
| 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

