



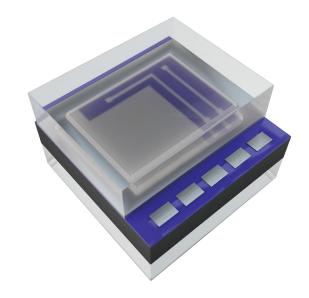
The HM Series is ideal for high-volume, low and medium pressure, harsh-media applications.

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; pressurized from cavity side

Gage; pressurized from either side of the

diaphragm

Media Air, gases and liquids that are compatible

with silicon and glass

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

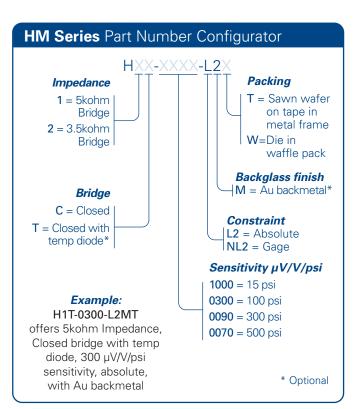
(NASDAQ: MMSI)

Speed Get to market quickly with creative and

flexible solutions

Service Experience prompt, personal, and

professional support





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 | μV/V/°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 |
| $U_{diode} @ I_{S} = 40uA$ | 350 | 530 | 800 | mV | Room Temp |
| TC of U _{diode} | -4.0 | | -1.0 | mV/°C | -40 to 150C |
| Long-Term Stability | -0.2 | 0 | 0.2 | % FSO | |
| Long-Term Stability (15psi only) | -0.4 | 0 | 0.4 | % FSO | |
| Burst Pressure | 5X | | | | Full scale pressure |
| Burst Pressure (500 psi part) | 1500 | | | psi | |
| Full-Scale Output (@ 5 volts excitation) | | | | | |
| 15 psi (1 bar; 103 KPa) | 60 | 75 | 90 | mV | Other outputs available upon request |
| 100 psi (6.9 bar; 689.5 KPa) | 120 | 150 | 180 | mV | |
| 300 psi (20.7 bar; 2,068 KPa) | 110 | 135 | 160 | mV | |
| 500 psi (34.5 bar; 3,447 KPa) | 140 | 175 | 210 | mV | |

DIMENSIONS (millimeters, post cut)

0.38

0.51

Optional TEMP **Bottom View** Top View 2.08 Ø 0.5 V_{+OUT} 2.08 0.89 0.15 +IN - Temp - - O - -IN -+0-0 1.0 0.36 0.25 Side View 0.51 Glass

ELECTRICAL

Silicon

Glass

Au backmetal (optional)

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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