

# **AP Series**

The AP Series is calibrated at room temperature using laser trimmed resistors and is suitable for high-volume, low to 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.

TECHNOLOGY: Merit Sensor utilizes a piezoresistive Wheatstone bridge with a chemically etched silicon diaphragm. All products are RoHS compliant.

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

#### **FEATURES**

-15 to 300 psi (-1 to 20.7 bar; -103 to 2,068 KPa) Range

Also available in higher pressures

Type Gage

Media Air, gases and liquids

**Packaging** Packaged die with gel on ceramic substrate

Flexibility Custom options available

### **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

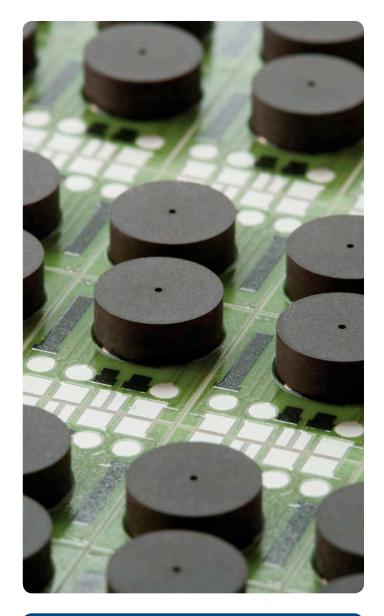
company (NASDAQ: MMSI)

Speed Get to market quickly with creative and

flexible solutions

Service Experience prompt, personal and

professional support



**AP Series** Standard Part Number

505071004



#### **SPECIFICATIONS**

| Parameter                                 | Minimum | Typical | Maximum | Units               | Notes |
|---|---------|---------|---------|---------------------|-------|
| General                                   |         |         |         |                     |       |
| Pressure Range                            | -15     |         | 300     | PSI                 |       |
| Burst Pressure                            | 3X      |         |         | Full scale pressure |       |
| Electrical (22°C unless otherwise stated) |         |         |         |                     |       |
| Input Excitation                          | 2.4     | 5       | 6       | VDC                 |       |
| Input Impedance                           | 8000    | 12000   | 16000   | ohms                |       |
| Output Impedance                          | 4000    | 5000    | 6000    | ohms                |       |
| Environmental                             |         |         |         |                     |       |
| Temp (Comp/Operating)                     | 10      | 25      | 40      | °C                  |       |
| Temperature (Storage)                     | -25     |         | 60      | °C                  |       |
| Storage Life                              |         |         | 5       | Years               |       |
| Performance                               |         |         |         |                     |       |
| Offset                                    | 4.5     | 6.0     | 7.5     | mV/5V               |       |
| Sensitivity                               | 64.868  | 65.523  | 66.178  | uV/V/psi            |       |
| Linearity                                 | -1      | 0       | 1       | %FSO (BFSL)         |       |
| Hysteresis                                | -1      |         | 1       | %FSO                |       |
| Accuracy*                                 | -2      | 0       | 2       | %FSO                |       |

<sup>\*</sup> The combined effect of Sensitivity, Repeatability, Nonlinearity, and Hysteresis errors over the temperature range of 25°C to 15°C, and 25°C to 40°C, expressed as a percent of Full Scale pressure (%FS).

#### **DIMENSIONS** (inches)

## **CIRCUIT SIDE VIEW**

#### **GEL SIDE VIEW**

