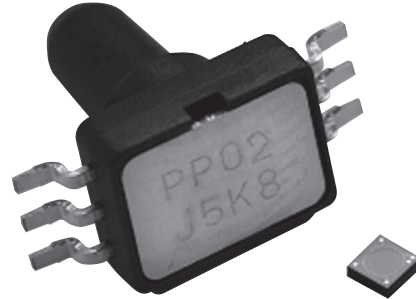


MEMS Gauge Pressure Sensor Featuring Small Size and Low Power Consumption

- Ultra-miniature 6.1 × 4.7 × 8.2 mm (L × W × H).
- Superior electrical characteristics to capacitive type pressure sensors.
- 0 to 37 kPa pressure range.
 - Offset voltage of -2.5 ± 4 mV
 - Span voltage of 31.0 ± 3.1 mV
- Low Power consumption of 0.2 mW
- Low Temperature Influence
 - Span of $\pm 1.0\%$ FS
 - Offset of $\pm 3.0\%$ FS

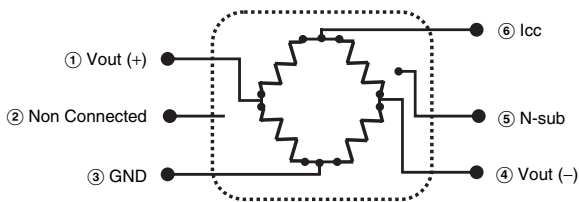


RoHS compliant

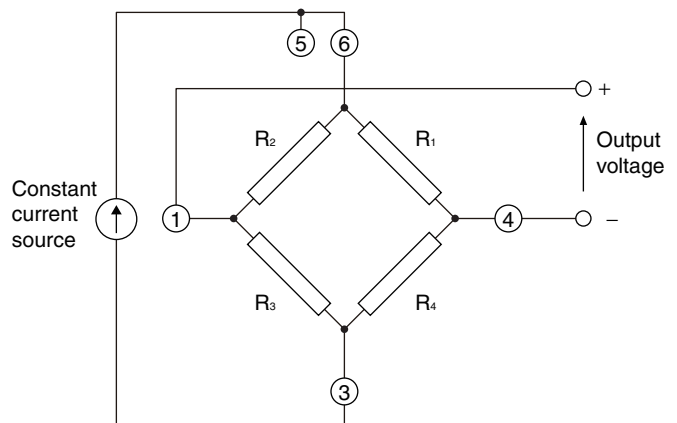


Refer to the *Safety Precautions* on page 6.

Terminal Arrangement



Connection Diagram



Note: If necessary, add a variable resistor below the GND pin (3).
The NC pin (2) must be secured to the circuit board.

Application Examples

- Medical equipment
- Home appliance
- Air movement control
- Level indicators
- Leak detection
- Pressure controller

Ordering Information

Standard Models with Surface mount package

Model	Classification	Structure	Packaging
2SMPP-02	Bottom Port Type	SOP	Plastic sleeve

Specifications

■ Ratings

Item	2SMPP-02
Type of pressure *1	Gauge pressure
Sensing method*2	Piezoresistance
Pressure medium	Air
Driving method	Constant current drive
Drive current	100 μ A DC
Pressure range	0 to 37 kPa
Maximum allowable pressure	53 kPa
Maximum drive current	130 μ A DC
Ambient operating temperature range	0 to 50°C (with no condensation or icing)
Ambient operating humidity range	15% to 95% (with no condensation or icing)
Ambient storage temperature range	-30 to 85°C (with no condensation or icing)
Ambient storage humidity range	10% to 95% (with no condensation or icing)
Weight	0.17 g

Note: The above specifications are the results of measurements taken at an ambient temperature of 23°C.

*1 Do not use the Sensor under negative pressure.

*2 Do not use any corrosive gases. Use only air.

Characteristics

■ Electrical Characteristics

Item	2SMPP-02
Gauge resistance value	20 \pm 2 k Ω
Offset voltage	-2.5 \pm 4.0 mV
Span voltage	31.0 \pm 3.1 mV (with an applied pressure of 37 kPa)
Non-linearity	0.8% FS max. (0 to 37 kPa)
Hysteresis	0.5% FS (0 to 37 kPa)
Sensitivity variation with temperature	0.5 \pm 1.0% FS (0°C)
	0.3 \pm 1.0% FS (50°C)
Offset voltage variation with temperature	0 \pm 3.0% FS (0 to 25°C)
	0 \pm 3.0% FS (25 to 50°C)

Measurement conditions: Ambient temperature = 23°C, constant current and drive current = 100 μ A