

Solid State Pressure Sensor

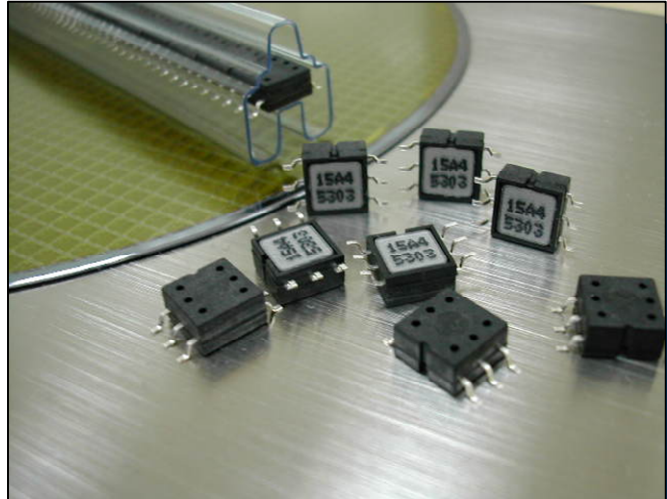
SMP Series – Model 31

FEATURES

- Low Cost
- Miniature SMD
- Absolute Pressure
- Small Foot Print
- High Sensitivity

APPLICATIONS

- Barometric Pressure
- Altimeter
- Medical Devices
- White Goods



DESCRIPTION

The SMP Series are uncompensated high performance die in a plastic surface mount package. They are absolute pressure sensors fabricated by bonding a micromachined silicon diaphragm to Pyrex glass in a vacuum. Uniform span and offset distribution result from precise implant and etching control. The result is long-term offset stability that is suitable for barometric pressure measurement.

This sensor provides a solution for high volume OEM manufacturers to use pressure sensors at costs close to bare die price, without the need to handle, attach or wire bond silicon die.

In order to provide maximum flexibility, the sensors are available with several custom features including pressure range, impedance and pin out configuration.

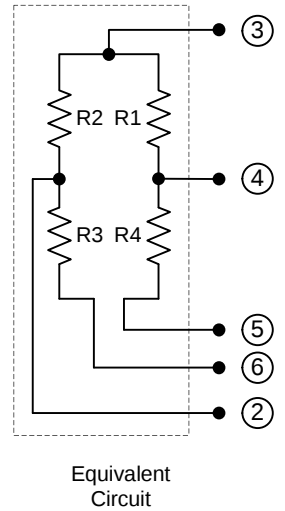
For custom products, please contact the factory.



Characteristics 15 psiA Version

Unless otherwise specified, all parameters are measured at 25 °C and excitation of 5.0 Vdc

Parameters	Min	Typ	Max	Unit
Excitation Voltage		5.0	10	V
Excitation Current		1.0		mA
Span	65	100	140	mV
Offset	-30		+30	mV
Bridge Impedance	4	5	6	kohm
Linearity ^{NOTE1}		±0.3		%FS
TC - Span ^{NOTE2}	-17.5	-19.5	-23.5	%FS/100°C
TC - Offset ^{NOTE2}		±8		%FS/100°C
Pressure Overload			3X	Rated FS
Temp - Operating	-40		+85	°C
Temp - Storage	-40		+125	°C

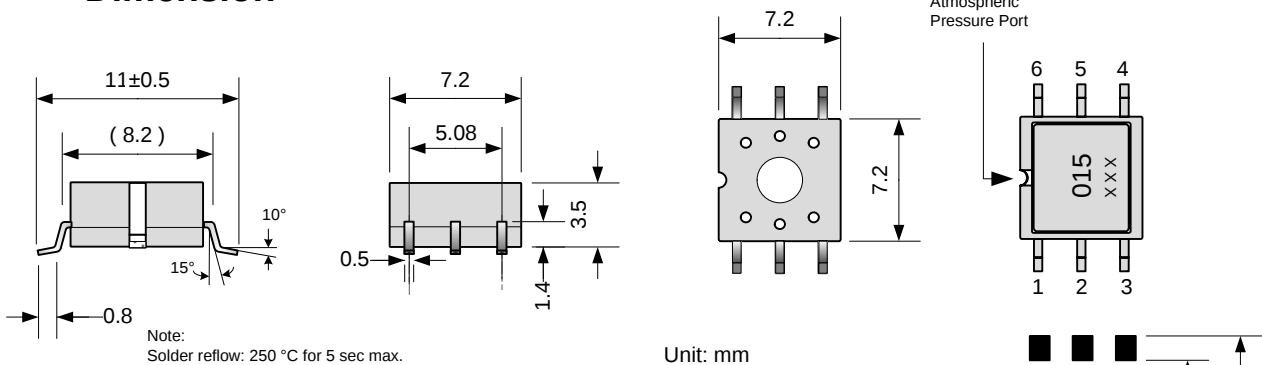


Notes:

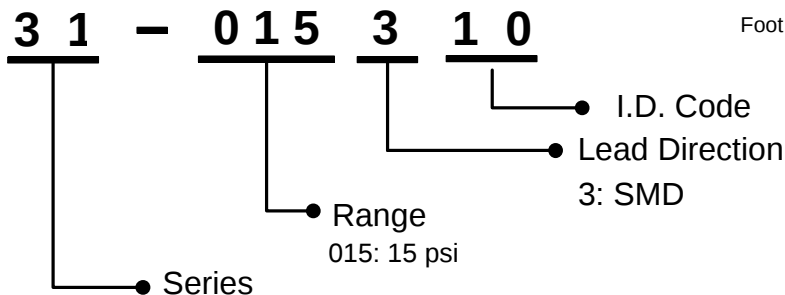
1. Best Fit Straight Line
2. Temperature coefficient is measured from -10 °C to 50 °C
3. Wetted material contains glass, RTV, PPA, Au, Ag and silicon

Lead	Connection
5,6	INPUT -
3	INPUT +
4	OUTPUT +
2	OUTPUT -

Dimension



Ordering Information



Foot Print



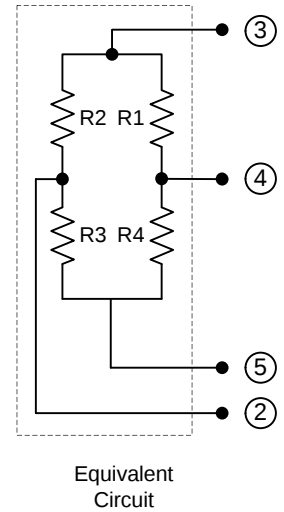
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Characteristics 100 psiA Version

Unless otherwise specified, all parameters are measured at 25 °C and excitation of 5.0 Vdc

Parameters	Min	Typ	Max	Unit
Excitation Voltage		5.0	10	V
Pressure Range		100		psi
Span	65	100	140	mV
Offset	-30		+30	mV
Bridge Impedance	4	5	6	kohm
Linearity ^{NOTE1}		±0.3		%FS
TC - Span ^{NOTE2}	-12	-19.5	-23.5	%FS/100°C
TC - Offset ^{NOTE2}		±8		%FS/100°C
Pressure Overload			1.5X	Rated FS
Temp - Operating	-40		+85	°C
Temp - Storage	-40		+125	°C

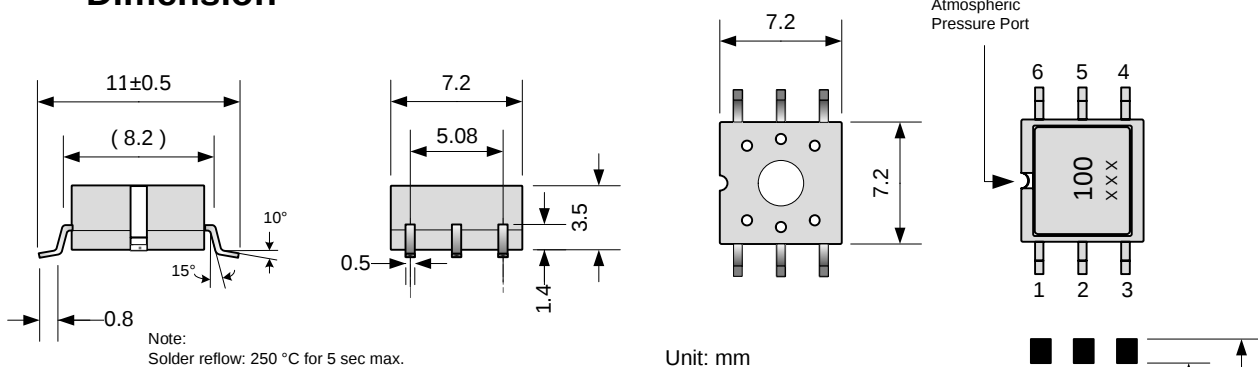


Notes:

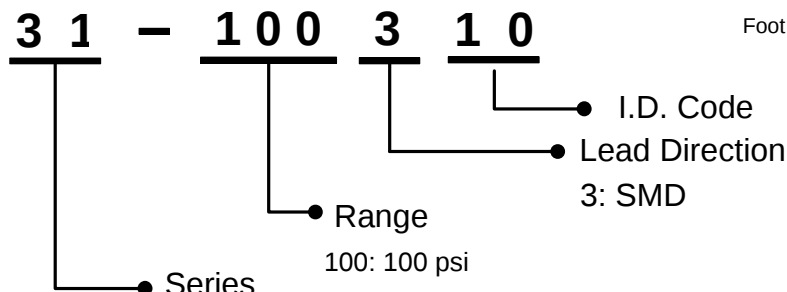
1. Best Fit Straight Line
2. Temperature coefficient is measured from -10 °C to 50 °C
3. Wetted material contains glass, RTV, PPA, Au, Ag and silicon

Lead	Connection
5	INPUT -
3	INPUT +
4	OUTPUT +
2	OUTPUT -

Dimension



Ordering Information



Foot Print



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