

40kPa Gauge Pressure Sensor

XL202

Features

- Gauge Pressure $-40\text{kPa} \sim 0\text{kPa} \sim 40\text{kPa}$
- Ambient Operating Temperature Range: -40°C to 125°C
- Suitable for Non-corrosive Gases
- SOP6 package

Applications

- Vacuum negative pressure detection
- Vacuum cleaner
- Massage chair
- Electronic sphygmomanometer

General Description

XL202 is a piezoresistive pressure sensor made using MEMS technology, consisting of an elastic film and four resistors integrated on the film. The four varistors form a Wheatstone bridge structure. When pressure is applied to the elastic film, the bridge generates a voltage output signal that is linearly proportional to the applied pressure. XL202 adopts standard SOP6 packaging, which has good linearity, repeatability, stability, and high sensitivity. XL202 can be widely used in fields such as household appliances, consumer electronics, and industrial control.

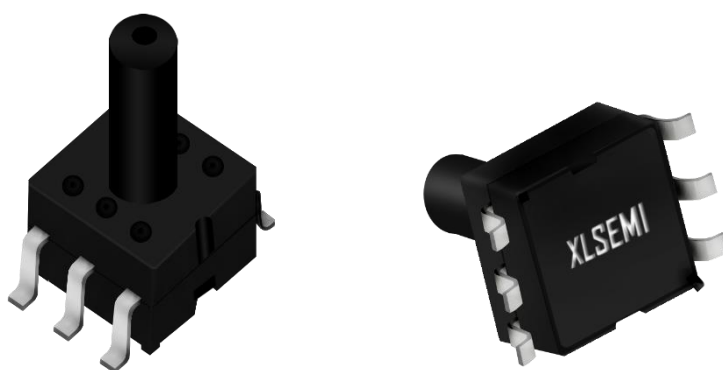


Figure1. Package Type of XL202

40kPa Gauge Pressure Sensor

XL202

Pin Configurations

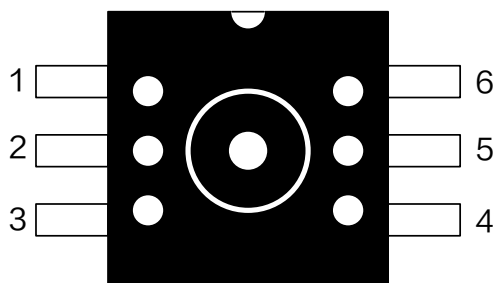


Figure2. Pin Configuration of XL202

Table 1 Pin Description

	1	2	3	4	5	6
Pin Definition 1	GND	OUT-	NC	VDD	OUT+	NC
Pin Definition 2	OUT-	GND	NC	OUT+	VDD	NC

Ordering Information

Order Information	Marking ID	Package Type	Eco Plan	Packing Type Supplied As
XL202	XL202	SOP6	RoHS & HF	70 Units Per Tube

Internal Structure

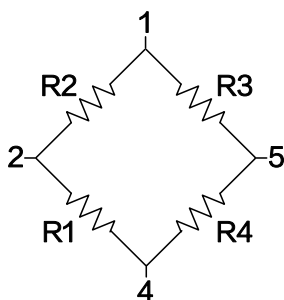


Figure3. Internal Structure Diagram of XL202

40kPa Gauge Pressure Sensor

XL202

XL202 Characteristics

$T_A = 25^{\circ}\text{C}$, $V_{DD} = 5\text{V}$, measurement medium: air, unless otherwise specified.

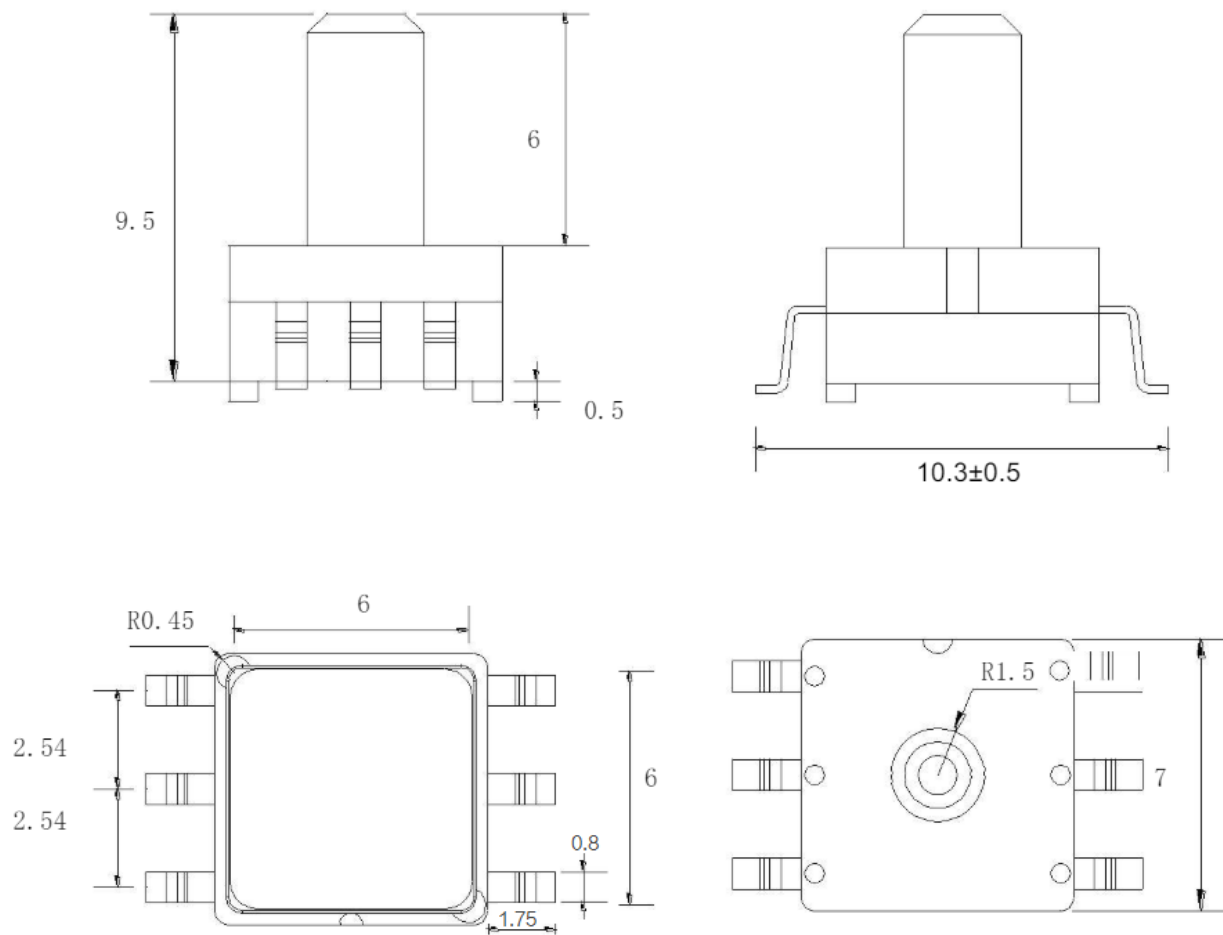
Parameters	Test Condition	Min.	Typ.	Max.	Unit
Operation Voltage			5	15	V
Operation Current			1	3	mA
Pressure Range			40		kPa
Operation Temperature		-40		125	$^{\circ}\text{C}$
Bridge Arm Resistance		4	5	6	$\text{k}\Omega$
Zero Output	0kPa	-10	0	10	mV
Zero Temperature Coefficient	-40~125 $^{\circ}\text{C}$	-0.26		0.13	%FS/ $^{\circ}\text{C}$
Full Scale Output	40kPa	59.5	70.0	80.5	mV
Full Scale Output Temperature Coefficient	-40~125 $^{\circ}\text{C}$	-0.26		0.13	%FS/ $^{\circ}\text{C}$
Pressure Hysteresis	0~40kPa		± 0.1		%FS
Repeatability	0kPa		± 0.1		%FS
Linear	1mA, 0~40kPa		± 0.2		%FS
Overload Pressure			3x		Rated
Burst Pressure			5x		Rated

40kPa Gauge Pressure Sensor

XL202

Package Information

SOP6



The above data has a tolerance of $\pm 0.05\text{mm}$, unless otherwise specified.

40kPa Gauge Pressure Sensor**XL202****Important Notice**

XLSEMI reserve the right to make modifications, enhancements, improvements, corrections or other changes without notice at any time. XLSEMI does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. XLSEMI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using XLSEMI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards. XLSEMI warrants performance of its products to the specifications applicable at the time of sale, in accordance with the warranty in XLSEMI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques are used to the extent XLSEMI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

For the latest product information, go to www.xlsemi.com.