

100kPa Gauge Pressure Sensor

XL203

Features

- Gauge Pressure $-100\text{kPa} \sim 0\text{kPa} \sim 100\text{kPa}$
- Ambient Operating Temperature Range: -40°C to 125°C
- Suitable for Non-corrosive Gases
- SOP6 package

Applications

- Pressure gauge
- Pipeline pressure monitoring
- Massage chair
- Oxygenator

General Description

XL203 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. XL203 adopts standard SOP6 packaging, which has good linearity, repeatability, stability, and high sensitivity. XL203 can be widely used in fields such as household appliances, consumer electronics, and industrial control.

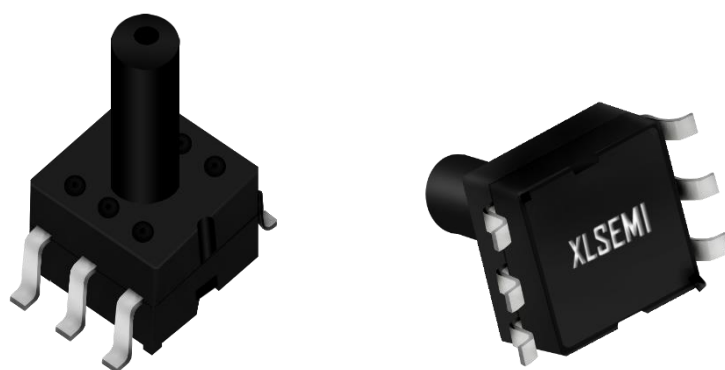


Figure1. Package Type of XL203

100kPa Gauge Pressure Sensor

XL203

Pin Configurations

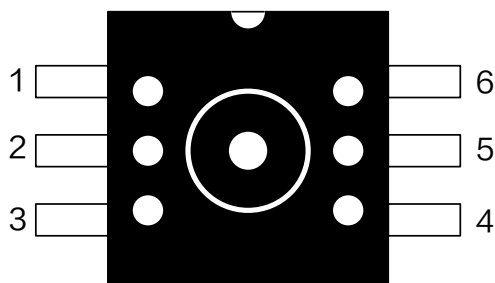


Figure2. Pin Configuration of XL203

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
XL203	XL203	SOP6	RoHS & HF	70 Units Per Tube

Internal Structure

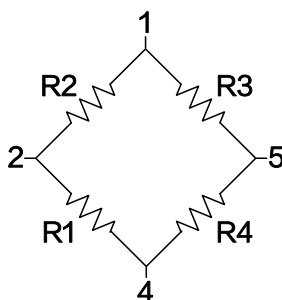


Figure3. Internal Structure Diagram of XL203

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XL203

XL203 Characteristics

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

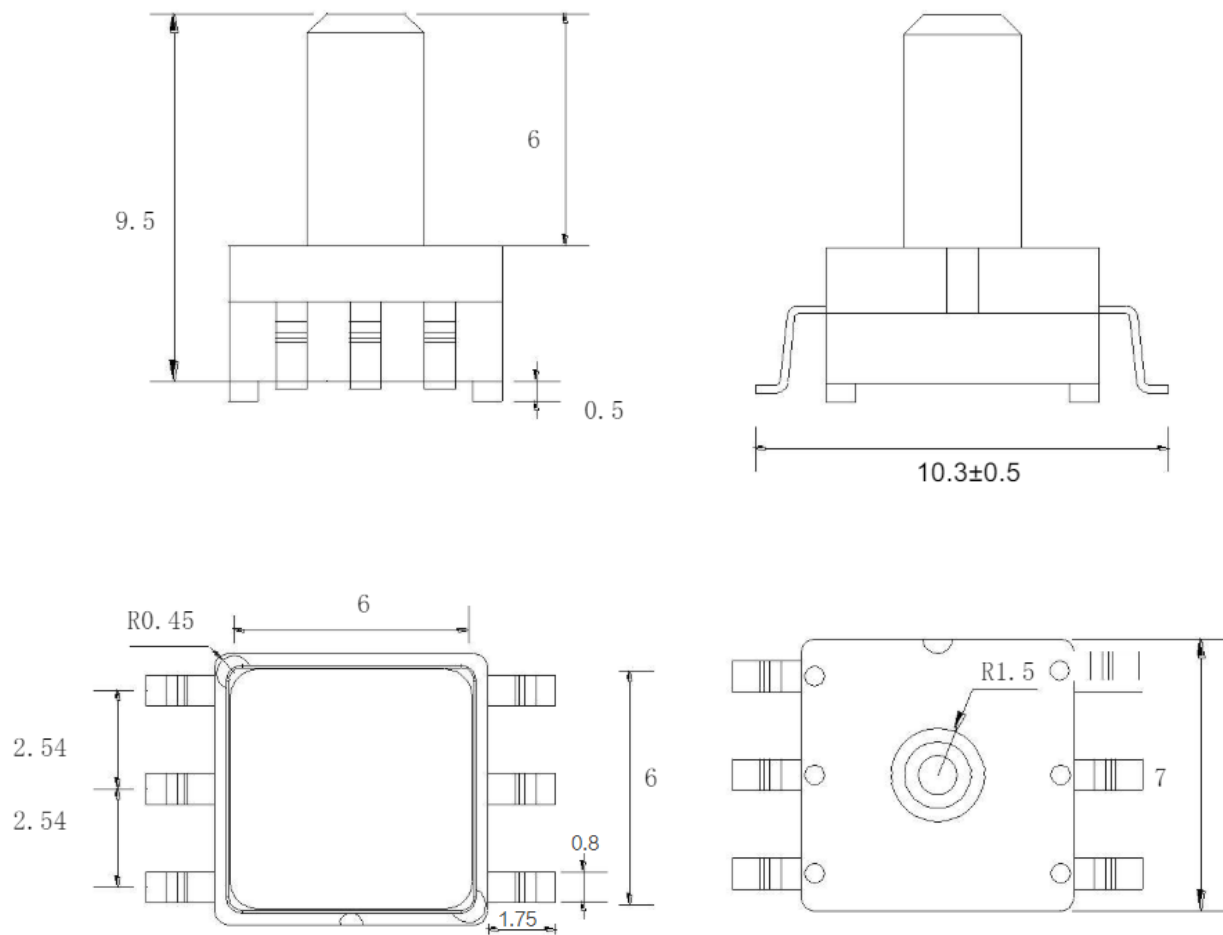
Parameters	Test Condition	Min.	Typ.	Max.	Unit
Operation Voltage			5	15	V
Operation Current			1	3	mA
Pressure Range			100		kPa
Operation Temperature		-40		125	$^{\circ}\text{C}$
Bridge Arm Resistance		4.5	5	5.5	$\text{k}\Omega$
Zero Output	0kPa	-5	0	5	mV
Zero Temperature Coefficient	-40~125 $^{\circ}\text{C}$	-0.03		0.0	%FS/ $^{\circ}\text{C}$
Full Scale Output	100kPa	59.5	70.0	80.5	mV
Full Scale Output Temperature Coefficient	-40~125 $^{\circ}\text{C}$	-0.3		0.0	%FS/ $^{\circ}\text{C}$
Pressure Hysteresis	0~100kPa		± 0.1		%FS
Repeatability	0kPa		± 0.1		%FS
Linear	1mA, 0~100kPa		± 0.2		%FS
Overload Pressure			3x		Rated
Burst Pressure			5x		Rated

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Package Information

SOP6



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

100kPa Gauge Pressure Sensor**XL203****Important Notice**

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