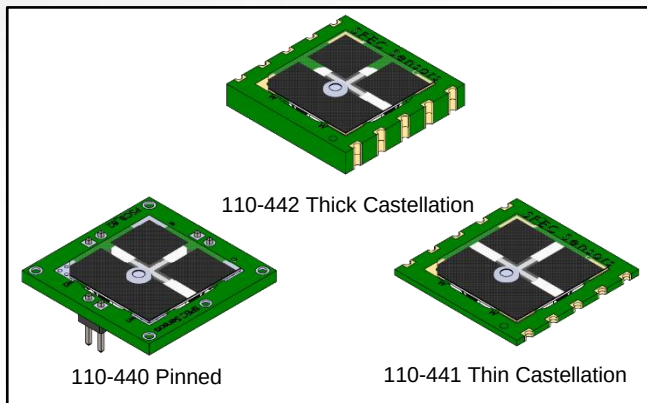
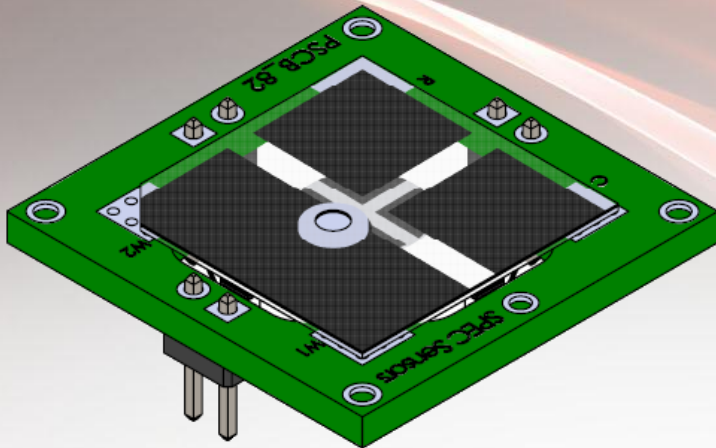


High Sensitivity Ozone (O₃) Sensor 110-44x



Interlink Electronics Screen Printed Electrochemical sensor (SPEC Sensor™) revolutionizes the current state of the art, enabling new applications in consumer, medical and industrial safety. Interlink Electronics offer the performance of the best quality electrochemical sensors at a fraction of the price. The 110-44x family High Sensitivity Ozone sensors are small and low-profile, facilitating easy integration into wireless, portable, and other IoT solutions. These sensors are ideal for health, food, environmental, industrial, and residential monitoring, because of their high performance, low cost, and small size. IE'S High Sensitivity Ozone Sensor are available in three packages (110-440, 110-441, 110-442).

FEATURES

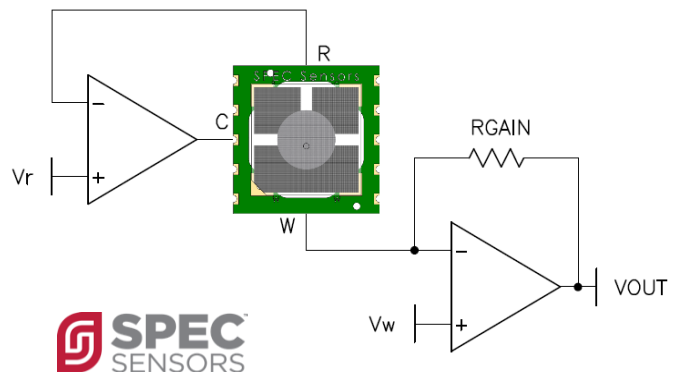
- Small Size & Low Profile (20 x 20 x 3 mm)
- Improved stability and low ppb sensitivity
- Accurate & Linear Response
- Long Life (10 +years)
- Fast Response
- 100% Factory Tested
- Ultra-Low Power < 50 uW max
- ROHS Compliant

APPLICATIONS

- Outdoor Air Quality
- Indoor Air Quality
- Food Quality
- Health/ Sanitizing
- Weather Stations
- Smart Homes
- Air Purification Control
- Industrial Safety

The diagram below shows the basic measuring circuit for the 110-44x. The sensor generates an electric current which is converted into output voltage (V_{out}) using a linear circuit like the one shown.

Notes: V_{bias} = V_w-V_r



SPECIFICATIONS

Parameter	Typical Value	Unit	Notes
Measurement Range	0 to 2	ppm	1,2,3
Lower Detection Limit	0.005	ppm	1,2
Resolution	0.003	ppm	1,2
Accuracy	± 5	%	1
Response Time – T (90)	< 180	seconds	1
Sensitivity Range	-100 ± 25	nA/ppm	1
Expected Operating Life	10	years	1
Operating Temperature Range	-30 to 55	°C	3
Operating Humidity Range	10 to 95	%	3,4
Operating Pressure Range	0.8 to 1.2	atm	3
Operating Bias Range	0 to -25	mV	
Power Consumption	10 to 50	uW	2

1. At standard conditions (25 °C, 50% RH, 1 atm), unless otherwise indicated.
2. Depends on circuit design.
3. Recommended operating range. The sensor may be damaged, and warranty voided if operated outside the specified range. For the best optimum accuracy operate sensor at -20 to 40 °C and 15 to 90% RH.
4. Non-condensing.

CROSS SENSITIVITY

Most chemical sensors exhibit some cross-sensitivity to other gases. The following table lists the relative response of common potential interfering gases, and the concentration at which the data was gathered.

Gas/Vapor	Concentration	Typical Response as PPM O3
Ozone	0.82 ppm	0.82
Hydrogen	200 ppm	0
Nitrogen Dioxide	5 ppm	4.2
Carbon Monoxide	400 ppm	0
Sulfur Dioxide	10 ppm	0.05
Hydrogen Sulfide	25 ppm	0
Ethanol	200 ppm	0
Formaldehyde	10 ppm	0
Ethylene	50 ppm	0.02
Chlorine	10 ppm	4.0
Nitric Oxide	10 ppm	0.2
Ammonia	100 ppm	-0.3

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