

● KGS 101



KGS 101 气体传感器是氧化锡(SnO<sub>2</sub>) 半导体式气体传感器。用于气体探测器、空气清浄器,自动换气系统,微波炉等。传感器的电阻在洁浄的空气中虽高,但在大气中的气体或水蒸气的浓度增加,传感器的电阻就减小。KGS 101 具有优异的稳定性,快速响应恢复,高灵敏度,耐久性优秀的特点。

■ 技术参数

检测气体	大部分的可燃性及还原性气体	
功耗	800 ± 50 mW	
加热片电流	160 ± 10 mA	
加热片电压	AC 或 DC 5 V	
回路电压	AC 或 DC 12 V 以下 (推荐用 DC 5V)	
负载电阻	可调	
使用温度及湿度	-10℃ ~ 50℃, 30-85%RH	
储存 温度	-30℃ ~ 50℃	
灵敏度	Rs (air)	20 ~ 80 kΩ (在洁浄空气中) 25℃, 60% RH
	Gas	Rs (CH <sub>4</sub> 1000ppm)/ Rs (air) < 1/3

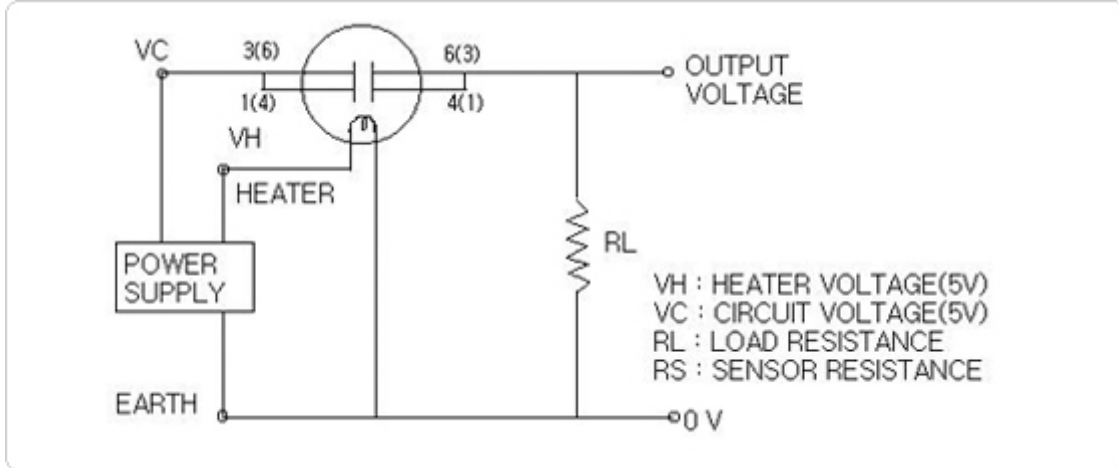
■ Detectable Gases

Hydrocarbons	Methane, Propane, Butane, Hexane, Gasoline, Acetylene, Ethylene, Butylene, Benzene, Toluene, etc.
Halogenized Hydrocarbons	Methyl Chloride(CH <sub>3</sub> Cl) , Ethyl Chloride, Vinyl Chloride, etc.
Alcohols	Methanol, Ethanol, Propanol, Butanol, etc.
Ethers	Methyl Ether, Ethyl Ether, etc.
Ketones	Acetone, Methyl Ethyl Ketone, etc.
Esters	Methyl Acetate, Ethyl Acetate, Butyl Acetate, etc.
Nitrogen Compounds	Nitro Methane, Methyl Amine, Ethyl Amine, etc.
Inorganic Gas & Others	Ammonia, Carbon Monoxide, Hydrogen, Hydrogen Sulphide, Smoke, etc.

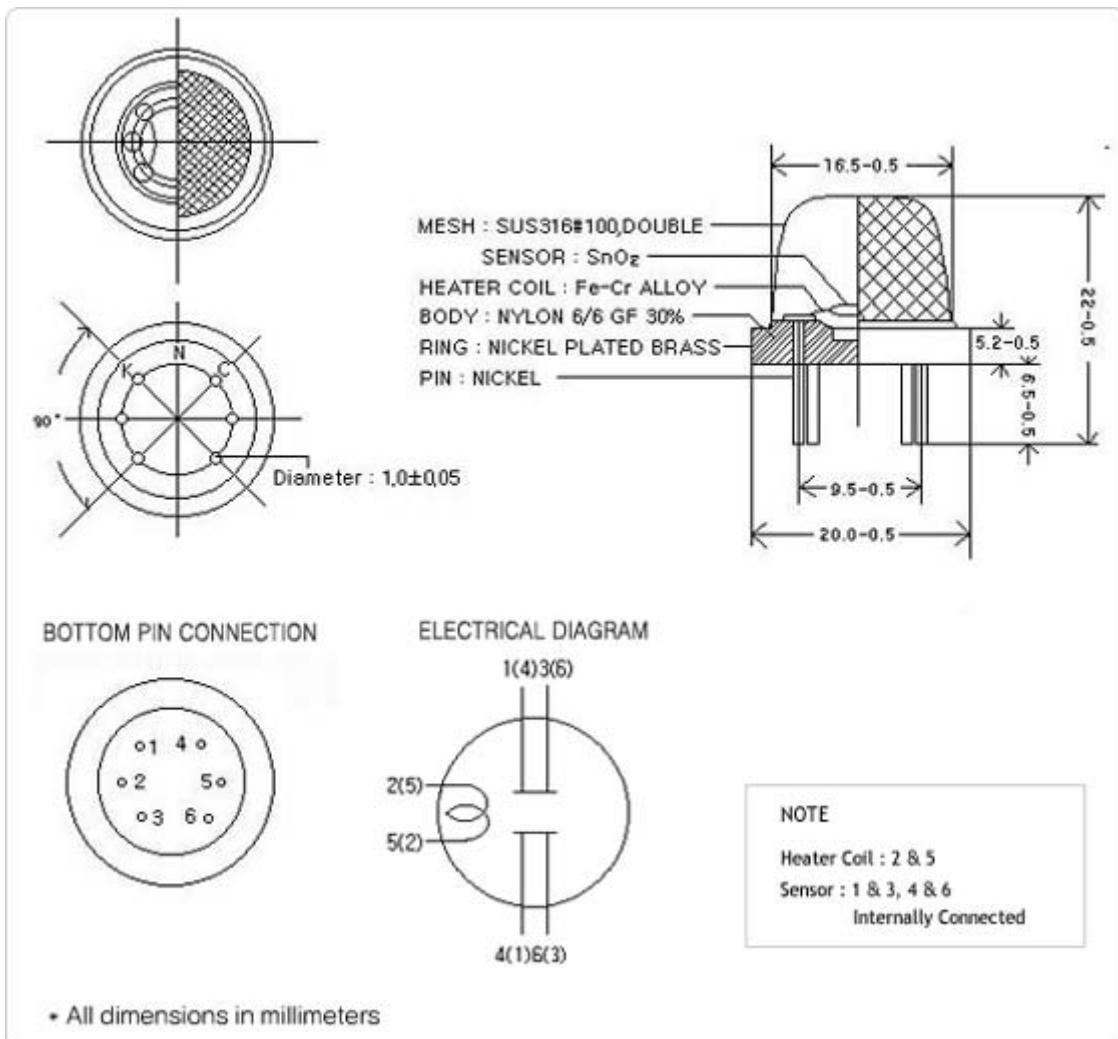
### ■ Basic Measuring Circuit

The variation in resistance of the sensor( $R_s$ ) is measured as a change in the voltage across the load resistor( $R_L$ ). The sensor resistance( $R_s$ ) is calculated from output voltage( $V_{RL}$ ) by the following formula.

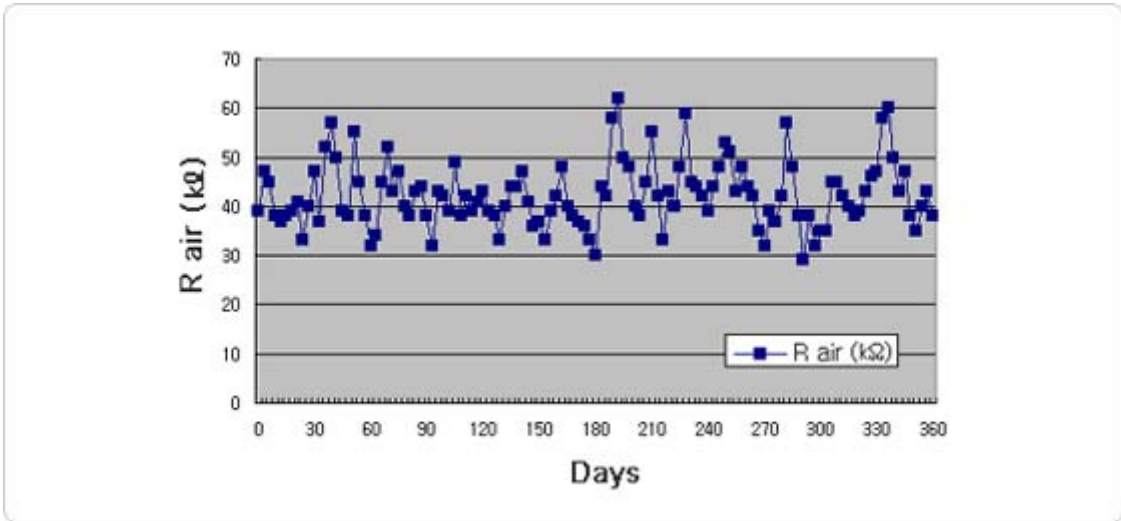
$$R_s = (V_c / V_{RL} - 1) * R_L$$



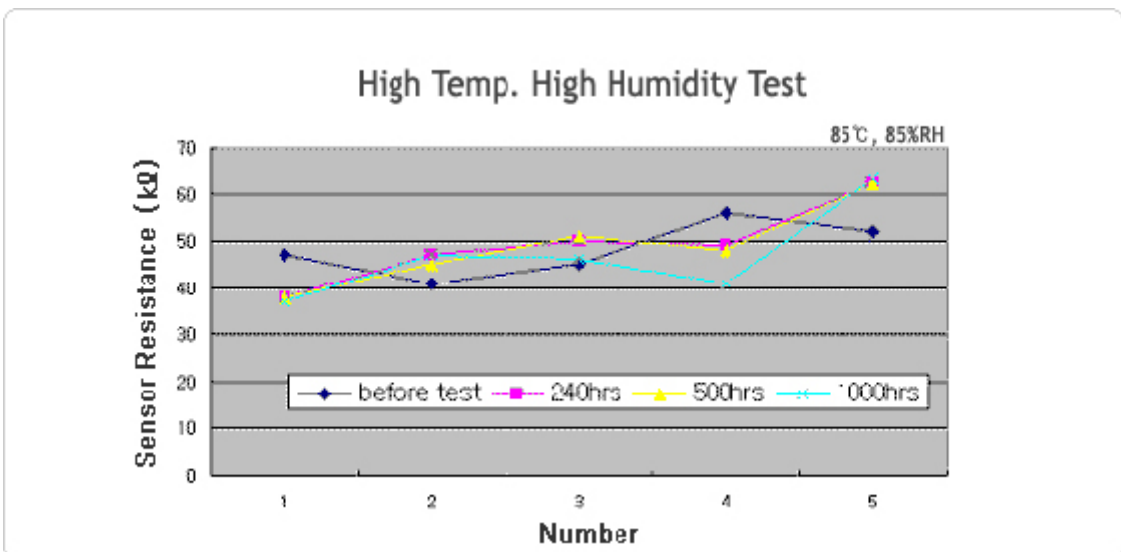
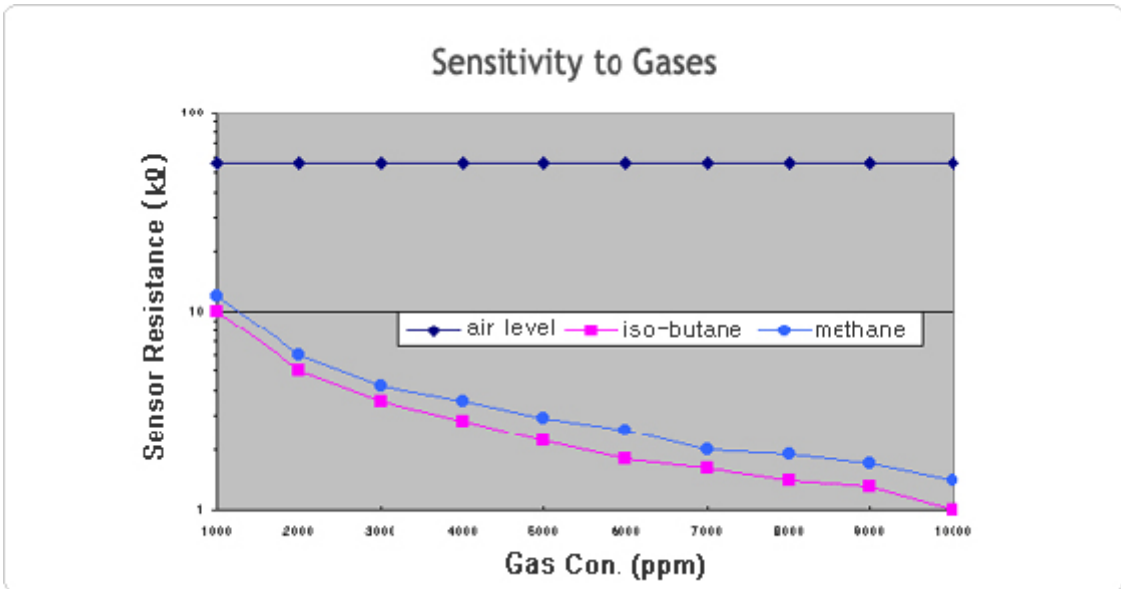
### ■ Structure and Materials



■ R air Variation with Aging Time



■ Characteristics Data



### Thermal Shock Test

