

## Sample test outcomes

<b>Time: 2019.06.27</b>								
<b>Test conditions: VH=2.5V, VC=3.3V</b>								
<b>Type: GM-102B、GM-302B、GM-502B、GM-702B</b>								
1#	<b>Gas: NO2</b>				<b>Gas: C2H5OH</b>			
	Type	Initial value(V)	5ppm(V)	Difference(V)	Type	Initial value(V)	50ppm(V)	Difference(V)
	GM-102B	1.41	0.38	-1.03	GM-102B	1.42	2	0.58
	GM-302B	0.94	0.48	-0.46	GM-302B	0.95	2.06	1.11
	GM-502B	1.42	0.53	-0.89	GM-502B	1.41	2.93	1.52
	GM-702B	1.54	0.55	-0.99	GM-702B	1.35	2.86	1.51

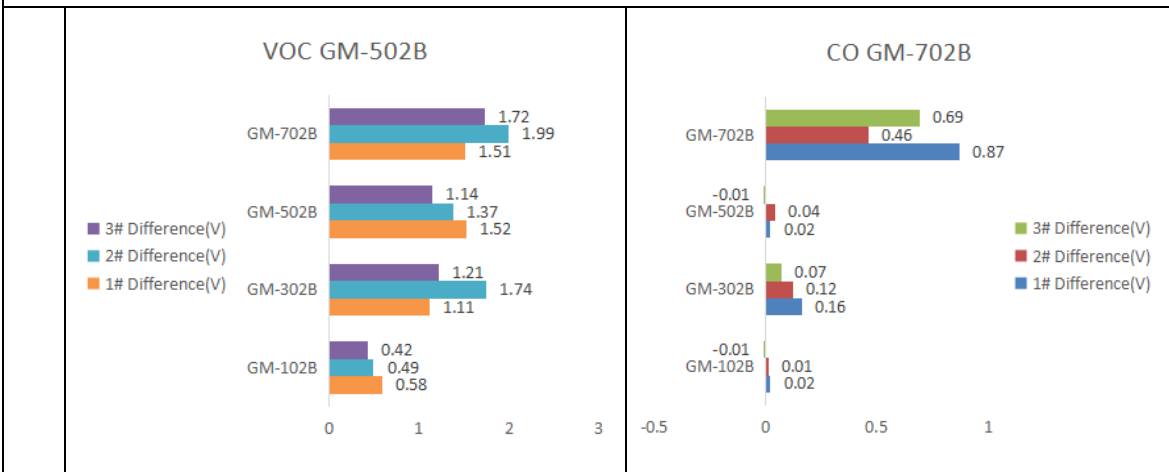
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<b>Time: 2019.06.27</b>								
<b>2#</b>	<b>Gas: NO2</b>				<b>Gas: C2H5OH</b>			
	Type	Initial value(V)	5ppm(V)	Difference(V)	Type	Initial value(V)	50ppm(V)	Difference(V)
	GM-102B	0.94	0.22	-0.72	GM-102B	0.92	1.41	0.49
	GM-302B	0.45	0.24	-0.21	GM-302B	0.35	2.09	1.74
	GM-502B	1.45	0.49	-0.96	GM-502B	1.51	2.88	1.37
	GM-702B	0.77	0.3	-0.47	GM-702B	0.74	2.73	1.99
<b>3#</b>	<b>Gas: NO2</b>				<b>Gas: C2H5OH</b>			
	Type	Initial value(V)	5ppm(V)	Difference(V)	Type	Initial value(V)	50ppm(V)	Difference(V)
	GM-102B	1.29	0.27	-1.02	GM-102B	1.2	1.62	0.42
	GM-302B	1.12	0.61	-0.51	GM-302B	1.12	2.33	1.21
	GM-502B	1.82	0.58	-1.24	GM-502B	1.72	2.86	1.14
	GM-702B	1.06	0.37	-0.69	GM-702B	1.08	2.8	1.72
<b>1#</b>	<b>Gas: CO</b>							
	Type	Initial value(V)	150ppm(V)	Difference(V)	Types of sensors		Gases measured	
	GM-102B	1.31	1.33	0.02	GM-102B		NO2	
	GM-302B	0.72	0.88	0.16	GM-302B		C2H5OH	
	GM-502B	1.33	1.35	0.02	GM-502B		VOC	
	GM-702B	1.22	2.09	0.87	GM-702B		CO	

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2#	Gas: CO				<p><b>NOTICE:</b> When it comes to judging what the gas is, GM-102B can be taken as an example. As it can be seen from the four charts above and beside, GM-102B has participated three times for each gas detecting. And its number of differences peaked at the most under the atmosphere of NO2 than other gases. Therefore GM-102B is sensible to NO2 and accordingly is able to detect NO2, which is applicable to other sensors and sorts of gases as well. When being put under other kinds of gases, the sensor is able to detect the gas which makes it the most differences.</p>																																			
	Type	Initial value(V)	150ppm(V)	Difference(V)																																				
	GM-102B	0.94	0.95	0.01																																				
	GM-302B	0.36	0.48	0.12																																				
	GM-502B	1.46	1.5	0.04																																				
	GM-702B	0.72	1.18	0.46																																				
3#	Gas: CO																																							
	Type	Initial value(V)	150ppm(V)	Difference(V)																																				
	GM-102B	1.18	1.17	-0.01																																				
	GM-302B	1.18	1.25	0.07																																				
	GM-502B	1.72	1.71	-0.01																																				
	GM-702B	1.01	1.7	0.69																																				
	<p>NO2 GM-102B</p> <table><thead><tr><th>Trial</th><th>3# Difference(V)</th><th>2# Difference(V)</th><th>1# Difference(V)</th></tr></thead><tbody><tr><td>1</td><td>-0.69</td><td>-0.47</td><td>-0.99</td></tr><tr><td>2</td><td>-1.24</td><td>-0.96</td><td>-0.89</td></tr><tr><td>3</td><td>-1.02</td><td>-0.72</td><td>-1.03</td></tr></tbody></table>				Trial	3# Difference(V)	2# Difference(V)	1# Difference(V)	1	-0.69	-0.47	-0.99	2	-1.24	-0.96	-0.89	3	-1.02	-0.72	-1.03	<p>C2H5OH GM-302B</p> <table><thead><tr><th>Trial</th><th>3# Difference(V)</th><th>2# Difference(V)</th><th>1# Difference(V)</th></tr></thead><tbody><tr><td>1</td><td>1.72</td><td>1.99</td><td>1.51</td></tr><tr><td>2</td><td>1.14</td><td>1.37</td><td>1.52</td></tr><tr><td>3</td><td>1.21</td><td>1.74</td><td>1.11</td></tr></tbody></table>				Trial	3# Difference(V)	2# Difference(V)	1# Difference(V)	1	1.72	1.99	1.51	2	1.14	1.37	1.52	3	1.21	1.74	1.11
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## Characteristic descriptions

### GM-302B

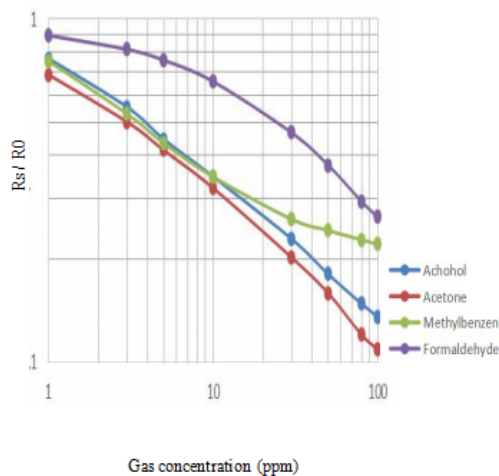


Chart 1 Typical sensitivity characteristic curve of sensor

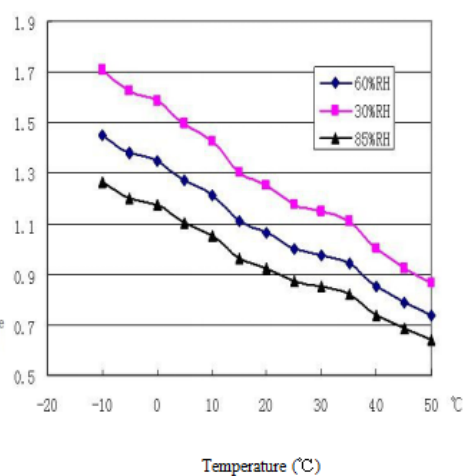
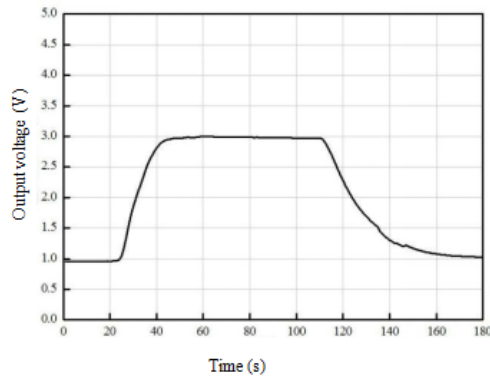
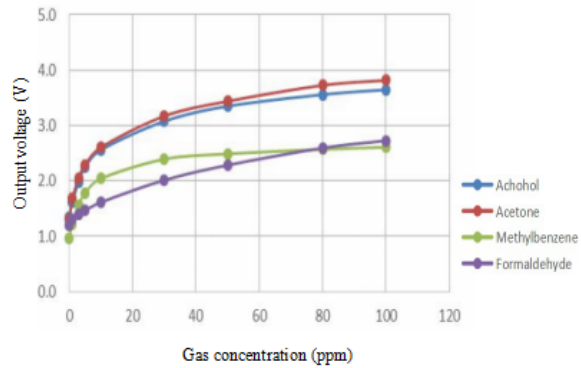


Chart 2 Typical temperature and humidity characteristic curves

$R_s$  in the figure represents the resistance value of the sensor in different concentrations of gas;  $R_0$  represents the resistance value of the sensor in clean air. All tests in the picture are completed under standard test conditions. Yellow line is Toluene, blue line is Ethanol, red line is Acetone and purple line is Formaldehyde, which is the same as the ones in charts below.



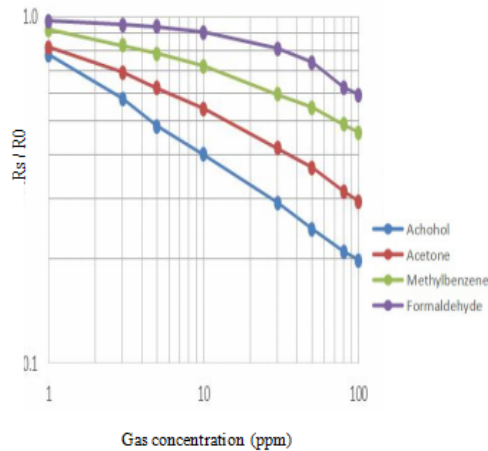
**Chart 3** Response recovery curve



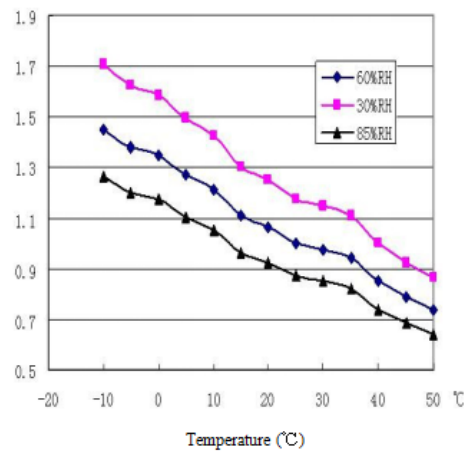
**Chart 4** Sensor linear characteristic curve

The output voltage in Chart 3 is the voltage across the load resistance (RL) of the sensor in series. The test in the figure is completed under standard test conditions, with a test gas of 50 ppm ethanol. The output voltage in Chart 4 is the voltage across the load resistance (RL) of the sensor in series. All tests in the figure are completed under standard test conditions.

### GM-502B

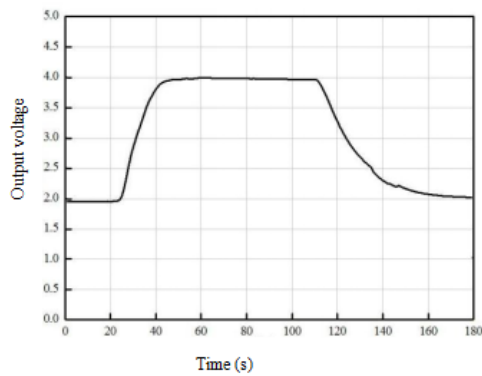


**Chart 5** Typical sensitivity characteristic curve of sensor

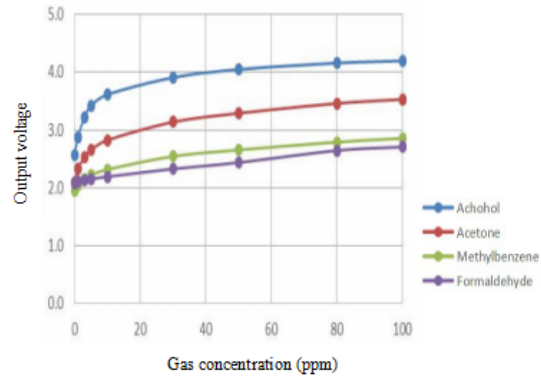


**Chart 6** Typical temperature and humidity characteristic curves

$R_s$  in Chart 5 represents the resistance value of the sensor in different concentrations of gas;  $R_0$  represents the resistance value of the sensor in clean air. All tests in the picture are completed under standard test conditions. Yellow line is Toluene, blue line is Ethanol, red line is Acetone and purple line is Formaldehyde, which is the same as the ones in charts below. In Chart 6,  $R_s$  represents the resistance value under 50ppm ethanol and various temperatures / humidities;  $R_{s0}$  represents the resistance value under 50ppm ethanol, 20 °C and 55% RH.



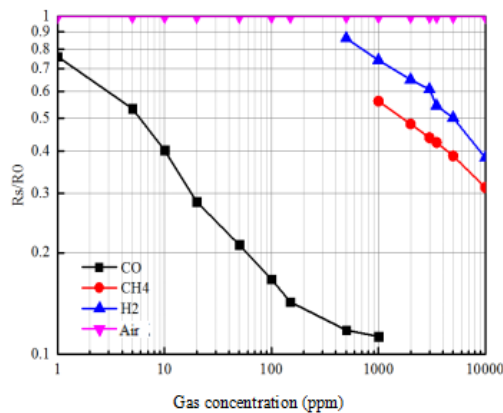
**Chart 7** Response recovery curve



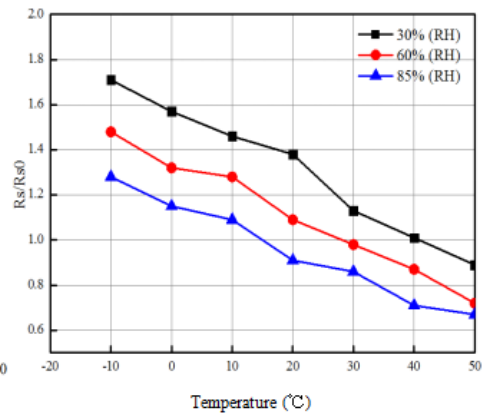
**Chart 8** Sensor linear characteristic curve

The output voltage in Chart 7 is the voltage across the load resistance (RL) of the sensor in series. The test in the figure is completed under standard test conditions, with a test gas of 50 ppm ethanol. The output voltage in Chart 8 is the voltage across the load resistance (RL) of the sensor in series. All tests in the figure are completed under standard test conditions.

### GM-702B

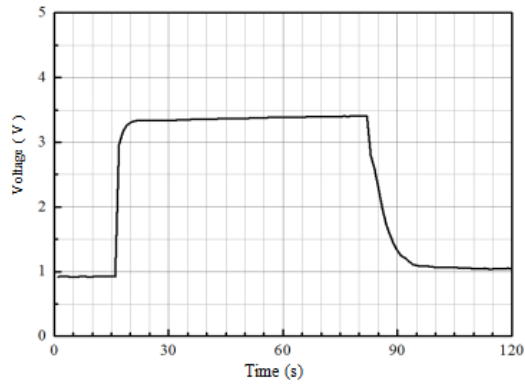


**Chart 9** Typical sensitivity characteristic curve of sensor

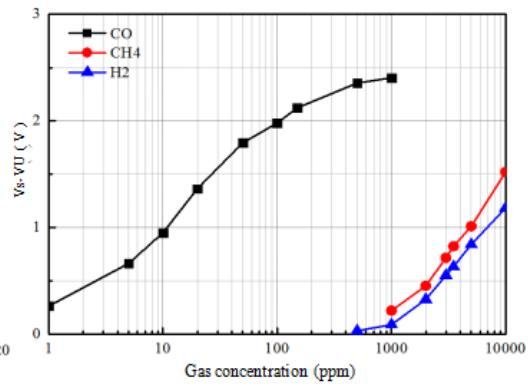


**Chart 10** Typical temperature and humidity characteristic curves

In Chart 9, Rs represents the resistance of the sensor in different concentrations of gas Value; R0 represents the resistance value of the sensor in clean air. All tests in the picture are completed under standard test conditions. The black line is for CO, red one is CH4, Purple is for H2 and pink one is Air. In Chart 10, Rs represents the temperature at 150ppmCO and various temperatures / humidities. Resistance value; Rs0 means resistance value under 150ppmCO, 20 °C, 55% RH.



**Chart 11** Response recovery curve



**Chart 12** Sensor linear characteristic curve

The voltage in Chart 11 is the voltage across the load resistance (RL) of the sensor in series. The test in the picture is completed under standard test conditions, test gas 150ppmCO. The output voltage in Chart 12 is the voltage across the load resistance (RL) of the sensor in series. All tests in the picture are completed under standard test conditions.