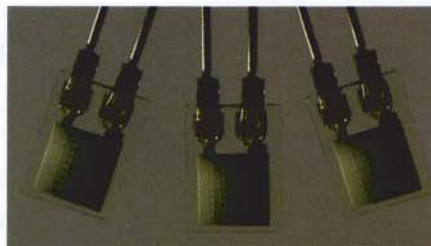


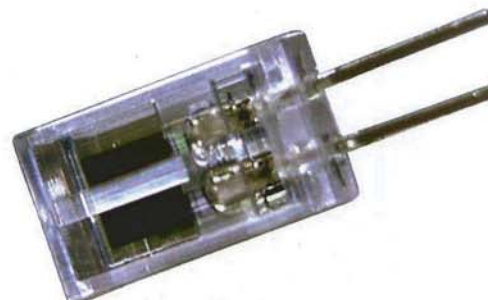
JSY-HC-1 / JSY-HC-1C

JSY-HC is a highly accurate humidity sensor manufactured via the semiconductor process. JSY-HC-1's dielectric material ensures stability in high and low level humidity due to its optimized moisture absorption rate and excellent electrical insulation properties.



JSY-HC-1 features an electrode structure and polymer with an optimized moisture absorption ratio and fast response time, stable hysteric property, and excellent linearity and accuracy.

- High accuracy
 - Long-term stability
 - Good linearity
 - Fast response time
 - Low-temperature coefficient
-
- Hygrometer
 - Automotives
 - Agricultural, Industrial Control Devices
 - Humidifiers and Dehumidifiers
 - HVAC System
 - Medical Applications
 - Weather Stations, Consumer Electronics



	JSY-HC-1	JSY-HC-1C
Nominal Capacitance (at 25°C, 55%RH)	330 ± 20pF	
Sensitivity(20~95%RH)	0.6 pF/%RH	
Response time t80	< 15sec.	
Linearity	< ±2%RH	
Hysteresis	2%RH	
Temperature coefficient	0.16 pF/°C	
Working range	0~100%RH, -40~120°C	
Operating voltage (no DC Voltage)	AC 5V (Max.)	
Operating frequency	1~100kHz (Recommended 20kHz)	
Long-term stability (at 20~30°C)	drift <0.2%RH/year	
Package type	without Case	with Case

JSY-HC-1 / JSY-HC-1C

Typical Characteristics

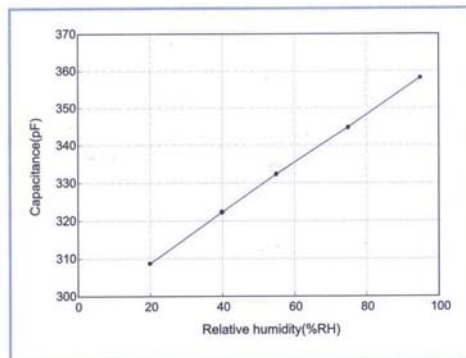
Between 10~95%RH range, capacitance changes average about 52 pF and linearity characteristics has less than $\pm 2\%$ RH error range.

$$C_m = 330 \text{ pF} + \text{Sens.} \cdot (\text{RH} - 55)$$

C_m : Capacitance as a variation of relative humidity

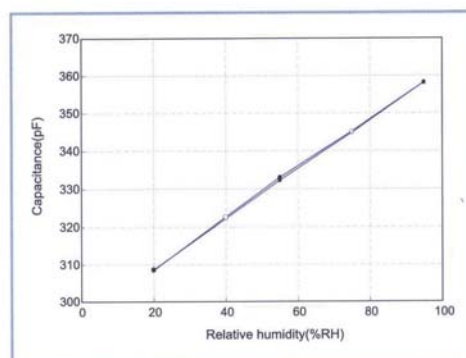
Sens. : Sensitivity of JSY-HC-1

RHm : Measured humidity



Hysteretic Characteristics

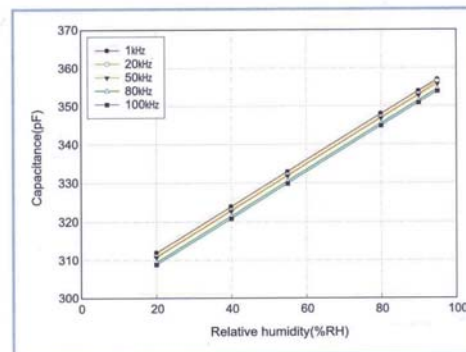
Moisture absorption/desorption on dielectric layer and hysteretic properties of humidity sensor that change depending on the membrane electrode's surface structure have less than 2% RH variation.



Frequency Characteristics

Behavior by frequency is inversely proportional by 0.6 pF according to frequency when the operational frequency is increased by 1~100 kHz.

JSY-HC-1 can stably operate at 20 kHz; anything less than 20 kHz drops linearity and makes operation not possible.



Working Range

The JSY-HC-1 should be used within the prescribed temperature and humidity condition. The sensor may malfunction if used beyond its normal operating range.

Sensor operates at a temperature range of $-40 \sim 120^\circ\text{C}$ and a humidity range of 0~100%RH. Temperature coefficient is 0.16 pF/ $^\circ\text{C}$.

