

SPECIFICATIONS
(Draft)

(Humidity sensor SD-20E)

Sandat Electronics Ltd.

1. SCORE

This specification is applied to the Humidity Sensor **SD-20E**.

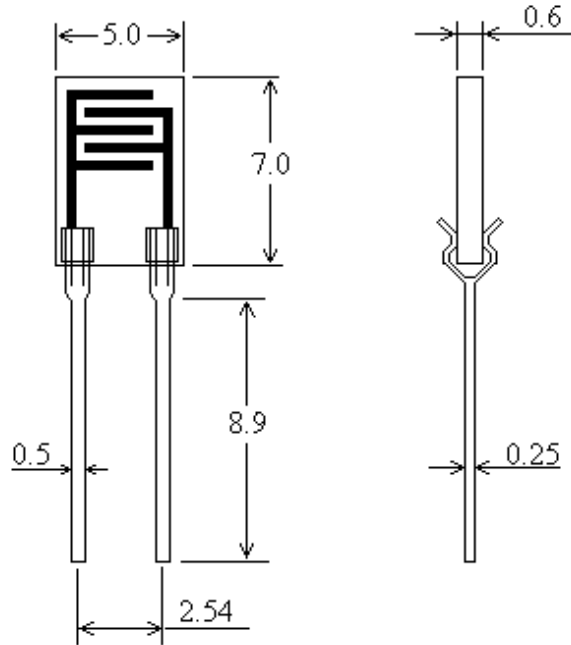
2. CHARACTERISTICS OF HUMIDITY SENSOR

- 1) Part name : Humidity sensor
- 2) Type name : SD-20E
- 3) Storage temperature range : 0~50°C
- 4) Storage humidity range : 20~95%RH、 Without condensation
- 5) Operating humidity range : 20~95%RH
- 6) Operating temperature range : 0~50°C
- 7) Rated working voltage : AC 1 V(50Hz~1KHz)
- 8) Rated power : 0.3 mW
- 9) Nominal impedance value : 31K Ω (25°C,60%RH)
- 10) Tolerance : $\pm 5\%$ RH
- 11) Typical sensitive characteristics : Shown in Fig.1
- 12) Typical response characteristics : Shown in Fig.2
- 13) Hysteresis loop : Show in Fig.3
- 14) Reliability(Impedance value change as relative humidity at 25°C,50%RH)
 - 14-1 Dry heat storage : $< \pm 5\%$ RH (85°C,1000hr.)
 - 14-2 Cold storage : $< \pm 5\%$ RH (-40°C,1000hr.)
 - 14-3 Damp heat storage : $< \pm 5\%$ RH (40°C,90%RH,1000hr.)
 - 14-4 Low humidity storage : $< \pm 5\%$ RH (25°C,20%RH,1000hr.)
 - 14-5 Heat cycle test : $< \pm 5\%$ RH (-40°C~+80°C,100 cycles)

3. NOTES

- 1) Don't apply any direct current to the sensor.
- 2) Don't touch the film and the surface of the sensor.
- 3) In use and stock, freezing, dust, mist, oil, alcohol, corrosive gases or any other dirty/anomalous ambient may cause degradation of the sensor's characteristics.
- 4). Protect the sensor film from flux/fume and high temperature during the soldering
- 5) Don't put sensor in water.

4. STRUCTURE



Unit: mm

Leat frame	Phosphor bronze(Sn plated)
Weight	0.15g (approx..)

5. MECHANICAL DURABILITY

Drop test (Dropped onto wooden plate from s height of 1m,3times)	Passed
Vibration test (Amplitude of 5mm ,X,Y,Z directions, 10Hz for 20mm)	Passed
Tensile strength of lead wire (Pulled with 1kg load for 10 seconds.)	Passed
Lead wire bending test(Lead wire was hended to 90 degrees with 250g load.and bended again to opposite direction.)	Passed

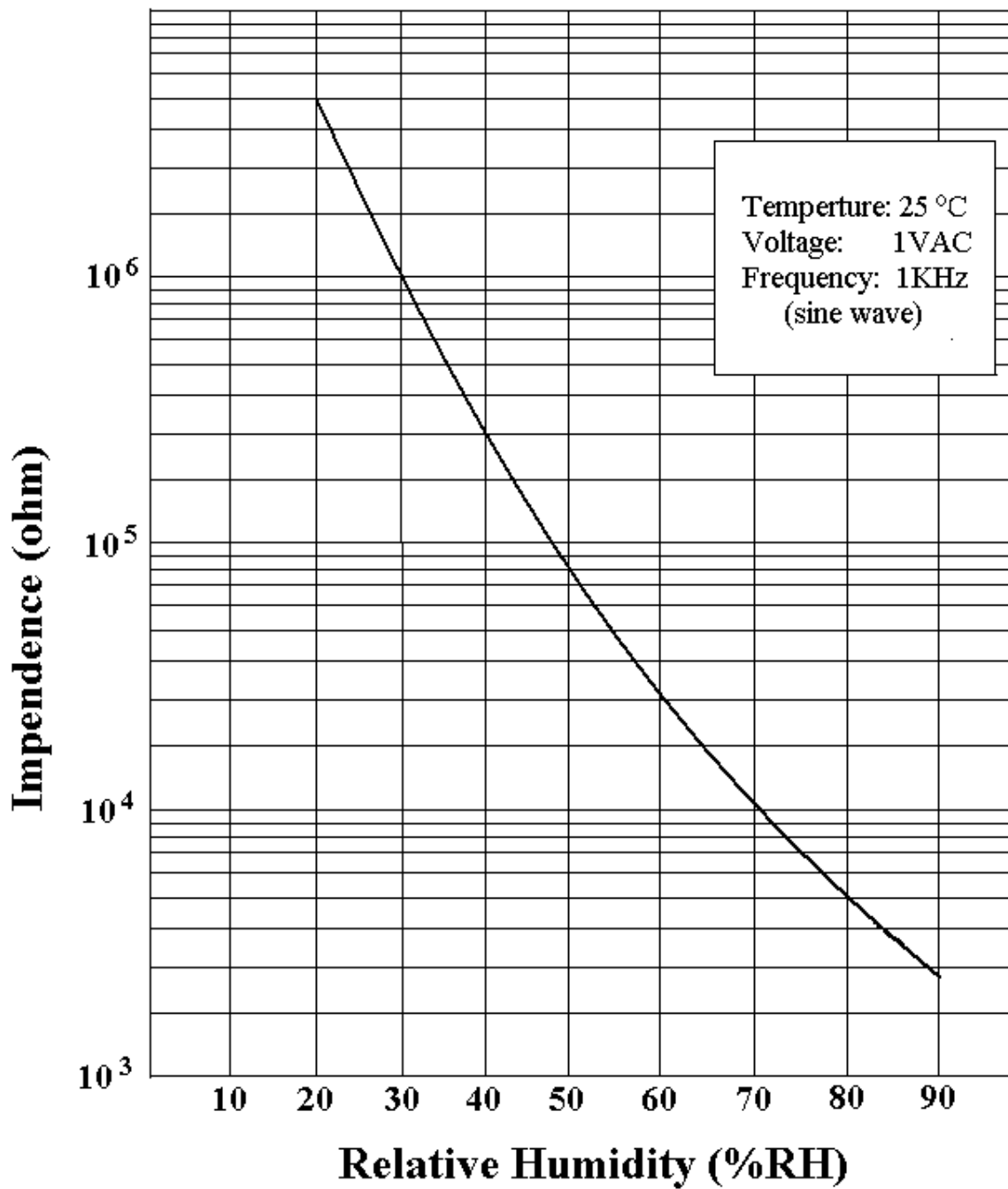


Fig.1 Typical Sensitivity Characteristics

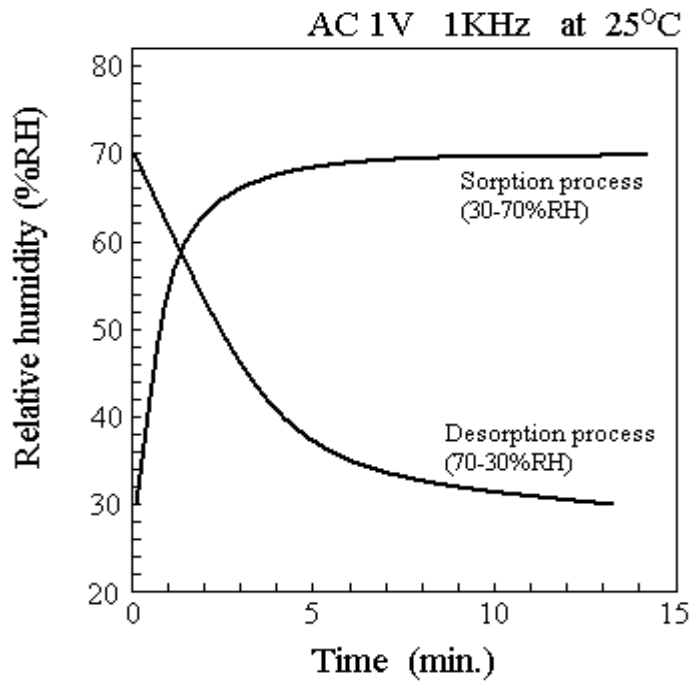


Fig.2 Typical Response Characteristics

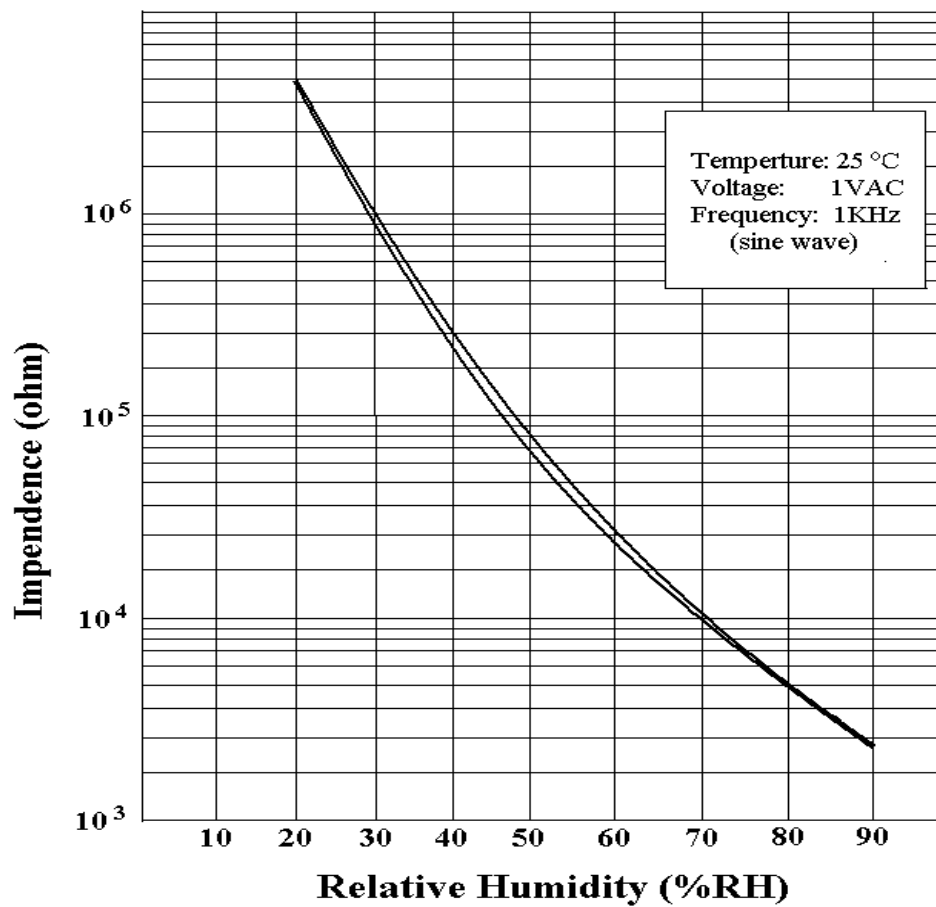


Fig.3 Hysteresis Loop