

INTRODUCTION

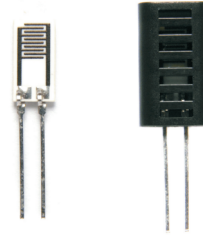
The HCZ-H6 humidity sensor is a discreet device that can be installed in a wide variety of applications.

APPLICATIONS

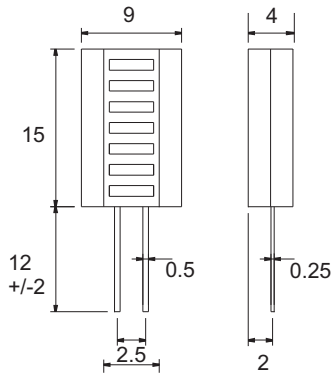
- Airconditioner, Humidifier, Dehumidifier
- Humidity Controller, Humidity transmitter
- Hygrometer, Hygro-recorder
- Copy machines, Data Equipment
- Appliance
- Weather forecast Equipment

FEATURES

- Wide humidity range
- Linear output
- Long term stability
- Small and economical
- RoHS Compliant



DIMENSIONS



PART Number

- | | | |
|-----------------|----------|--|
| <u>HCZ - H6</u> | <u>A</u> | 1. Series |
| 1 | 2 | 2. Dip type +/- 3%RH |
| | 3 | 3. A= Molded Body B= Open Frame (unprotected) element |

ELECTRICAL CHARACTERISTICS

| | UNITS | MIN. | TYP. | MAX. |
|-------------------------------------|--------|------|------|------|
| Rated Voltage | Vrms | - | 1 | - |
| Rated power | mW | - | - | 0.2 |
| Operating frequency range | KHz | 0.5 | 1 | 2 |
| Operating temperature range | °C | 0 | - | 60 |
| Operating humidity range | %RH | - | - | 90 |
| Impedance range at 60%RH and 25°C** | KΩ | 22.9 | - | 41.9 |
| Humidity accuracy | %RH | -3 | - | +3 |
| Hysteresis (40%RH~80%RH) | %RH | - | - | 2 |
| Temperature dependence (reference) | %RH/°C | - | 0.6 | - |

**Measurement by LCR meter at 1KHz, 1 Vrms (sine wave)

Relative humidity (Impedance at 25°C, 1KHz, 1Vrms)

| %RH | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
|----------------|-------|-------|-----|----|----|----|-----|-----|
| Impedance (KΩ) | 6,300 | 1,400 | 310 | 87 | 31 | 12 | 5.4 | 2.3 |

MECHANICAL CHARACTERISTICS

| Number | Item | Description | Criteria* |
|--------|------------------------------|---|--|
| 1 | Shock Resistance | Drop 3 times @75cm | No abnormal appearance & electrical properties |
| 2 | Vibration Resistance | 2 hours each in the directions of X-Y-Z, at the frequency of 10-55Hz, and amplitude of 1.5mm | No abnormal appearance & electrical properties |
| 3 | Resistance to soldering heat | The lead terminal shall be immersed by 3mm from the substrate for 3 seconds in solder bath of 260±5°C | No abnormal appearance & electrical properties |
| 4 | Strength of terminations | 500g @ 10 seconds in the axial direction of lead terminal | Secured |

RELIABILITY

| Number | Item | Description | Criteria* |
|--------|---------------------|--|-----------|
| 1 | Heat Resistance | 1000 Hours @ 85°C, <30%RH | <±3%RH |
| 2 | Cool Resistance | 1000 Hours @ -30°C, <70%RH | <±3%RH |
| 3 | Humidity Resistance | 1000 Hours @ 40°C, 90%RH | <±3%RH |
| 4 | Humidity Cycle | Repeat 500 Cycles One Cycle: 30 minutes @ 25°C, <30%RH 30 minutes @ 25°C, > 90%RH | <±3%RH |
| 5 | Temperature Cycle | Repeat 100 Cycles One Cycle: 30 minutes @ -30°C 30 minutes @ 85°C | <±3%RH |
| 6 | Voltage Resistance | 3000 Hours @ 1KHz, 1Vrms | <±3%RH |

*The criteria test that the sensors finish the description process after 2 hours under normal temperature and humidity. The test condition is fixed at 25°C, 60%RH by LCR meter at 1KHz, 1Vrms (sine wave)

CAUTION NOTES

- Avoid direct application of DC Voltage on Sensor
- Avoid drenching
- Avoid exposure to Salt, Sulfide Dioxide, Ammonia, Chlorine, Alcohol, Glycols, Aldehydes

RH CURVE

