

Humidity & Temperature Sensor SHT11

Sensirion introduces the new generation of integrated relative humidity and temperature sensor systems with outstanding performance. Based on intelligent CMOSens® technology, the SHT11 offers you maximum ease-of-use and excellent long-term stability.

- _ Relative humidity & temperature
- _ Dew point
- _ Fully calibrated
- _ Digital 2-wire interface
- _ Excellent long-term stability
- _ Designed for high volume applications
- _ Cost-effective

powered by

CMOSens®
TECHNOLOGY

www.sensirion.com

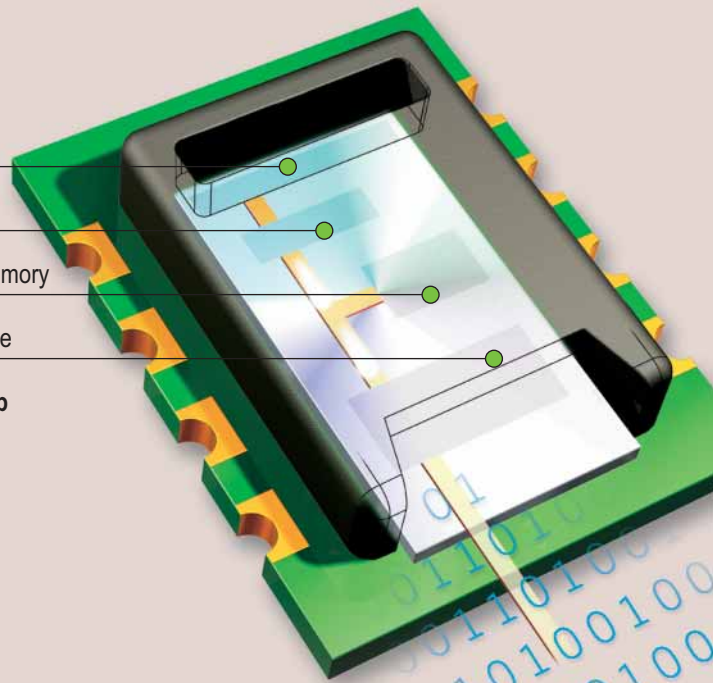
2 Sensors
(RH & Temp.)

14-bit ADC

Calibration Memory

Digital Interface

... on one chip



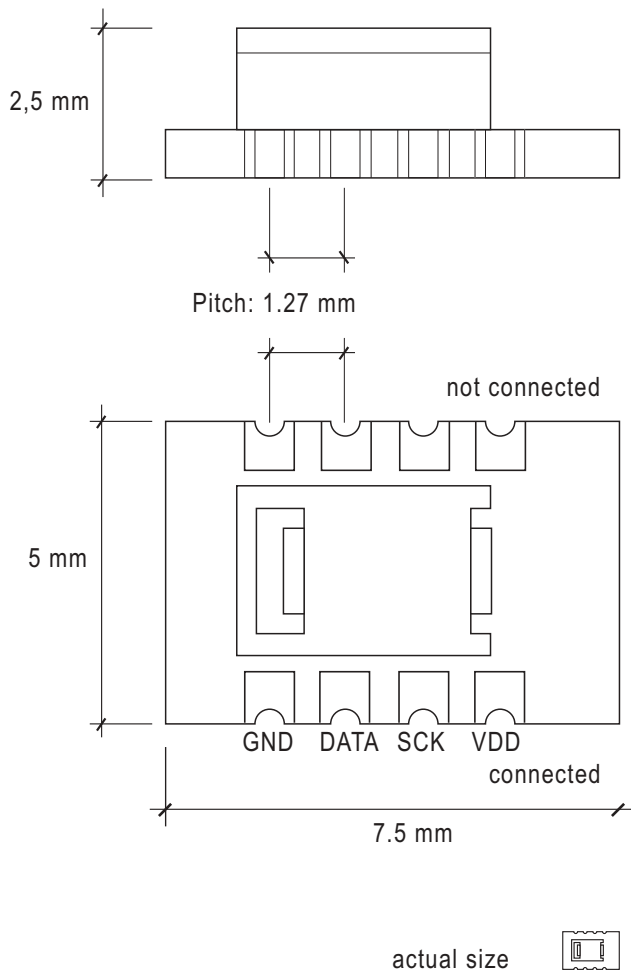
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Your partner for innovative sensor solutions.

SENSIRION
THE SENSOR COMPANY

Humidity & Temperature Sensor SHT11



Features

- _ Combined relative humidity and temperature measurement
- _ Precise dew point measurement
- _ Fully calibrated, interchangeable without recalibration
- _ Ultra fast response time
- _ Digital 2-wire interface (no external components required)
- _ Ultra small size (7.5 x 5 x 2.5 mm)
- _ High reliability
- _ Optimized for long-term stability
- _ Fully immersible
- _ Low power due to measurement on demand
- _ Self test capability of sensor elements
- _ Heatable sensor elements for excellent precision and stability

Specifications

_ Relative Humidity (RH)

Range:	0 to 100 % RH
Accuracy:	± 3.5 % RH (20 to 80 % RH)
Response time:	≤ 4 sec.
Reproducibility:	± 0.1 % RH
Resolution:	0.03 % RH
Operating temperature:	−40°C to 120°C

_ Temperature (T)

Range:	−40°C to 120°C
Accuracy:	± 0.5°C @ 25°C, ± 0.9°C (0°C – 40°C)
Response time:	≤ 20 sec.
Reproducibility:	± 0.1°C
Resolution:	0.01°C

Electrical Data

_ Power consumption:	typ. 30 µW (@ 5 V, 12-bit, measure every 2 sec.) typ. 1 µW (@ 2.4 V, 8-bit, measure every 2 min.)
_ Supply voltage range:	2.4 to 5.5 V
_ Input current during measurement:	0.5 mA
_ Input current standby:	0.3 µA

Packaging Information

- _ The sensor system is packaged as a surface mountable device and mountable in standard SMD assembly lines
- _ The whole system, including packaging, is qualified

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DABECO

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