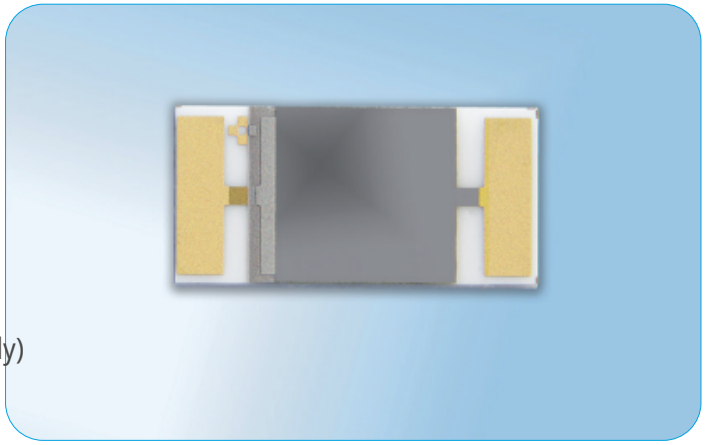
P14-FemtoCap

Capacitive Humidity Sensor

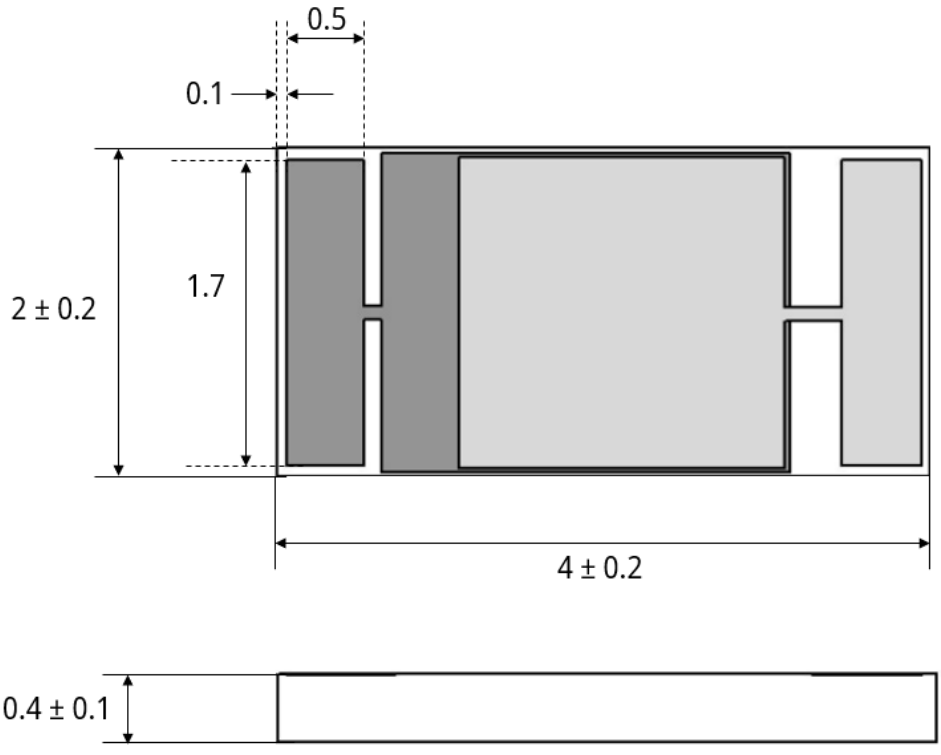
Optimal for various humidity applications

Benefits & characteristics

- High chemical resistance
- Wide temperature range
- Resistance to condensation
- Fast recovery time
- Very low drift
- Excellent price/performance ratio
- Solderable and bondable (fully automated assembly)
- Customer-specific sensor available upon request



Illustration



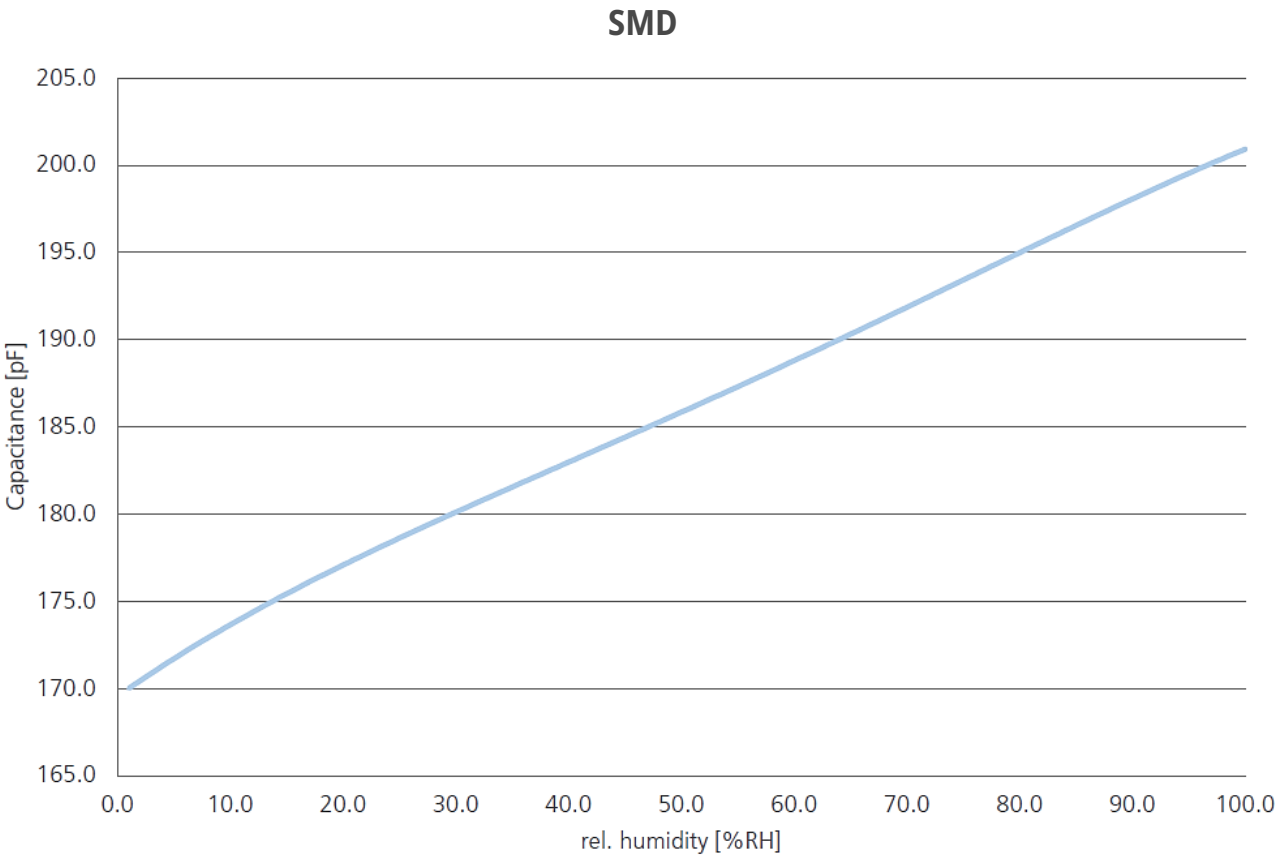
Technical data

Dimensions (L x W x H in mm):	4.0 x 2.0 x 0.4
Operating humidity range	0 % RH to 100 % RH (maximal dew point +85 °C)
Operating temperature range:	-50 °C to +150 °C
Capacitance (C30):*	180 pF ±50 pF (at 30 % RH and +23 °C)
Typical sensitivity (at C30 = 180 pF):	0.3 pF/% RH (15 % RH to 90 % RH)
Operating humidity range:	0 % RH to 100 % RH (maximal dew point +85 °C)
Loss factor:	< 0.01 (at +23 °C, at 10 kHz, at 90 % RH)
Linearity error:	< 1.5 % RH (15 % RH to 90 % RH at +23 °C after one point calibration)
Hysteresis:	< 1.5 % RH
Response time t_{63}:	< 3 s (50 % RH to 0 % RH at +23 °C)
Temperature dependence (typical):	Δ % RH = (B1 x % RH + B2) x T [°C] + (B3 x % RH + B4) B1 = 0.0014 [1/ °C] B2 = 0.1325 [% RH/ °C] B3 = -0.0317 B4 = -3.0876 [% RH]
Measurement frequency range:	1 kHz to 100 kHz (recommended 10 kHz)
Maximal supply voltage:	< 12 V_{pp} AC
Signal form:	alternating signal without DC bias
Connections: *	SMD, automatic assembly compatible

*Customer-specific alternatives available

The calibration of the sensor must be done 5 days after soldering at the earliest

Characteristic Curve



Order information

Order code	Product name (secondary reference)	Special
103563	P14 FemtoCap-G (180 pF ± 50 pF)	

Related documents

Document	File name
Application note Humidity sensors	AH_E

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