



SHC180

Capacitive Humidity Sensor

Data Sheet

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Name	Capacitive humidity sensor	Ningbo jiangbei junrong electron technology Co., ltd product developed department	Frame	2007.01.01.
Model	SHC180		Emend 1	2007.02.02.
			Emend 2	
			Emend 3	

1、 General

SHC180 capacitive humidity sensor, Excellent linearity in high Performance areas , For the fabrication of the SHC180 Series, semiconductor fabrication technology is utilized. can be used in shopping malls, Indoor and car air quality control, office automation, medical, industrial control systems and a wide range of research areas, It also can be widely applied in occasions with temperature retrieves performance.

2、 Characteristic

High performance-price ratio, excellent linearity, Compatible with automatized assembly processes, including wave soldering, reflow and water mersion. High reliability and long term stability Suitable for linear voltage or frequency output circuitry. Fast response time , Seismic resistance.

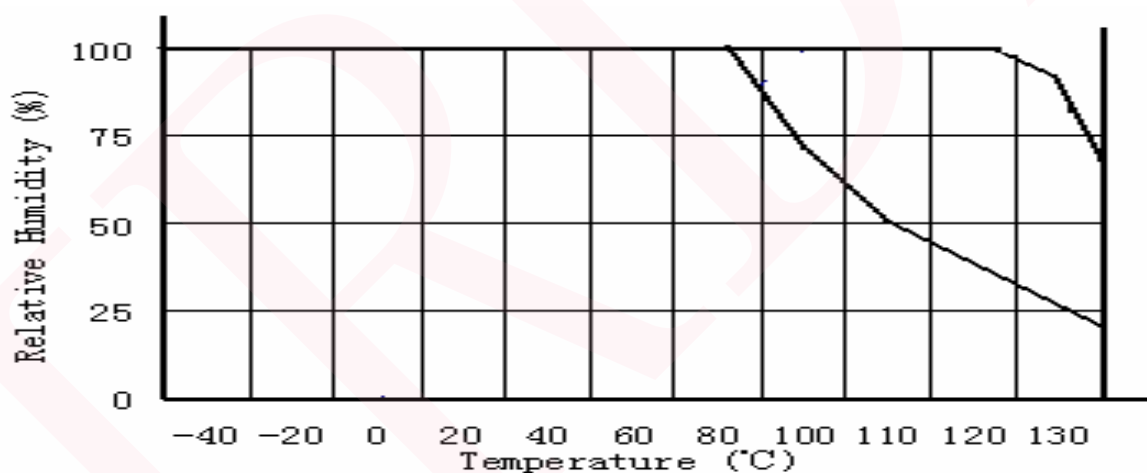
3、 Maximum Ratings (at 25°C 10kHz unless otherwise noted)

Ratings	Symbol	Value	Unit
Operating Temperature	Ta	-40~125	°C
Storage Temperature	Tstg	-40~125	°C
Supply Voltage	Vs	10	Vac
Humidity Operating Range	RH	0~99	%RH
Soldering @ T = 280°C	t	10	S

4、Characteristics(Ta = 25°C, measurement frequency @ 10kHz unless otherwise noted)

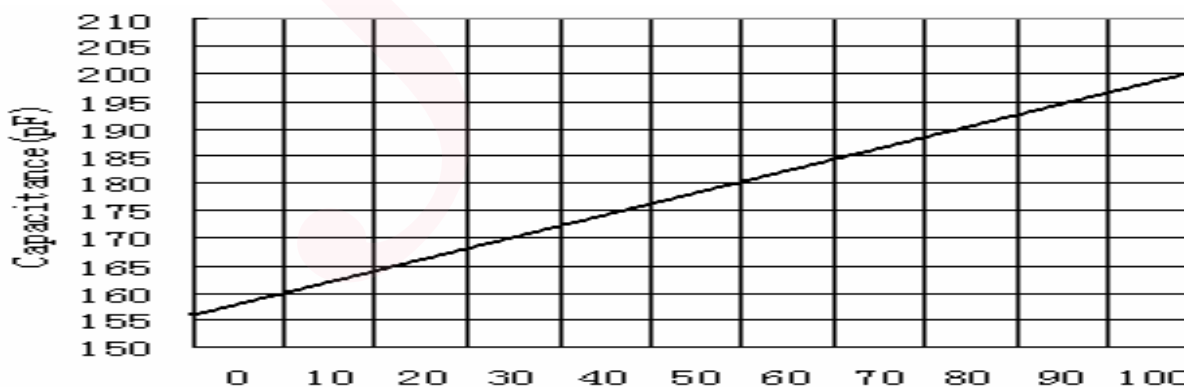
	Min	Type	Max	Unit
Humidity measuring range	0		99	%RH
Supply voltage		5	10	V
Nominal capacitance @ 60% RH*	160	180	200	PF
Temperature coefficient		0.01		PF/°C
Averaged Sensitivity from 10% to 90% RH	0.35	0.45	0.55	PF/%RH
Leakage current (Vcc = 5 Volts)			1	nA
Recovery time after 150 hours of condensation		10		s
power factor		<=0.01		%
Long term stability		0.5		%RH/Year
Response time (33 to 76 % RH, still air @ 63%)		5		S
Operating frequency	1		100	kHz
Deviation to typical response curve (10% to 90% RH)		<±1.5		%RH
Humidity Hysteresis (10%~90%RH)		<±1		%RH

5、Operating Range

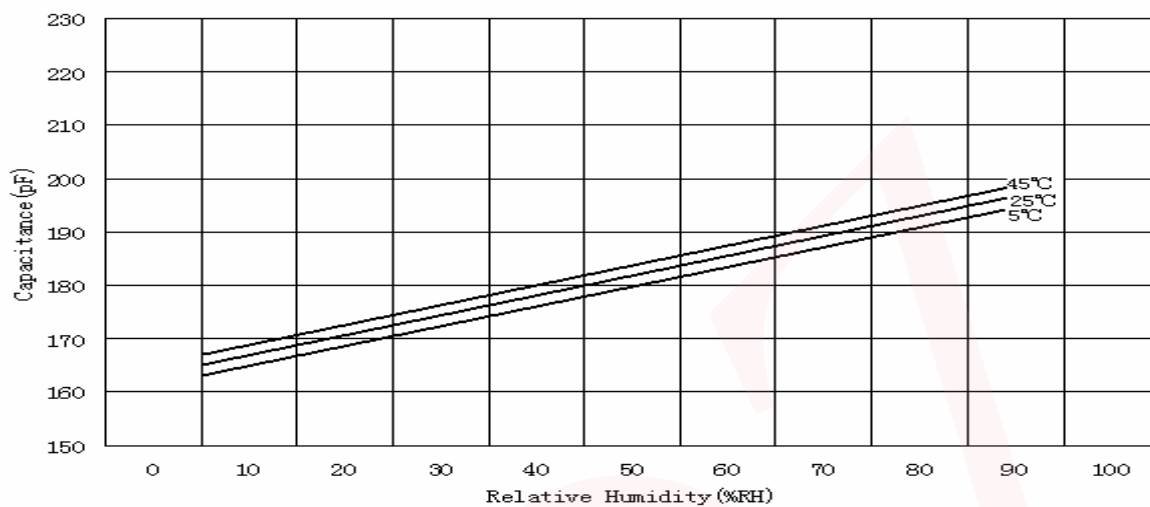


6、Characteristics (CONT'D)

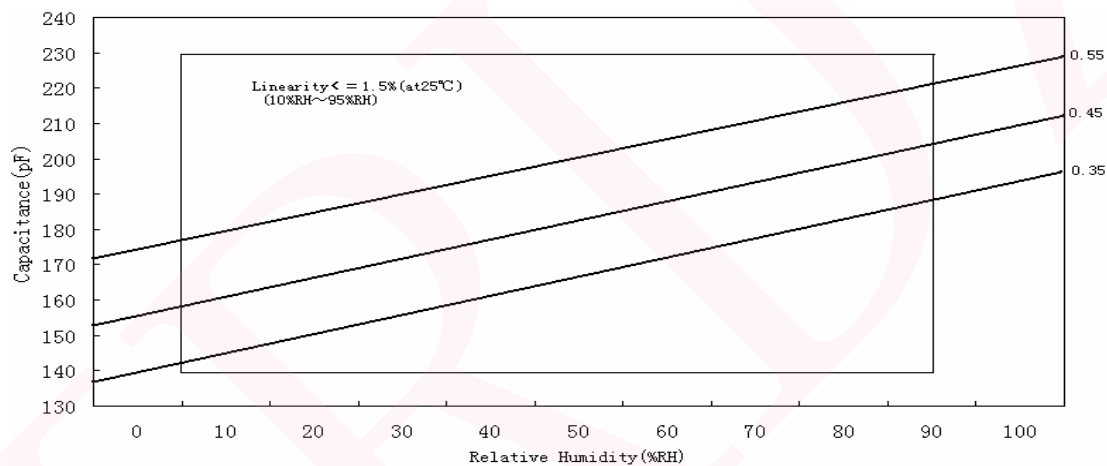
Typical response curve of SHC180 in humidity (at 25°C 10kHz)



7、Temperature Characteristics (at:10KHz)



8、Basic Characteristics of Humidity Sensor



9、Mechanical Size

