MHTC1A4

MHTC1A5

Capacitive humidity sensor

Humidity and temperature sensor module

Data sheet

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Name	Humidity and temperature sensor module	Ningbo jiangbei junrong electron technology Co., ltd	Frame	2006.04.18
			Emend 1	2006.06.06
Model	MHTC1A4 MHTC1A5		Emend 2	2007.03.07
			Emend 3	2008.05.30.

1. General

MHTCA humidity and temperature sensor module is designed base capacitive humidity and temperature sensor by Ningbo Junrong Electron. This product utilizes humidity sensor capacitor (HS1101, France Humirel) and temperature sensor (LM35, America), with characteristics of stable, high accuracy, quick response, good crossing-over and it also use craftwork of SMD, and so own extremely small body, stable and reliably performance. The quality guarantee time is 12 months.

2. Application

Electron , pharmaceutical industry, food processing, warehouses, tobacco, textile, weather, libraries and museum.

3. Shape

Model	encapsulation	shape
MHTC1A	without shell	detail to the picture

4. Model

There are three models according to with or without Temperature and humidity sensor.

MHTC1A4 temperature and humidity measuring module, with NTC resistance

MHTC1A5 temperature and humidity measuring module, with LM35 temperature sensor

5. Specification

(1) Power supply (vin) DC 5V±5%

(2) Electrical current 2mA (max 5mA)

(3) Temperature operating range -30 ~ 80℃

(4) Humidity operating range 0 ~ 100%RH (dew point)

(5) Humidity measuring range 2 ~ 99%RH

(6) Temperature storing range -40 ~ 85℃

(7) Humidity storing range under 95%RH (no dew point)

(8) Humidity measuring Accuracy MHTC1A ±3%RH (at 25℃, 60%RH)

(9) Typical humidity data responding to output

Based as the power supplied by 5.0V, at 25℃ environment

Humidity (%RH)	0	5	10	15	20	25	30
Voltage (mV)	390	470	560	630	720	840	960
Humidity (%RH)	35	40	45	50	55	60	65
Voltage (mV)	1080	1220	1350	1480	1620	1740	1890
Humidity (%RH)	70	75	80	85	90	95	100
Voltage (mV)	2070	2250	2420	2580	2750	2920	3100

(10) Temperature testing feature MHTC1A5 ±1℃ (LM35 temperature sensor)

MHTC1A4 ±1% 10K 3950 resistance

(11) Temperature dependence (reference) ±2%RH(5.00V DC, 0 - 100%RH, at 25℃, 15-25℃)

(12) Voltage dependence (reference) under ±3%RH

(13) Measure: 33.5x21.6x10 mm

6. Note

(1) Please be careful when connecting (no protecting supply power.)

(2) Make sure Supply power according to the stipulate range

(3) Storage condition

Temperature range 10 ~ 50℃

Humidity range 80%RH

7. Product picture

MHC1A

MHTC1A1, 4

MHTC1A2, 5

MHTC1A Electric connecting

Electric tie-in	Content
1(VCC)	Power supply DC5V(red)
2(H)	Humidity output(yellow)
3(GND)	GND(black)
4(T)	Temperature output(green)

Chart2. Connection example.

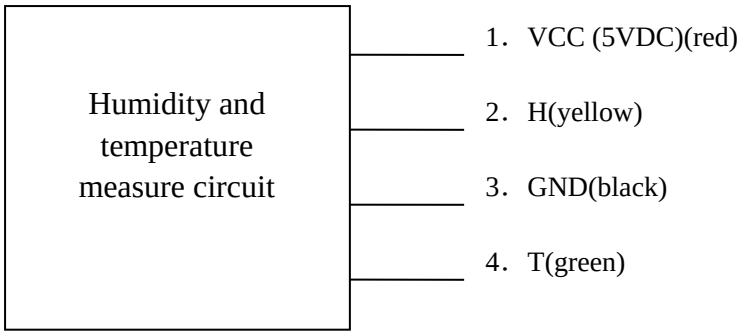


Chart4.

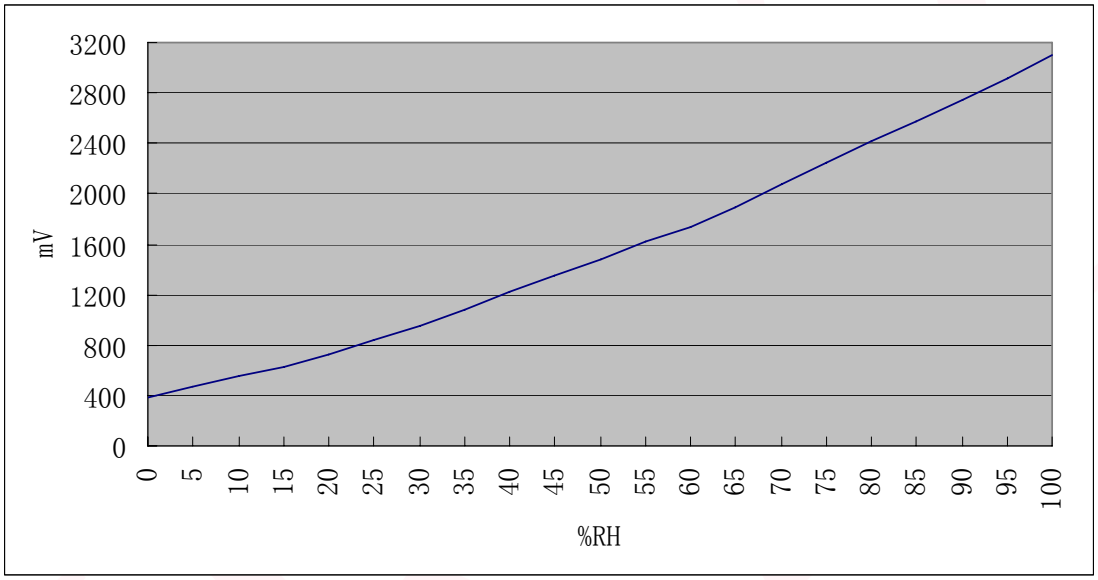
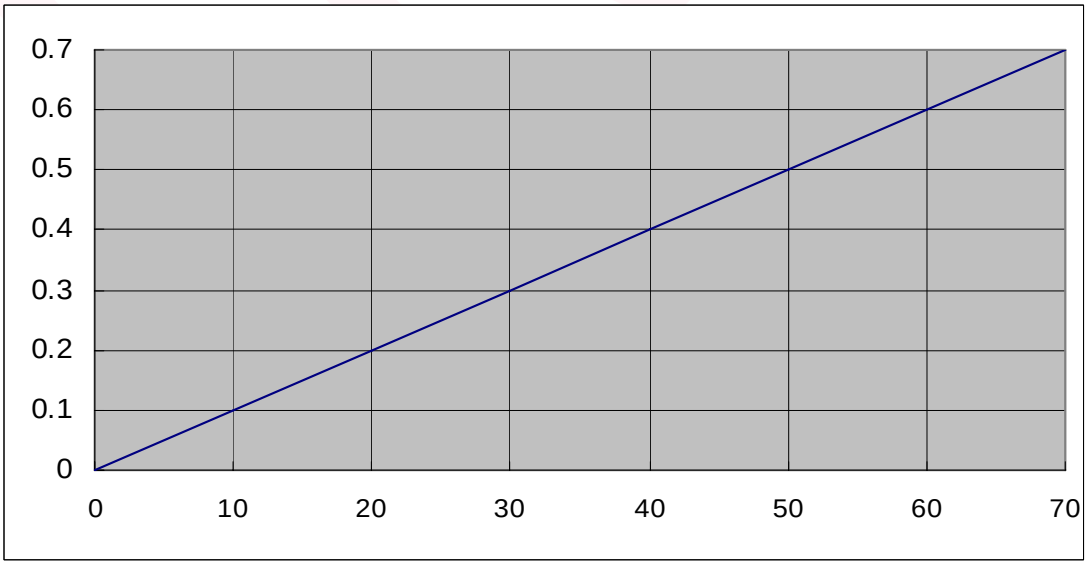


Chart5.Temperature standard characteristic picture (LM35)



Output voltage 0-0.7V DC

Table2. 10KΩ 3950 R-T Sub-degree table

::10KΩ 3950:: R-T 分度表							
T	R	T	R	T	R	T	R
0	32.66	20	12.518	40	5.292	60	2.468
1	31.132	21	11.958	41	5.074	61	2.3816
2	29.687	22	11.427	42	4.8694	62	2.297
3	28.314	23	10.925	43	4.6786	63	2.2147
4	27.003	24	10.449	44	4.502	64	2.1346
5	25.75	25	10	45	4.34	65	2.057
6	24.549	26	9.5757	46	4.178	66	1.9821
7	23.396	27	9.1753	47	4.022	67	1.91
8	22.29	28	8.7982	48	3.8718	68	1.8407
9	21.228	29	8.4433	49	3.7272	69	1.7746
10	20.21	30	8.11	50	3.588	70	1.7115
11	19.223	31	7.7793	51	3.4541	71	1.6515
12	18.296	32	7.4599	52	3.3254	72	1.595
13	17.423	33	7.1512	53	3.2017	73	1.5416
14	16.6	34	6.8529	54	3.083	74	1.4915
15	15.823	35	6.565	55	2.969	75	1.4448
16	15.088	36	6.2876	56	2.8598	76	1.4023
17	14.392	37	6.0212	57	2.7551	77	1.361
18	13.734	38	5.7661	58	2.655	78	1.3208
19	13.109	39	5.5229	59	2.5593	79	1.2816