



# Amphenol Advanced Sensors

Amphenol Thermometrics (UK) Ltd., Crown Industrial Estate,  
Priorswood Road, Taunton, Somerset, TA2 8QY, UK  
Tel +44 (0) 1823 335200 Fax +44 (0) 1823 332637

<b>PROVISIONAL TEST SPECIFICATION</b>	SAMPLE SERIAL No. <b>RM-0434</b>	ISSUE : <b>B</b>
CUSTOMER :	DATE : <b>19 January 2017</b>	QTY. :
CUSTOMER SERIAL No. <b>RM-0434</b>	ORIGINATOR : <b>Aiden</b>	PAGE 1 OF 4

## DESCRIPTION:

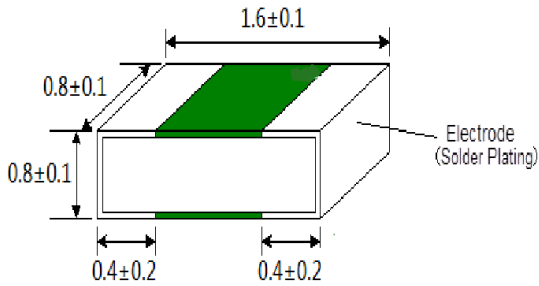
Surface mount NTC chip  
RoHS compliant

### 1. Scope

This specification is applicable to dimensions and electrical characteristics of SMD type chip thermistor **RM-0434**

### 2. Shape & Dimensions

Unit; mm



### 3. Electrical characteristics

Item	Standard	Test Method & Condition
1. Resistance (R25)	10kohm Tolerance is $\pm 1\%$	R <sub>25</sub> ; The resistance value at 25°C
2. B-value (B25/85)	3435K Tolerance is $\pm 1\%$	B25/85 ; Calculated by $\text{Ln} (R_{25}/R_{85}) / (1/T_{25}-1/T_{85})$ (T <sub>25</sub> , T <sub>85</sub> are absolute temperature values with for 25°C & 85°C respectively)
3. Maximum rated wattage (at 25°C)	100 mW	This value is measured in the still air with the sample which is soldered on a glass epoxy board t=1.6mm
4. Heat dissipation constant	1.0mW/°C	This value is measured in the still air with the sample which is soldered on a solder coated copper wire $\phi=0.25\text{mm}$
5. Operating temperature	-40~+125°C	

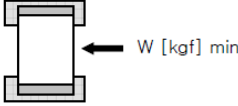
The copyright in this Specification/Document is the property of Amphenol Thermometrics (UK) Ltd and the Specification/Document is issued on the condition that it is not copied, reprinted, stored in an electronic retrieval system or reproduced, nor its contents disclosed either wholly or in part to any Third Party without either the consent in writing of or in accordance with the conditions of a contract with Amphenol Thermometrics (UK) Ltd. © AMPHENOL THERMOMETRICS (UK) LTD.

CHANGES SINCE LAST ISSUE: $\Delta R_vT$ centre with temp coefficients							
Issue :	A	B					
Date :	11.05.2016	01.19.2017					
Originator :	Aiden	Aiden					

4 . Soldering conditions

This device can be solder by flow and reflow soldering

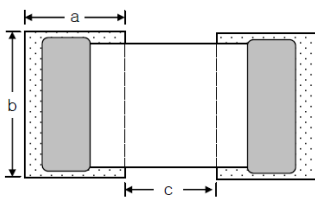
5 . Testing

No	Item	Performance	Test method
1	Solderability	The dipped terminal area shall be at least 90% covered with new solder coating.	The terminal area shall be immersed in a solder tank kept at 230±5°C for 5±1 seconds.
2	Resistance to Solder Heat	ΔR/R Not exceeding ±3% No mechanical damage and no make change in appearance.	A thermistor shall be immersed in solder pot kept as 260±5°C for 5±1 seconds. It shall be left at room temperature for more than one hour before the resistance value is measured.
3	Thermal shock	ΔR/R Not exceeding ±3% No mechanical damage and no make change in appearance.	One cycle during which the thermistor is kept at -40°C for 30 minutes, at room temperature for 10~15 minutes, at 125°C for 30 minutes and at room temperature for 10~15 minutes shall be repeated 100 cycle. The thermistor shall be left at room temperature for 1~24 hours before the resistance value is measured.
4	Humidity Bias	ΔR/R Not exceeding ±3% No mechanical damage and no make change in appearance.	It shall be left at 85±5°C and 85 %RH with no load for 1000 hours. The thermistor shall be left at room temperature for 1~24 hours before the resistance value is measured.
5	High Temperature Exposure	ΔR/R Not exceeding ±3% No mechanical damage and no make change in appearance.	It shall be left in a thermostatic oven kept at 125±3°C with no load for 1000 hours. The thermistor shall be left at room temperature for 1~24 hours before the resistance value is measured.
6	Low Temperature Exposure	ΔR/R Not exceeding ±3% No mechanical damage and no make change in appearance.	It shall be left in a thermostatic oven kept at -40±3°C with no load for 1000 hours. The thermistor shall be left at room temperature for 1~24 hours before the resistance value is measured.
9	Terminal Strength	No serious mechanical damage 1.0 W(kgf)	

The copyright in this Specification/Drawing/Document is the property of Amphenol Thermometrics (UK) Ltd and the Specification/Drawing/Document is issued on the condition that it is not copied, reprinted, stored in an electronic retrieval system or reproduced, nor its contents disclosed either wholly or in part to any Third Party without either the consent in writing or in accordance with the conditions of a contract with Amphenol Thermometrics (UK) Ltd. © AMPHENOL THERMOMETRICS (UK) LTD.

5. Recommended soldering condition

a) Land pattern design

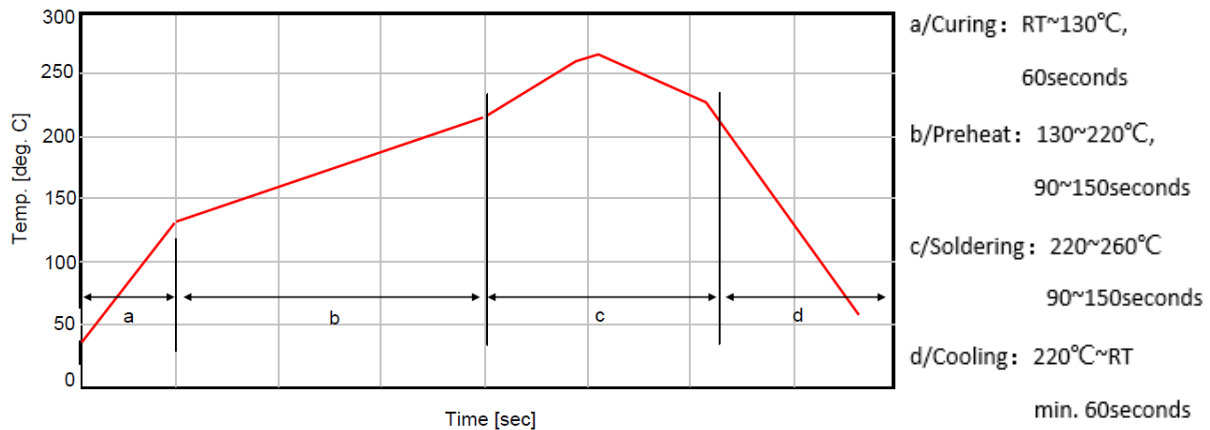


Code	Land Dimension with Chip Size (mm)		
	a	b	c
1608	0.6~0.7	0.6~0.8	0.6~0.8

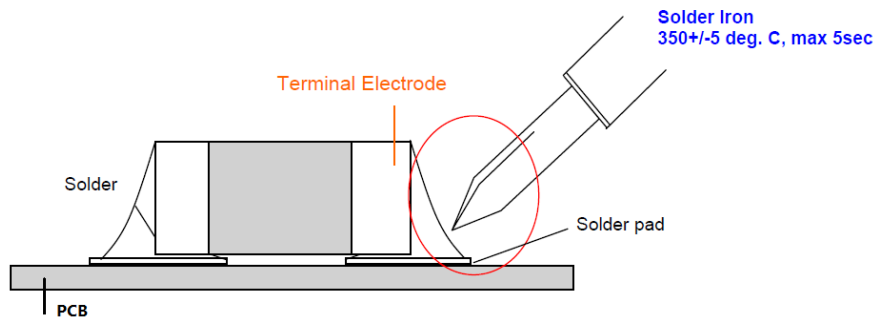
b)Reflow Soldering

\*Solder:Sn-Ag-Cu

\*260deg.C 10seconds max



c)Soldering Iron



To prevent a defective crack from thermal shock due to solder iron,the end of iron-tip must be located on between terminal electrode and solder pad.

7.Caution

- Please follow this specification for actual application;
- Hauling and assembling gently;
- Stop using the temperature sensor, when it be damaged or scrapped;
- Apply to correct operation temperature range, avoid using in rapid temperature change, over pressure,corrosive environment;
- Do consider self-heating of NTC into measure system;
- For others, please consult our sales engineer.

8. Following Condition

8.1 Storage Condition:

- Storage Temp. Range: -10°C~40°C;
- Relative Humidity: ≤75% RH;
- Keep away from direct sunlight, damp and corrosive environment.
- Without dewing.

8.2 Storage Term:

- Use this product within 12 months after delivery.
- If 12 months or more elapsed,please check the solderability before use.

8.3 Storage Place:

- Store this product in no corrosive gas(SOX,CL,etc.),nor directly under sunshine.

R-T Conversion Table  
Part No.: RM-0434  
R25: 10kohm  $\pm$  1%  
B25/85: 3435K  $\pm$  1%  
Notes:Temp Tol below represents the tolerance of NTC itself, the impact of ambient temperature is not considered.

The copyright in this Specification/Drawing/Document is the property of Amphenol Thermometrics (UK) Ltd and the Specification/Drawing/Document is issued on the condition that it is not copied, reprinted, stored in an electronic retrieval system or reproduced, nor its contents disclosed either wholly or in part to any Third Party without either the consent in writing or in accordance with the conditions of a contract with Amphenol Thermometrics (UK) Ltd. © AMPHENOL THERMOMETRICS (UK) LTD.

T(°C)	Rnom (kΩ)	Rto $\pm\%$	Rmin (kΩ)	Rmax (kΩ)	Temp Tol $\pm\%$
-40	203.378	4.09	195.369	211.694	0.73
-39	192.285	4.03	184.817	200.035	0.72
-38	181.862	3.97	174.896	189.087	0.71
-37	172.064	3.92	165.565	178.801	0.71
-36	162.851	3.86	156.786	169.134	0.70
-35	154.185	3.80	148.524	160.046	0.70
-34	146.030	3.74	140.745	151.499	0.69
-33	138.354	3.69	133.419	143.458	0.68
-32	131.126	3.63	126.516	135.890	0.68
-31	124.317	3.58	120.011	128.765	0.67
-30	117.901	3.52	113.878	122.055	0.67
-29	111.854	3.47	108.093	115.733	0.66
-28	106.151	3.41	102.636	109.776	0.65
-27	100.772	3.36	97.486	104.159	0.65
-26	95.697	3.31	92.624	98.862	0.64
-25	90.907	3.25	88.033	93.865	0.64
-24	86.383	3.20	83.695	89.149	0.63
-23	82.111	3.15	79.597	84.697	0.62
-22	78.075	3.10	75.722	80.493	0.62
-21	74.260	3.05	72.059	76.522	0.61
-20	70.654	2.99	68.593	72.770	0.60
-19	67.243	2.94	65.314	69.222	0.60
-18	64.017	2.89	62.211	65.869	0.59
-17	60.964	2.84	59.273	62.696	0.58
-16	58.073	2.79	56.490	59.695	0.58
-15	55.337	2.74	53.854	56.854	0.57
-14	52.745	2.69	51.356	54.165	0.56
-13	50.289	2.64	48.988	51.618	0.56
-12	47.961	2.60	46.743	49.206	0.55
-11	45.754	2.55	44.613	46.920	0.54
-10	43.662	2.50	42.592	44.753	0.54
-9	41.676	2.45	40.675	42.698	0.53
-8	39.793	2.40	38.855	40.750	0.52
-7	38.005	2.36	37.126	38.901	0.51
-6	36.308	2.31	35.484	37.147	0.51
-5	34.696	2.26	33.924	35.481	0.50
-4	33.164	2.22	32.441	33.900	0.49
-3	31.709	2.17	31.032	32.398	0.49
-2	30.326	2.13	29.691	30.971	0.48
-1	29.011	2.08	28.416	29.615	0.47
0	27.760	2.04	27.203	28.325	0.46
1	26.570	1.99	26.049	27.100	0.46
2	25.438	1.95	24.950	25.934	0.45
3	24.361	1.90	23.903	24.824	0.44
4	23.335	1.86	22.907	23.769	0.43
5	22.358	1.82	21.957	22.764	0.43
6	21.427	1.77	21.052	21.807	0.42
7	20.540	1.73	20.189	20.896	0.41
8	19.695	1.69	19.367	20.028	0.40
9	18.890	1.64	18.582	19.200	0.39
10	18.121	1.60	17.834	18.412	0.39
11	17.389	1.56	17.120	17.660	0.38
12	16.690	1.52	16.438	16.943	0.37
13	16.022	1.48	15.788	16.259	0.36
14	15.386	1.44	15.166	15.607	0.35
15	14.778	1.40	14.573	14.984	0.35
16	14.197	1.35	14.006	14.389	0.34
17	13.642	1.31	13.464	13.822	0.33
18	13.113	1.27	12.946	13.280	0.32
19	12.606	1.23	12.451	12.762	0.31
20	12.122	1.19	11.978	12.267	0.31
21	11.659	1.16	11.525	11.794	0.30
22	11.216	1.12	11.092	11.342	0.29
23	10.793	1.08	10.677	10.909	0.28
24	10.388	1.04	10.280	10.496	0.27
25	10.000	1.00	9.900	10.100	0.26
26	9.629	1.04	9.529	9.729	0.28
27	9.273	1.08	9.174	9.373	0.29
28	8.933	1.11	8.834	9.033	0.30
29	8.607	1.15	8.508	8.706	0.31
30	8.295	1.19	8.196	8.393	0.32
31	7.995	1.23	7.898	8.093	0.33
32	7.708	1.26	7.611	7.806	0.35
33	7.433	1.30	7.337	7.530	0.36
34	7.169	1.34	7.074	7.265	0.37
35	6.916	1.37	6.822	7.011	0.38
36	6.673	1.41	6.580	6.767	0.40
37	6.440	1.45	6.348	6.534	0.41
38	6.217	1.48	6.125	6.309	0.42
39	6.002	1.52	5.912	6.093	0.43
40	5.796	1.55	5.707	5.886	0.45
41	5.598	1.59	5.510	5.687	0.46
42	5.408	1.62	5.321	5.496	0.47

T(°C)	Rnom (kΩ)	Rto $\pm\%$	Rmin (kΩ)	Rmax (kΩ)	Temp Tol $\pm\%$
43	5.225	1.66	5.140	5.312	0.48
44	5.050	1.69	4.965	5.135	0.50
45	4.881	1.73	4.798	4.965	0.51
46	4.719	1.76	4.637	4.802	0.52
47	4.563	1.80	4.482	4.645	0.54
48	4.413	1.83	4.333	4.494	0.55
49	4.269	1.86	4.190	4.348	0.56
50	4.130	1.90	4.053	4.208	0.58
51	3.996	1.93	3.920	4.074	0.59
52	3.868	1.96	3.793	3.944	0.60
53	3.744	2.00	3.670	3.819	0.62
54	3.625	2.03	3.553	3.699	0.63
55	3.510	2.06	3.439	3.583	0.64
56	3.400	2.10	3.330	3.471	0.66
57	3.293	2.13	3.224	3.363	0.67
58	3.191	2.16	3.123	3.260	0.68
59	3.092	2.19	3.025	3.160	0.70
60	2.997	2.22	2.931	3.063	0.71
61	2.905	2.26	2.840	2.970	0.73
62	2.816	2.29	2.753	2.881	0.74
63	2.731	2.32	2.669	2.794	0.75
64	2.648	2.35	2.587	2.711	0.77
65	2.569	2.38	2.509	2.630	0.78
66	2.492	2.41	2.433	2.552	0.80
67	2.418	2.44	2.360	2.477	0.81
68	2.347	2.47	2.290	2.405	0.83
69	2.278	2.51	2.222	2.335	0.84
70	2.211	2.54	2.156	2.267	0.86
71	2.147	2.57	2.093	2.202	0.87
72	2.085	2.60	2.032	2.139	0.89
73	2.025	2.63	1.973	2.078	0.90
74	1.967	2.66	1.916	2.019	0.92
75	1.911	2.69	1.861	1.962	0.93
76	1.857	2.72	1.807	1.907	0.95
77	1.804	2.74	1.756	1.854	0.96
78	1.754	2.77	1.706	1.802	0.98
79	1.705	2.80	1.658	1.753	0.99
80	1.657	2.83	1.612	1.704	1.01
81	1.612	2.86	1.567	1.658	1.02
82	1.567	2.89	1.523	1.613	1.04
83	1.524	2.92	1.481	1.569	1.06
84	1.483	2.95	1.440	1.527	1.07
85	1.443	2.97	1.401	1.486	1.09
86	1.404	3.00	1.363	1.446	1.10
87	1.366	3.03	1.326	1.408	1.12
88	1.330	3.06	1.290	1.371	1.13
89	1.295	3.09	1.256	1.335	1.15
90	1.261	3.11	1.222	1.300	1.17
91	1.227	3.14	1.190	1.266	1.18
92	1.195	3.17	1.159	1.233	1.20
93	1.164	3.20	1.128	1.202	1.22
94	1.134	3.22	1.099	1.171	1.23
95	1.105	3.25	1.070	1.141	1.25
96	1.077	3.28	1.042	1.112	1.27
97	1.049	3.30	1.016	1.084	1.28
98	1.023	3.33	0.990	1.057	1.30
99	0.997	3.36	0.964	1.030	1.32
100	0.972	3.38	0.940	1.005	1.33
101	0.948	3.41	0.916	0.980	1.35
102	0.924	3.43	0.893	0.956	1.37
103	0.901	3.46	0.871	0.932	1.38
104	0.879	3.49	0.849	0.910	1.40
105	0.858	3.51	0.828	0.888	1.42
106	0.837	3.54	0.808	0.866	1.44
107	0.816	3.56	0.788	0.845	1.45
108	0.797	3.59	0.769	0.825	1.47
109	0.777	3.61	0.750	0.806	1.49
110	0.759	3.64	0.732	0.787	1.51
111	0.741	3.66	0.715	0.768	1.53
112	0.723	3.69	0.698	0.750	1.54
113	0.706	3.71	0.681	0.732	1.56
114	0.690	3.74	0.665	0.715	1.58
115	0.674	3.76	0.649	0.699	1.60
116	0.658	3.79	0.634	0.683	1.62
117	0.643	3.81	0.619	0.667	1.63
118	0.628	3.83	0.605	0.652	1.65
119	0.614	3.86	0.591	0.637	1.67
120	0.600	3.88	0.577	0.623	1.69
121	0.586	3.91	0.564	0.609	1.71
122	0.573	3.93	0.551	0.595	1.73
123	0.560	3.95	0.539	0.582	1.74
124	0.547	3.98	0.526	0.569	1.76
125	0.535	4.00	0.515	0.557	1.78

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for* [NTC \(Negative Temperature Coefficient\) Thermistors](#) *category:*

*Click to view products by* [Amphenol](#) *manufacturer:*

Other Similar products are found below :

[118-253FAJ-P01](#) [121-202EAC-P01](#) [123-802EAJ-P01](#) [128-105NDP-Q02](#) [B57234S330M](#) [NTCLE410E3103F](#) [199-303KAF-A02](#) [30054-4](#)  
[M09N038F](#) [B57401V2103H062](#) [500-52AA04-101](#) [526-31AA19-104](#) [526-31AN12-202](#) [103AT-5-1P-FT](#) [10K3A542I](#) [111-802EAJ-901](#) [112-](#)  
[103FAG-H02](#) [112-104KAG-B01](#) [111-182CAG-H01](#) [112-103FAF-H01](#) [112-104KBF-F01](#) [526-31AA79-102](#) [B57621C5472J62](#) [44015RC](#)  
[194303KEVA01](#) [B57359V2224J260](#) [B57621C5472K062](#) [135-105QAF-J02](#) [B57230V2103H260](#) [NTCS0603E3333FHT](#) [118-802EAJ-P01](#)  
[121-103FAC-Q02](#) [144-101FAG-001](#) [521-53AW02-104](#) [CL109R4120](#) [GA100K6D234](#) [USUR1000-502G-06](#) [GA10K3MR1I](#) [USUR1000-](#)  
[203G-06](#) [NTCS0603E3333HHT](#) [GA1K7CG3](#) [NXFT15WB473FEAB030](#) [GA10K3A542I](#) [NTCLE213E3103JHT1](#) [A1504AS26P2A](#)  
[PANR103338-490](#) [NTCALUG02A502FA](#) [JSNA104F425FABXG](#) [JSNA103F345FABXG](#) [JSNA473F405FABXG](#)