

APPROVAL SHEET

CUSTOMER _____

PARTNAME Pearl-Shape Temp Measurement NTC Thermistor

PART NUMBER B H7 A ! (? + ! 6 ' (+ \$

DATE _____

CONFIRM

<p style="text-align: center;">CLIENT</p> <p>Quality Dep.: _____</p> <p>Production Dep.: _____</p> <p>Engineering Dep.: _____</p>

<p style="text-align: center;">MANUFACTOR</p> <p>Design: _____</p> <p>Check: _____</p> <p>Approval: _____</p>

	Customer:		
	customer confirm	Confirm:	Date:
		Approve:	Date:

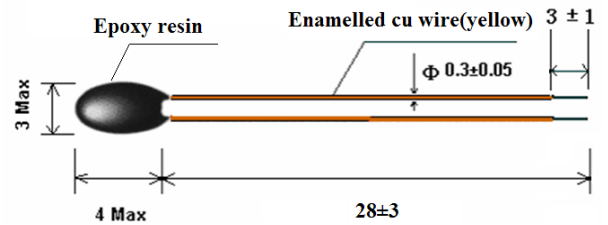
1、Electrical Characteristics

	Item	Symbol	Test conditions	Unit	Specification
1.1	Zero Power Resistance at 25°C	R ₂₅	T _a =25±0.05°C Test Power≤0.1mW	KΩ	4.7±1%
1.2	B-value	B _{25/50}	$B=[(T_a \times T_b)/(T_b - T_a)] \times \ln(R_a/R_b)$ T _b =50°C±0.01°C	K	3470±1%
1.3	Thermal dissipation Coefficient	δ	In still air	mW/°C	≥2
1.4	Thermal time constant	τ	In still air	sec	≤7
1.5	Insulation resistance	/	100V/DC 1min	MΩ	≥100
1.6	Operating temperature	/	/	°C	-55°C ~ 125°C
1.7	Maximum rated power	P _{max}	/	mW	50
1.8	R&T-table	/	/	/	See attached table
1.9	Resistance tolerance	/	/	/	See attached curve

2、Reliability

	Item	Test conditions and methods	Technical requirements
2.1	Terminal strength	Fixed resistor end, Pull strength: 5±1 N, time: 10±1 sec	No obvious damage, R ₂₅ ΔR/R≤±2%
2.2	Solderability	temperature : 245±5°C for 2-3sec	the coverage area should be more than 95%.
2.3	Welding heat resistant	Tin pan temperature : 260±5°C, immersion depth is apart from the body resistance 6mm , time:5±1sec	R ₂₅ ΔR/R≤±2%.
2.4	Steady humidity and heat	Temp: 40°C±2°C, humidity: 93±2%, Time : 500hrs	R ₂₅ ΔR/R≤±2%.
2.5	Rapid changes in temperature	-55°C 30min→25°C 5min→1 25°C 30min→25°C 5min , 5cycles	R ₂₅ ΔR/R≤±2%
2.6	High temperature storage	Temp : 125°C±5°C, Time :1000hrs	R ₂₅ ΔR/R≤±2%
2.7	Low temperature storage	Temp : -55°C, Time :1000hrs	R ₂₅ ΔR/R≤±2%

4, Dimensions(mm)



No.	Name	Material specifications	Quantity	note
1	element	NTC Thermistor (chip)	1	
2	Modified resin	Coating types of resin	1	Black
3	Lead wire	Φ0.3 Enameled cu wire	2	Yellow

3、Matters need attention

- 3.1 This product USES: Temperature measurement and control;
- 3.2 Avoid measurement error when current through the thermistor chip resulted in heating element itself;
- 3.3 When the soldering iron welding, the welding place at least 2 mm space from coating layer and the welding temperature should be lower than 300 °C, welding time < 3 ses
- 3.4 Storage temp: -10°C ~ 40°C; storage humidity : ≤75% RH;
- 3.5 Avoid air corrosion or sunlight
- 3.6 Remake sealed storage after package opening.

	Customer:		
	customer confirm	Confirm:	Date:
		Approve:	Date:

R&T Table

NTCM-4K7-B3470							
R25=4.7K Ω TOLERANCE: ±1% B25/50=3470K B25/85=3639K TOLERANCE: ±1%(P219-2)							
TEMP (°C)	RESISTANCE (K Ω)			RESISST-TOL (%)		TEMP-TOL (°C)	
	MIN	CENTER	MAX	△R	-△R	△T	-△T
-55	247.368	260.099	273.458	5.136	-4.894	0.749	-0.713
-54	233.640	245.522	257.984	5.075	-4.839	0.745	-0.710
-53	220.486	231.565	243.175	5.013	-4.784	0.740	-0.706
-52	207.929	218.247	229.054	4.951	-4.727	0.736	-0.703
-51	195.976	205.578	215.629	4.889	-4.670	0.732	-0.700
-50	184.630	193.559	202.900	4.825	-4.613	0.728	-0.696
-49	173.883	182.183	190.859	4.762	-4.555	0.724	-0.692
-48	163.725	171.435	179.490	4.698	-4.497	0.720	-0.689
-47	154.138	161.298	168.775	4.634	-4.439	0.715	-0.685
-46	145.104	151.752	158.689	4.571	-4.380	0.711	-0.681
-45	136.600	142.772	149.207	4.507	-4.322	0.707	-0.678
-44	128.605	134.333	140.302	4.443	-4.264	0.702	-0.674
-43	121.093	126.410	131.947	4.380	-4.205	0.698	-0.670
-42	114.040	118.975	124.111	4.316	-4.147	0.693	-0.666
-41	107.422	112.003	116.768	4.253	-4.090	0.689	-0.662
-40	101.215	105.468	109.888	4.191	-4.032	0.684	-0.658
-39	95.394	99.343	103.445	4.129	-3.974	0.680	-0.654
-38	89.937	93.604	97.411	4.067	-3.917	0.675	-0.650
-37	84.822	88.229	91.763	4.005	-3.860	0.670	-0.646
-36	80.028	83.193	86.474	3.944	-3.804	0.666	-0.642
-35	75.534	78.475	81.523	3.883	-3.748	0.661	-0.638
-34	71.321	74.055	76.887	3.823	-3.692	0.656	-0.633
-33	67.370	69.913	72.545	3.763	-3.636	0.651	-0.629
-32	63.666	66.032	68.478	3.704	-3.581	0.646	-0.624
-31	60.192	62.393	64.667	3.645	-3.527	0.641	-0.620
-30	56.932	58.980	61.096	3.587	-3.472	0.636	-0.615
-29	53.873	55.780	57.749	3.529	-3.419	0.630	-0.611
-28	51.000	52.776	54.609	3.472	-3.365	0.625	-0.606
-27	48.302	49.957	51.664	3.415	-3.312	0.620	-0.601
-26	45.768	47.310	48.900	3.359	-3.259	0.615	-0.596
-25	43.386	44.823	46.304	3.303	-3.207	0.609	-0.591
-24	41.145	42.486	43.866	3.248	-3.155	0.604	-0.586
-23	39.038	40.289	41.576	3.193	-3.104	0.598	-0.581

SRPASSIVES

-22	37.055	38.222	39.422	3.139	-3.053	0.592	-0.576
-21	35.188	36.277	37.396	3.085	-3.002	0.587	-0.571
-20	33.428	34.445	35.490	3.031	-2.952	0.581	-0.566
-19	31.771	32.720	33.695	2.978	-2.902	0.575	-0.561
-18	30.208	31.095	32.005	2.926	-2.853	0.569	-0.555
-17	28.733	29.562	30.412	2.874	-2.803	0.564	-0.550
-16	27.342	28.116	28.910	2.822	-2.755	0.558	-0.544
-15	26.028	26.752	27.493	2.771	-2.706	0.552	-0.539
-14	24.786	25.463	26.156	2.721	-2.658	0.545	-0.533
-13	23.613	24.246	24.894	2.670	-2.611	0.539	-0.527
-12	22.504	23.096	23.702	2.620	-2.563	0.533	-0.521
-11	21.455	22.009	22.575	2.571	-2.516	0.527	-0.515
-10	20.462	20.980	21.510	2.522	-2.470	0.520	-0.510
-9	19.522	20.007	20.502	2.473	-2.423	0.514	-0.504
-8	18.631	19.085	19.548	2.425	-2.377	0.507	-0.497
-7	17.787	18.212	18.645	2.377	-2.331	0.501	-0.491
-6	16.987	17.385	17.790	2.329	-2.286	0.494	-0.485
-5	16.228	16.601	16.979	2.282	-2.241	0.488	-0.479
-4	15.508	15.857	16.211	2.235	-2.196	0.481	-0.472
-3	14.825	15.151	15.483	2.189	-2.152	0.474	-0.466
-2	14.176	14.481	14.791	2.142	-2.107	0.467	-0.459
-1	13.559	13.845	14.135	2.097	-2.063	0.460	-0.453
0	12.955	13.222	13.493	2.050	-2.018	0.453	-0.447
1	12.416	12.666	12.920	2.006	-1.976	0.446	-0.439
2	11.886	12.120	12.358	1.961	-1.933	0.439	-0.433
3	11.381	11.601	11.823	1.916	-1.890	0.432	-0.426
4	10.901	11.107	11.315	1.872	-1.847	0.424	-0.419
5	10.444	10.636	10.831	1.828	-1.805	0.417	-0.412
6	10.009	10.189	10.371	1.784	-1.763	0.410	-0.405
7	9.594	9.762	9.932	1.741	-1.721	0.402	-0.398
8	9.199	9.356	9.515	1.697	-1.679	0.395	-0.390
9	8.822	8.969	9.117	1.654	-1.637	0.387	-0.383
10	8.443	8.580	8.718	1.609	-1.594	0.380	-0.377
11	8.120	8.248	8.377	1.569	-1.555	0.372	-0.368
12	7.792	7.912	8.033	1.527	-1.514	0.364	-0.361
13	7.480	7.592	7.705	1.485	-1.473	0.356	-0.353
14	7.182	7.286	7.391	1.443	-1.433	0.348	-0.346
15	6.897	6.994	7.092	1.402	-1.392	0.340	-0.338
16	6.625	6.716	6.807	1.361	-1.352	0.332	-0.330
17	6.365	6.449	6.534	1.320	-1.312	0.324	-0.322
18	6.116	6.195	6.274	1.279	-1.273	0.316	-0.315
19	5.878	5.952	6.025	1.238	-1.233	0.308	-0.307
20	5.651	5.719	5.788	1.198	-1.194	0.300	-0.299
21	5.433	5.497	5.560	1.158	-1.154	0.291	-0.290
22	5.225	5.284	5.343	1.118	-1.115	0.283	-0.282
23	5.026	5.081	5.135	1.078	-1.077	0.274	-0.274

SRPASSIVES

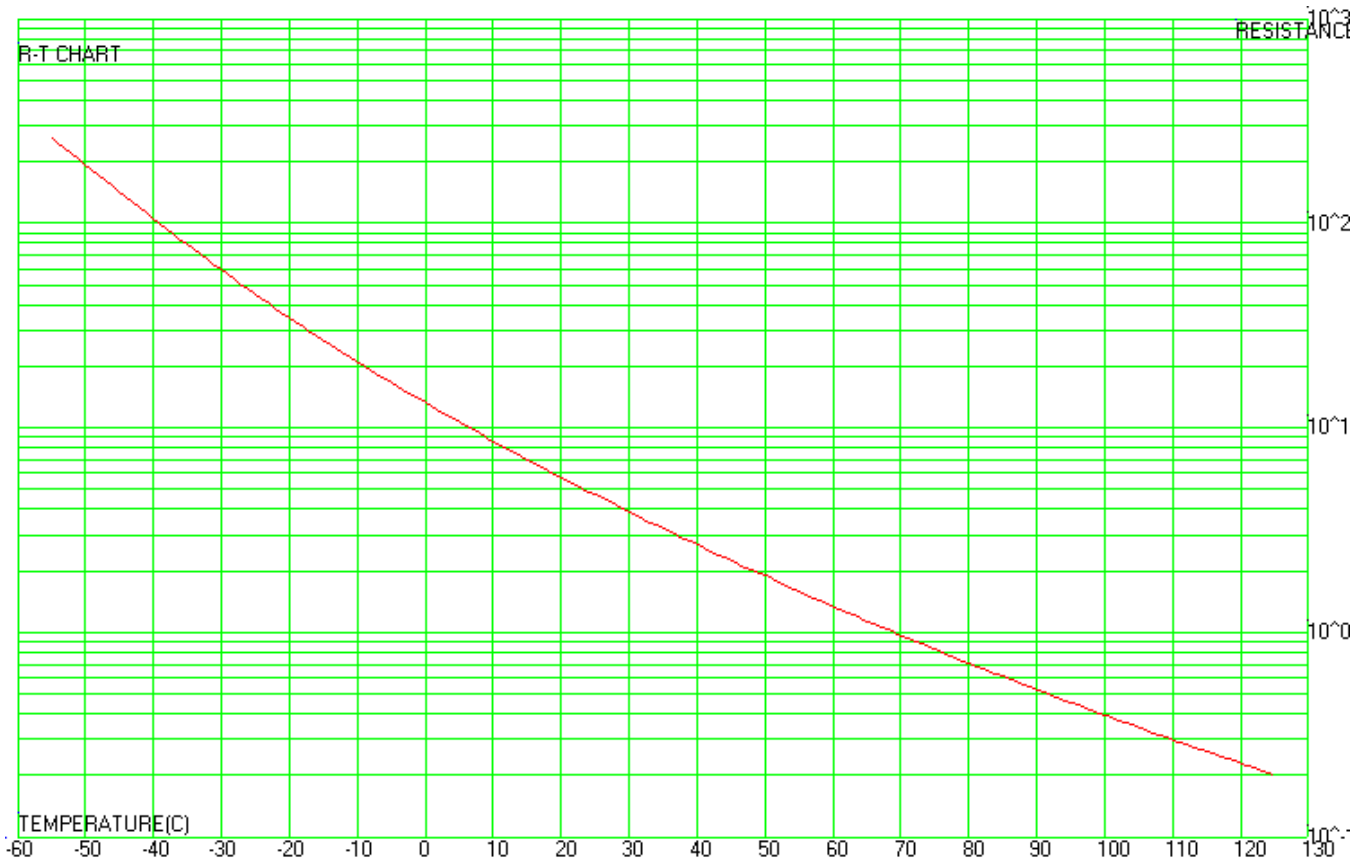
24	4.835	4.886	4.937	1.039	-1.038	0.266	-0.266
25	4.653	4.700	4.746	1.000	-1.000	0.258	-0.258
26	4.474	4.521	4.568	1.039	-1.038	0.269	-0.269
27	4.303	4.350	4.397	1.078	-1.076	0.281	-0.280
28	4.140	4.187	4.233	1.116	-1.114	0.292	-0.292
29	3.983	4.030	4.076	1.155	-1.152	0.304	-0.303
30	3.833	3.880	3.926	1.193	-1.189	0.316	-0.315
31	3.690	3.736	3.782	1.232	-1.226	0.328	-0.327
32	3.552	3.598	3.643	1.270	-1.264	0.340	-0.339
33	3.420	3.465	3.511	1.308	-1.301	0.352	-0.350
34	3.294	3.338	3.383	1.345	-1.337	0.364	-0.362
35	3.173	3.217	3.261	1.383	-1.374	0.377	-0.374
36	3.056	3.100	3.144	1.421	-1.410	0.389	-0.386
37	2.945	2.988	3.032	1.458	-1.447	0.402	-0.398
38	2.838	2.880	2.924	1.495	-1.483	0.414	-0.411
39	2.735	2.777	2.820	1.532	-1.519	0.427	-0.423
40	2.637	2.678	2.720	1.569	-1.555	0.439	-0.435
41	2.542	2.583	2.625	1.606	-1.590	0.452	-0.448
42	2.451	2.492	2.533	1.642	-1.626	0.465	-0.460
43	2.364	2.404	2.444	1.679	-1.661	0.478	-0.473
44	2.280	2.320	2.359	1.715	-1.696	0.491	-0.485
45	2.200	2.239	2.278	1.751	-1.731	0.504	-0.498
46	2.123	2.161	2.200	1.787	-1.766	0.517	-0.511
47	2.048	2.086	2.124	1.823	-1.800	0.530	-0.523
48	1.977	2.014	2.052	1.859	-1.835	0.543	-0.536
49	1.909	1.945	1.982	1.894	-1.869	0.557	-0.549
50	1.876	1.912	1.949	1.912	-1.885	0.576	-0.568
51	1.779	1.815	1.850	1.965	-1.937	0.583	-0.575
52	1.718	1.753	1.788	2.000	-1.971	0.597	-0.588
53	1.660	1.694	1.728	2.035	-2.004	0.611	-0.601
54	1.604	1.637	1.671	2.070	-2.038	0.624	-0.615
55	1.549	1.582	1.615	2.105	-2.071	0.638	-0.628
56	1.497	1.529	1.562	2.139	-2.104	0.652	-0.641
57	1.447	1.479	1.511	2.174	-2.137	0.666	-0.655
58	1.399	1.430	1.461	2.208	-2.170	0.680	-0.668
59	1.352	1.383	1.414	2.242	-2.203	0.694	-0.682
60	1.307	1.337	1.368	2.277	-2.236	0.708	-0.696
61	1.264	1.294	1.324	2.310	-2.268	0.722	-0.709
62	1.223	1.252	1.281	2.344	-2.300	0.737	-0.723
63	1.183	1.211	1.240	2.378	-2.332	0.751	-0.737
64	1.144	1.172	1.200	2.411	-2.364	0.766	-0.751
65	1.107	1.135	1.162	2.445	-2.396	0.780	-0.765
66	1.072	1.098	1.125	2.478	-2.428	0.795	-0.779
67	1.037	1.063	1.090	2.511	-2.460	0.810	-0.793
68	1.004	1.030	1.056	2.544	-2.491	0.824	-0.807
69	0.972	0.997	1.023	2.577	-2.522	0.839	-0.821

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70	0.941	0.966	0.991	2.610	-2.553	0.854	-0.836
71	0.911	0.935	0.960	2.643	-2.584	0.869	-0.850
72	0.883	0.906	0.931	2.675	-2.615	0.884	-0.864
73	0.855	0.878	0.902	2.707	-2.646	0.899	-0.879
74	0.828	0.851	0.874	2.740	-2.676	0.915	-0.894
75	0.802	0.825	0.848	2.772	-2.707	0.930	-0.908
76	0.778	0.800	0.822	2.804	-2.737	0.945	-0.923
77	0.754	0.775	0.797	2.836	-2.767	0.961	-0.938
78	0.731	0.752	0.773	2.867	-2.797	0.976	-0.952
79	0.708	0.729	0.750	2.899	-2.827	0.992	-0.967
80	0.687	0.707	0.728	2.930	-2.857	1.008	-0.982
81	0.666	0.686	0.706	2.962	-2.886	1.024	-0.997
82	0.646	0.665	0.685	2.993	-2.916	1.039	-1.013
83	0.626	0.645	0.665	3.024	-2.945	1.055	-1.028
84	0.608	0.626	0.645	3.055	-2.974	1.071	-1.043
85	0.589	0.608	0.626	3.086	-3.003	1.087	-1.058
86	0.572	0.590	0.608	3.117	-3.032	1.104	-1.074
87	0.555	0.573	0.591	3.147	-3.061	1.120	-1.089
88	0.539	0.556	0.574	3.178	-3.090	1.136	-1.105
89	0.523	0.540	0.557	3.208	-3.118	1.153	-1.120
90	0.508	0.524	0.541	3.239	-3.147	1.169	-1.136
91	0.493	0.509	0.526	3.269	-3.175	1.186	-1.152
92	0.479	0.494	0.511	3.299	-3.203	1.202	-1.167
93	0.465	0.480	0.496	3.329	-3.231	1.219	-1.183
94	0.451	0.467	0.482	3.359	-3.259	1.236	-1.199
95	0.438	0.453	0.469	3.388	-3.287	1.253	-1.215
96	0.426	0.441	0.456	3.418	-3.314	1.269	-1.231
97	0.414	0.428	0.443	3.447	-3.342	1.286	-1.247
98	0.402	0.416	0.431	3.477	-3.369	1.304	-1.263
99	0.391	0.405	0.419	3.506	-3.397	1.321	-1.280
100	0.380	0.393	0.407	3.535	-3.424	1.338	-1.296
101	0.369	0.382	0.396	3.564	-3.451	1.355	-1.312
102	0.359	0.372	0.385	3.593	-3.478	1.373	-1.329
103	0.349	0.362	0.375	3.622	-3.505	1.390	-1.345
104	0.339	0.352	0.365	3.650	-3.531	1.408	-1.362
105	0.330	0.342	0.355	3.679	-3.558	1.425	-1.379
106	0.321	0.333	0.345	3.707	-3.584	1.443	-1.395
107	0.312	0.324	0.336	3.736	-3.611	1.461	-1.412
108	0.304	0.315	0.327	3.764	-3.637	1.479	-1.429
109	0.296	0.307	0.319	3.792	-3.663	1.497	-1.446
110	0.288	0.299	0.310	3.820	-3.689	1.515	-1.463
111	0.280	0.291	0.302	3.848	-3.715	1.533	-1.480
112	0.272	0.283	0.294	3.876	-3.741	1.551	-1.497
113	0.265	0.276	0.286	3.903	-3.766	1.569	-1.514
114	0.258	0.268	0.279	3.931	-3.792	1.588	-1.531
115	0.251	0.261	0.272	3.959	-3.817	1.606	-1.549

SRPASSIVES

116	0.245	0.255	0.265	3.986	-3.843	1.624	-1.566
117	0.238	0.248	0.258	4.013	-3.868	1.643	-1.583
118	0.232	0.242	0.251	4.040	-3.893	1.662	-1.601
119	0.226	0.235	0.245	4.068	-3.918	1.680	-1.619
120	0.220	0.229	0.239	4.095	-3.943	1.699	-1.636
121	0.214	0.223	0.233	4.121	-3.968	1.718	-1.654
122	0.209	0.218	0.227	4.148	-3.993	1.737	-1.672
123	0.204	0.212	0.221	4.175	-4.017	1.756	-1.689
124	0.198	0.207	0.216	4.202	-4.042	1.775	-1.707
125	0.193	0.202	0.210	4.228	-4.066	1.794	-1.725



SRPASSIVES

