

## 興勤電子工業股份有限公司

## THINKING ELECTRONIC INDUSTRIAL CO., LTD.

總公司：臺灣高雄市大順一路93號12樓之一

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生產基地

## MANUFACTURING SITE

- 高雄工廠：臺灣高雄市楠梓加工區開發路51號  
 KAOHSIUNG FACTORY: No.51, Kaifa Road, Nantze Export Processing Zone,  
 Kaohsiung City 81170, Taiwan  
 TEL: 886-7-9616668 FAX: 886-7-9616698
- 高雄工廠：臺灣高雄市楠梓加工區新建南路2號2-2F  
 KAOHSIUNG FACTORY 2: No. 2-2, Xinjian S. Rd., N.E.P.Z., Kaohsiung City 81170, Taiwan  
 TEL: 886-7-9630001 FAX: 886-7-3635113
- 常州工廠：中國江蘇省常州市武進高新技術產業開發區龍門路6號  
 CHANGZHOU FACTORY: No.6, Longmen Road, Wujin National High&New-Tech Industrial  
 Development Zone, Changzhou, Jiangsu, China  
 TEL: 86-519-86578999 FAX: 86-519-86558643
- 東莞工廠：中國廣東省東莞市長安鎮沙頭東大街  
 DONG GUAN FACTORY: Chiao-Tou Tsun, Sha-Tao Hsiang, Chang-An Town,  
 Dong-Guan City 523863, Guangdong, China  
 TEL: 86-769-85542016 FAX: 86-769-85546890
- 宜昌工廠：中國湖北省宜昌市猇亭區猇亭大道283號  
 YICHANG FACTORY: No. 283 Xiaoting Avenue, Xiaoting Dist., Yichang  
 City 443007, Hubei, China  
 TEL: 86-717-6510010 FAX: 86-717-6511430



## SPECIFICATION FOR APPROVAL

客戶 CUSTOMER	立創電子
型號 CERTIFIED MODEL/TYPE	
料號 PART NO.	BTSTB102CBB026(RoHS)
應用 APPLICATION	
客戶料號 CUSTOMER P/N	
發型日期 ISSUE DATE	Dec.1.2020
版次 REV. NO	1.0
版本日期 REV. DATE	

客戶承認 FOR CUSTOMER APPROVAL	核對 CHECKED BY
	戶鋒
	確認 APPROVED BY
	朱鳳美



客戶 CUSTOMER:立創電子

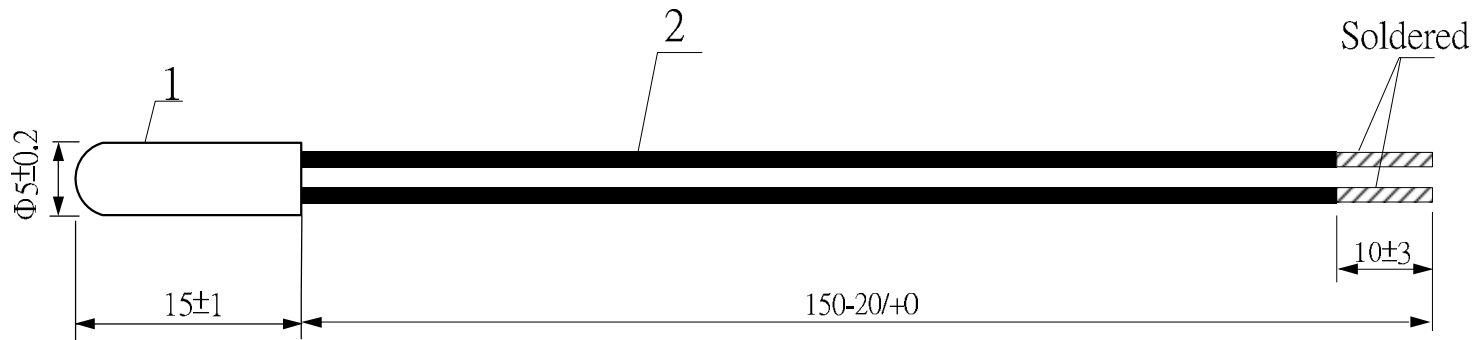
客戶料號 CUSTOMER P/N :

料號 Part No. : BTSTB102CBB026

**修訂記錄清單 REVISED RECORD SHEET**

版次 REV. NO	版本日期 REV. DATE	修改內容 REVISED CONTENT
1.0	2020/12/1	新發布 (New Released)

A. 材料清單 Material List		
序號 NO.	項目 ITEM	詳述 DESCRIPTION
*	元素 ELEMENT	PT-1000
1	外殼 CAP	Φ5*15mm不鏽鋼殼 Φ5*15mm Stainless steel
2	線材 LEAD WIRE	26AWG CABLE線 PTFE 26AWG CABLE WIRE
B. Electrical Characteristic		
ITEM		VALUE
R0°C		1000Ω ( Class2 B)
TCR		3750ppm/K
備註：電阻R0°C時為1000Ω，線阻抗為0.3Ω/米 (at 20°C)		



						客戶 Customer	立創電子	
						客戶料號 Customer P/N		
						料號 Thinking P/N	BTSTB102CBB026	
						圖號 Drawing NO.	BTS1610003	
						日期 Date	2020/12/1	
						公差 Tol: ±0.3	單位 Unit: mm	比例 Scale:
1.0	2020/12/1	New Released		阮東	戶鋒	朱鳳美	興勤電子工業股份有限公司 THINKING ELECTRONIC INDUSTRIAL CO., LTD	
版次 Rev.	日期 Date	修訂記錄 Subjects of Change	ECN No.	制作 Designed by	審核 Checked by	核準 Approved by		

客戶 Customer:立創電子

料號 Thinking P/N: BTSTB102CBB026

序號NO	材料名稱 PART NAME	材料規格 PART P/N	數量 Q'TY	安規號 UL FILE NO
*	元素 ELEMENT	PT-1000	1	
1	外殼 CAP	Φ5*15mm不鏽鋼殼 Φ5*15mm Stainless steel	1	
2	線材 LEAD WIRE	26AWG CABLE線 PTFE 26AWG CABLE WIRE	2	
REMARK				

核準 Approved by: 朱鳳美

審核 Checked by: 戶鋒

制作 Designed by:阮東

感測器產品規格說明書

**Specification of PT SENSOR for Temperature Measurement and Control**

產品料號 PART NO. BTSTB102CBB026

客戶料號 CUSTOMER P/N.

**1. 電氣特性 Electrical characteristics**

	參數 Parameter	符號 Symbol	測試條件 Test Conditions	最小值 Min.	正常值 Nor.	最大值 Max.	單位 Unit.
a.	0°C時之基準電阻值 Resistance At 0°C	R <sub>0</sub>	R <sub>0</sub> °C = 1000Ω	Class 2B			Ω
b.	電阻溫度系數 TCR		3750				ppm/K
c.	耐壓測試 Hi - Pot Test		3500V AC 1 sec	-----	-----	10	mA
d.	絕緣測試 Insulation test		500V DC	MIN: 100 MΩ			

**2. 最大工作范围 Maximun Ratings**

	項目 Parameter	規格 Specification	單位 Unit
a.	Operation Temperature Range	-40 ----- +150	°C

## PT1000 Temperature vs resistance

**Tolerance class: 2B**

**Pt1000 TC 3750ppm**

Permissible deviation :  $Dt = \pm 2(0.3^{\circ}\text{C} + 0.005 \cdot |t|)$

Temperature °C	Resistance Rt W	Sensibility W/°C	Permissible deviation	
			°C	W
-40	846.580	3.863	1.000	3.863
-39	850.440	3.861	0.990	3.823
-38	854.300	3.860	0.980	3.783
-37	858.160	3.858	0.970	3.743
-36	862.010	3.857	0.960	3.703
-35	865.870	3.856	0.950	3.663
-34	869.730	3.854	0.940	3.623
-33	873.580	3.853	0.930	3.583
-32	877.430	3.851	0.920	3.543
-31	881.280	3.850	0.910	3.503
-30	885.130	3.849	0.900	3.464
-29	888.980	3.847	0.890	3.424
-28	892.830	3.846	0.880	3.384
-27	896.670	3.844	0.870	3.345
-26	900.510	3.843	0.860	3.305
-25	904.360	3.842	0.850	3.266
-24	908.200	3.840	0.840	3.226
-23	912.040	3.839	0.830	3.186
-22	915.880	3.838	0.820	3.147
-21	919.710	3.836	0.810	3.108
-20	923.550	3.835	0.800	3.068
-19	927.380	3.834	0.790	3.029
-18	931.220	3.833	0.780	2.989
-17	935.050	3.831	0.770	2.950
-16	938.880	3.830	0.760	2.911
-15	942.710	3.829	0.750	2.872
-14	946.540	3.827	0.740	2.832
-13	950.360	3.826	0.730	2.793
-12	954.190	3.825	0.720	2.754
-11	958.010	3.824	0.710	2.715
-10	961.840	3.822	0.700	2.676
-9	965.660	3.821	0.690	2.637
-8	969.480	3.820	0.680	2.598
-7	973.300	3.819	0.670	2.559
-6	977.120	3.817	0.660	2.520
-5	980.930	3.816	0.650	2.481
-4	984.750	3.815	0.640	2.442
-3	988.560	3.814	0.630	2.403
-2	992.380	3.813	0.620	2.364
-1	996.190	3.811	0.610	2.325

## PT1000 Temperature vs resistance

**Tolerance class: 2B**

**Pt1000 TC 3750ppm**

Permissible deviation :  $Dt = \pm 2(0.3^{\circ}\text{C} + 0.005 \cdot |t|)$

0	1000.000	3.810	0.600	2.286
1	1003.810	3.809	0.610	2.323
2	1007.620	3.808	0.620	2.361
3	1011.430	3.807	0.630	2.398
4	1015.230	3.805	0.640	2.435
5	1019.040	3.804	0.650	2.473
6	1022.840	3.803	0.660	2.510
7	1026.640	3.802	0.670	2.547
8	1030.440	3.801	0.680	2.584
9	1034.240	3.799	0.690	2.622
10	1038.040	3.798	0.700	2.659
11	1041.840	3.797	0.710	2.696
12	1045.640	3.796	0.720	2.733
13	1049.430	3.795	0.730	2.770
14	1053.220	3.793	0.740	2.807
15	1057.020	3.792	0.750	2.844
16	1060.810	3.791	0.760	2.881
17	1064.600	3.790	0.770	2.918
18	1068.390	3.789	0.780	2.955
19	1072.180	3.787	0.790	2.992
20	1075.960	3.786	0.800	3.029
21	1079.750	3.785	0.810	3.066
22	1083.530	3.784	0.820	3.103
23	1087.320	3.783	0.830	3.139
24	1091.100	3.781	0.840	3.176
25	1094.880	3.780	0.850	3.213
26	1098.660	3.779	0.860	3.250
27	1102.440	3.778	0.870	3.287
28	1106.210	3.776	0.880	3.323
29	1109.990	3.775	0.890	3.360
30	1113.760	3.774	0.900	3.397
31	1117.540	3.773	0.910	3.433
32	1121.310	3.772	0.920	3.470
33	1125.080	3.770	0.930	3.507
34	1128.850	3.769	0.940	3.543
35	1132.620	3.768	0.950	3.580
36	1136.390	3.767	0.960	3.616
37	1140.150	3.766	0.970	3.653
38	1143.920	3.764	0.980	3.689
39	1147.680	3.763	0.990	3.726
40	1151.440	3.762	1.000	3.762
41	1155.210	3.761	1.010	3.798

## PT1000 Temperature vs resistance

**Tolerance class: 2B**

**Pt1000 TC 3750ppm**

Permissible deviation :  $Dt = \pm 2(0.3^{\circ}\text{C} + 0.005 \cdot |t|)$

42	1158.970	3.760	1.020	3.835
43	1162.730	3.758	1.030	3.871
44	1166.480	3.757	1.040	3.908
45	1170.240	3.756	1.050	3.944
46	1174.000	3.755	1.060	3.980
47	1177.750	3.754	1.070	4.016
48	1181.500	3.752	1.080	4.053
49	1185.250	3.751	1.090	4.089
50	1189.010	3.750	1.100	4.125
51	1192.750	3.749	1.110	4.161
52	1196.500	3.748	1.120	4.197
53	1200.250	3.746	1.130	4.233
54	1204.000	3.745	1.140	4.270
55	1207.740	3.744	1.150	4.306
56	1211.480	3.743	1.160	4.342
57	1215.230	3.742	1.170	4.378
58	1218.970	3.740	1.180	4.414
59	1222.710	3.739	1.190	4.450
60	1226.450	3.738	1.200	4.486
61	1230.180	3.737	1.210	4.521
62	1233.920	3.736	1.220	4.557
63	1237.650	3.734	1.230	4.593
64	1241.390	3.733	1.240	4.629
65	1245.120	3.732	1.250	4.665
66	1248.850	3.731	1.260	4.701
67	1252.580	3.730	1.270	4.737
68	1256.310	3.728	1.280	4.772
69	1260.040	3.727	1.290	4.808
70	1263.760	3.726	1.300	4.844
71	1267.490	3.725	1.310	4.879
72	1271.210	3.724	1.320	4.915
73	1274.940	3.722	1.330	4.951
74	1278.660	3.721	1.340	4.986
75	1282.380	3.720	1.350	5.022
76	1286.100	3.719	1.360	5.057
77	1289.820	3.718	1.370	5.093
78	1293.530	3.716	1.380	5.129
79	1297.250	3.715	1.390	5.164
80	1300.960	3.714	1.400	5.199
81	1304.680	3.713	1.410	5.235
82	1308.390	3.711	1.420	5.270
83	1312.100	3.710	1.430	5.306



## PT1000 Temperature vs resistance

**Tolerance class: 2B**

**Pt1000 TC 3750ppm**

Permissible deviation :  $Dt = \pm 2(0.3^{\circ}\text{C} + 0.005 \cdot |t|)$

84	1315.810	3.709	1.440	5.341
85	1319.520	3.708	1.450	5.376
86	1323.230	3.707	1.460	5.412
87	1326.930	3.705	1.470	5.447
88	1330.640	3.704	1.480	5.482
89	1334.340	3.703	1.490	5.518
90	1338.040	3.702	1.500	5.553
91	1341.740	3.701	1.510	5.588
92	1345.440	3.699	1.520	5.623
93	1349.140	3.698	1.530	5.658
94	1352.840	3.697	1.540	5.693
95	1356.540	3.696	1.550	5.729
96	1360.230	3.695	1.560	5.764
97	1363.930	3.693	1.570	5.799
98	1367.620	3.692	1.580	5.834
99	1371.310	3.691	1.590	5.869
100	1375.000	3.690	1.600	5.904
101	1378.690	3.689	1.610	5.939
102	1382.380	3.687	1.620	5.974
103	1386.070	3.686	1.630	6.009
104	1389.750	3.685	1.640	6.043
105	1393.440	3.684	1.650	6.078
106	1397.120	3.683	1.660	6.113
107	1400.800	3.681	1.670	6.148
108	1404.480	3.680	1.680	6.183
109	1408.160	3.679	1.690	6.217
110	1411.840	3.678	1.700	6.252
111	1415.520	3.677	1.710	6.287
112	1419.190	3.675	1.720	6.322
113	1422.870	3.674	1.730	6.356
114	1426.540	3.673	1.740	6.391
115	1430.210	3.672	1.750	6.426
116	1433.880	3.671	1.760	6.460
117	1437.550	3.669	1.770	6.495
118	1441.220	3.668	1.780	6.529
119	1444.890	3.667	1.790	6.564
120	1448.560	3.666	1.800	6.598
121	1452.220	3.665	1.810	6.633
122	1455.890	3.663	1.820	6.667
123	1459.550	3.662	1.830	6.702
124	1463.210	3.661	1.840	6.736
125	1466.870	3.660	1.850	6.770

## PT1000 Temperature vs resistance

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**Tolerance class: 2B**

**Pt1000 TC 3750ppm**

Permissible deviation :  $Dt = \pm 2(0.3^{\circ}\text{C} + 0.005 \cdot |t|)$

126	1470.530	3.659	1.860	6.805
127	1474.190	3.657	1.870	6.839
128	1477.840	3.656	1.880	6.873
129	1481.500	3.655	1.890	6.908
130	1485.150	3.654	1.900	6.942
131	1488.810	3.653	1.910	6.976
132	1492.460	3.651	1.920	7.010
133	1496.110	3.650	1.930	7.045
134	1499.760	3.649	1.940	7.079
135	1503.410	3.648	1.950	7.113
136	1507.050	3.646	1.960	7.147
137	1510.700	3.645	1.970	7.181
138	1514.350	3.644	1.980	7.215
139	1517.990	3.643	1.990	7.249
140	1521.630	3.642	2.000	7.283
141	1525.270	3.640	2.010	7.317
142	1528.910	3.639	2.020	7.351
143	1532.550	3.638	2.030	7.385
144	1536.190	3.637	2.040	7.419
145	1539.820	3.636	2.050	7.453
146	1543.460	3.634	2.060	7.487
147	1547.090	3.633	2.070	7.521
148	1550.730	3.632	2.080	7.555
149	1554.360	3.631	2.090	7.588
150	1557.990	3.630	2.100	7.622