

产品承认书

PRODUCT SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER NAME	
客户料号 P/N OF CUSTOMER	
承认字号 APPROVAL NO.	
产品名称 PRODUCT NAME	贴片型负温度系数热敏电阻 SMD NTC THERMISTOR
规格型号 TYPE SPECIFICATION	SNC104B14050F0402E
承认书版本号 APPROVAL SHEET VERSION	1.0
承认日期 DATE OF APPROVAL	

供 应 商 SUPPLIER		
制 定 DESIGNED	审 核 CHECKED	批 准 APPROVED
供应商品管部印鉴 SUPPLIER QA SEAL		

客 户 CUSTOMER		
检 验 INSPECTED	审 核 CHECKED	批 准 APPROVED
客户承认印鉴 CUSTOMER APPROVAL SEAL		



修订履历

[illegible]

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1、规格型号 PART IDENTIFICATION

SN	C	104	B1	4050	F	0402	E
①	②	③	④	⑤	⑥	⑦	⑧

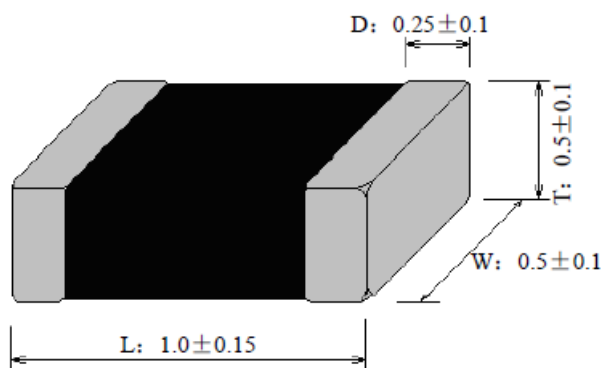
① 产品类别 PRODUCT CATEGORY	SN指敏感型负温度系数热敏电阻;
	SN INDICATES SMD NTC THERMISTOR
② 系列类别 SERIES CATEGORY	C指贴片;
	C IS FOR PATCH
③ 产品阻值 (25°C零功率电阻值) PRODUCT RESISTANCE VALUE (ZERO POWER RESISTANCE VALUE OF 25°C)	104指100 KΩ;
	104 MEANS 100 KΩ;
④ B值代码 B-VALUE CODE	B _i 指25/50;
	B1 IS 25/50;
⑤ B值数值 B-VALUE	4050指B值为4050k;
	4050 MEANS THAT B VALUE IS 4050K;
⑥ 阻值误差 RESISTANCE ERROR	F指±1%;
	F MEANS ±1%;
⑦ 本体尺寸 BODY SIZE	0402指2.2图所示尺寸;
	0402 REFERS TO THE SIZE SHOWN IN FIGURE 2.2;
⑧ 环保产品 ENVIRONMENTAL PROTECTION PRODUCTS	E表示环保产品。
	E IS FOR ENVIRONMENTALLY FRIENDLY PRODUCTS.

2、产品特性 PRODUCTION FEATURES

2.1 技术参数 TECHNICAL PARAMETER

规格型号 PART NO	额定零功率电阻值 ZERO POWER RESISTANCE AT 25°C R25(Ω)	B 值常数B- CONSTANT 25/50°C(K)	耗散系数 DISSIPATION FACTOR (mw/°C)	热时间常数 (S) THERMAL TIME ONSTANT	额定功率 Max POWER RATING AT 25°C(mw)	工作温度范围 OPERATING TEMPERATURE RANGE (°C)
SNC104B:4050F0402E	100K	4050	≥ 1	≤ 3	100	-40 ~ 125

2.2 外形尺寸 PRODUCTION DIMENSION



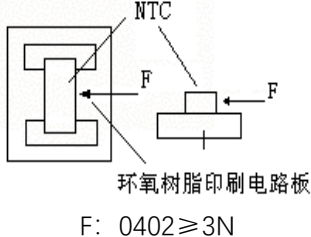
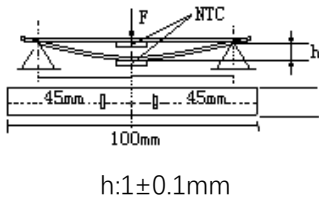
(单位UNIT: MM)

3、检验规则 INSPECTION REGULATIONS

3.1 出厂检验 DELIVERY INSPECTION

序号 SEQUENCE	检测项目 TEST ITEM	检测方法 DETECTION METHOD	性能要求 PERFORMANCE REQUIREMENT
(1)	R_{25}	将待测评置于25°C高精度油槽内稳定后测量 TO BE MEASURED IN 25°C HIGH PRECISION OIL TANK STABILITY AFTER MEASUREMENT	$100K\Omega \pm 1\%$
(2)	$B_{25/50}$	将待测评置于25°C、50°C高精度油槽内稳定后测量 TO BE MEASURED IN 25°C, 50°C HIGH PRECISION OIL TANK STABILITY AFTER MEASUREMENT	$4050K \pm 1\%$
(3)	外观 APPEARANCE	在20X的显微镜下目测检查 VISUAL EXAMINATION UNDER A 20X MICROSCOPE	产品符合2.2的外形要求, 无腐蚀、流挂、断片、崩边崩角等 THE PRODUCT CONFORMS TO THE SHAPE REQUIREMENTS OF 2.2, WITHOUT CORROSION, FLOW HANGING, FRAGMENTATION, EDGE BREAKAGE, ETC
(4)	尺寸 DIMENSION	用精度不小于0.01mm的游标卡尺测量 MEASURE WITH VERNIER CALIPER WITH ACCURACY NOT LESS THAN 0.01MM	产品符合2.2的外形尺寸 THE PRODUCT CONFORMS TO 2.2 DIMENSIONS
(5)	可焊性 WELDABILITY	焊接温度 WELDING TEMPERATURE: $245 \pm 5^{\circ}\text{C}$; 浸入时间 IMMERSION TIME: $3 \pm 1\text{s}$	着锡面积 TIN AREA $\geq 95\%$
(6)	耐焊性 WELDING RESISTANCE	焊接温度 WELDING TEMPERATURE: $260 \pm 10^{\circ}\text{C}$ 浸入时间 IMMERSION TIME: $10 \pm 1\text{s}$	无外观损伤, 着锡面积 NO APPEARANCE DAMAGE, TIN AREA $\geq 75\%$ $\Delta R_{25}/R_{25}$ $\leq 5\%$

3.2 型式检验 PATTERN INSPECTION

序号 SEQUENCE	检验项目 INSPECTION ITEM	检验标准 INSPECTION STANDARD	检验方法 INSPECTION METHOD	性能要求 PERFORMANCE REQUIREMENT
(1)	端头强度 END STRENGTH	IEC68-2-21	 环氧树脂印刷电路板 F: 0402 ≥ 3N	无外观损伤 NO COSMETIC DAMAGE
(2)	抗弯强度 BENDING STRENGTH	IEC68-2-21	 h: 1 ± 0.1mm	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25} / R_{25}$ ≤ 3%
(3)	跌落 FALL	IEC68-2-32	跌落高度 HEIGHT OF FALL: 1.0 ± 0.1m 跌落次数 NUMBER OF DROPS: 1 跌落面 FALLING SURFACE: 水泥 CEMENT	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25} / R_{25}$ ≤ 1% $\Delta B / \Delta B$ ≤ 2%
(4)	湿热负载 DAMP-HEAT LOAD	IEC68-2-2/ IEC68-2-3/CNS5550	温度 TEMPERATURE: -40°C, +125°C 周期 PERIOD: 100, 30min/cyc	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25} / R_{25}$ ≤ 5% $\Delta B / \Delta B$ ≤ 2%
(5)	高温存储 HIGH TEMPERATURE STORAGE	IEC68-2-2/CNS5550	温度 TEMPERATURE: 125 ± 2°C 时间 TIME: 1000 ± 24h	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25} / R_{25}$ ≤ 5% $\Delta B / \Delta B$ ≤ 2%
(6)	冷热冲击 COLD AND HEAT SHOCK	IEC68-2-14	温度 TEMPERATURE: -40°C ± 2°C 周期 PERIOD: 100, 30min/cyc	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25} / R_{25}$ ≤ 5% $\Delta B / \Delta B$ ≤ 2%
(7)	低温存储 LOW TEMPERATURE STORAGE	IEC68-2-1	温度 TEMPERATURE: -40 ± 2°C 时间 TIME: 1000 ± 24h	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25} / R_{25}$ ≤ 5% $\Delta B / \Delta B$ ≤ 2%

(8)	耐久性 DURABILITY	UL1434	环境温度 AMBIENT TEMPERATURE: $25\pm 2^{\circ}\text{C}$ 工作电流 WORKING CURRENT 周期 PERIOD: 6000	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 5\%$ $ \Delta B/\Delta B \leq 2\%$
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4、包装、贮存 PACKAGE & STORAGE

4.1 包装 PACKAGE

序号 SEQUENCE	包装方式 PACKAGING	包装材料、尺寸 PACKAGING MATERIAL&DIMENSION	产品数量 PART QUANTITY
(1)	编带 BRAID	0402纸带, 标准带轮 0402 PAPER TAPE, STANDARD TAPE WHEEL	10000PCS
(2)	内包装盒 INNER BOX	纸箱 CORTON, L×W×H=185mm×70mm×190mm	
(3)	外包装箱 PACKAGING	纸箱 CORTON, L×W×H=370mm×205mm×215mm	

4.2 贮存 STORAGE

产品密封保存, 存放产品的仓库环境温度 - 10℃ ~ + 40℃、相对湿度不大于 70%, 仓库内不允许有各种有害气体、易爆的产品及有腐蚀性的化学物品, 并且无强烈的机械振动、冲击和强辐射的作用, 包装箱应垫高地面至少 20cm, 距离墙壁、热源、冷源、窗口或空气入口至少 50cm。

- THIS PRODUCT MUST BE KEPT SEALED.
- STORE IN AN ORDINARY ENVIRONMENT (NORMAL ROOM TEMPERATURE, HUMIDITY AND ATMOSPHERIC PRESSURE).
- STORAGE TEMPERATURE: -10℃~+40℃
- RELATIVE HUMIDITY: ≤70%RH.
- KEEP AWAY FROM CORROSIVE GASES, DEOXIDIZING GAS, FLAMMABLE GAS OR DIRECT SUNLIGHT.
- AVOID STRONG MECHANICAL VIBRATION, SHOCK.
- THE PACKING BOX SHOULD BE RAISED AT LEAST 20CM ABOVE THE GROUND AND AT LEAST 50CM AWAY FROM THE WALL, HEAT SOURCE, COLD SOURCE, WINDOWS OR AIR INLET.
- ABNORMAL STORAGE AND OPERATING CONDITIONS MAY CAUSE MALFUNCTION FUNCTION OR FAILURE OF OUR PRODUCTS.

5、电阻 – 温度特性表 RESISTANCE-TEMPERATURE CHARACTERISTIC TABL

 $R_{25}=100K\Omega\pm1\%$
 $B_{25/50}=4050\pm1\%$

T(°C)	RMin(KΩ)	RNor(KΩ)	RMax(KΩ)	T(°C)	RMin(KΩ)	RNor(KΩ)	RMax(KΩ)
-40	3869.8067	4056.3501	4251.4606	-1	352.0231	360.1645	368.4574
-39	3604.9198	3775.9890	3954.7806	0	333.8673	341.4062	349.0804
-38	3360.0951	3517.0469	3680.9619	1	316.7626	323.7432	330.8446
-37	3133.6755	3277.7405	3428.0858	2	300.6418	307.1051	313.6760
-36	2924.1511	3056.4464	3194.4076	3	285.4426	291.4264	297.5059
-35	2730.1462	2851.6861	2978.3389	4	271.1068	276.6460	282.2702
-34	2550.4056	2662.1120	2778.4332	5	257.5802	262.7072	267.9095
-33	2383.7841	2486.4950	2593.3722	6	244.8124	249.5571	254.3683
-32	2229.2356	2323.7136	2421.9535	7	232.7565	237.1465	241.5952
-31	2085.8043	2172.7434	2263.0800	8	221.3686	225.4295	229.5421
-30	1952.6160	2032.6484	2115.7496	9	210.6077	214.3634	218.1642
-29	1828.8710	1902.5728	1979.0468	10	200.4358	203.9081	207.4197
-28	1713.8369	1781.7334	1852.1345	11	190.8171	194.0264	197.2699
-27	1606.8430	1669.4134	1734.2468	12	181.7185	184.6836	187.6783
-26	1507.2743	1564.9559	1624.6825	13	173.1089	175.8472	178.6110
-25	1414.5666	1467.7590	1522.7993	14	164.9591	167.4869	170.0364
-24	1328.2024	1377.2705	1428.0086	15	157.2419	159.5742	161.9250
-23	1247.7061	1292.9837	1339.7703	16	149.9321	152.0828	154.2490
-22	1172.6411	1214.4332	1257.5891	17	143.0057	144.9878	146.9826
-21	1102.6056	1141.1917	1181.0099	18	136.4404	138.2659	140.1018
-20	1037.2303	1072.8659	1109.6149	19	130.2156	131.8955	133.5838
-19	976.1751	1009.0946	1043.0198	20	124.3115	125.8562	127.4075
-18	919.1270	949.5448	980.8712	21	118.7098	120.1290	121.5530
-17	865.7973	893.9103	922.8439	22	113.3935	114.6960	116.0019
-16	815.9200	841.9088	868.6385	23	108.3463	109.5405	110.7368
-15	769.2499	793.2800	817.9790	24	103.5532	104.6467	105.7412
-14	725.5604	747.7840	770.6111	25	99.0000	100.0000	101.0000
-13	684.6425	705.1992	726.3004	26	94.5879	95.5865	96.5859
-12	646.3030	665.3211	684.8303	27	90.3979	91.3932	92.3902
-11	610.3633	627.9608	646.0011	28	86.4175	87.4080	88.4009
-10	576.6583	592.9437	609.6281	29	82.6352	83.6193	84.6067
-9	545.0352	560.1084	575.5408	30	79.0399	80.0165	80.9970
-8	515.3525	529.3053	543.5816	31	75.6216	76.5894	77.5619
-7	487.4793	500.3964	513.6043	32	72.3704	73.3285	74.2919
-6	461.2942	473.2534	485.4741	33	69.2773	70.2249	71.1783
-5	436.6846	447.7577	459.0658	34	66.3339	67.2701	68.2127
-4	413.5461	423.7994	434.2635	35	63.5320	64.4562	65.3873
-3	391.7819	401.2764	410.9599	36	60.8641	61.7758	62.6948
-2	371.3021	380.0941	389.0553	37	58.3232	59.2217	60.1281
T(°C)	RMin(KΩ)	RNor(KΩ)	RMax(KΩ)	T(°C)	RMin(KΩ)	RNor(KΩ)	RMax(KΩ)
38	55.9024	56.7874	57.6808	82	10.7595	11.1096	11.4700

39	53.5954	54.4667	55.3466	83	10.4087	10.7509	11.1033
40	51.3964	52.2536	53.1198	84	10.0710	10.4055	10.7501
41	49.2997	50.1426	50.9949	85	9.7459	10.0729	10.4098
42	47.3000	48.1285	48.9666	86	9.4328	9.7525	10.0820
43	45.3924	46.2063	47.0300	87	9.1313	9.4438	9.7660
44	43.5720	44.3713	45.1806	88	8.8408	9.1463	9.4614
45	41.8346	42.6191	43.4140	89	8.5610	8.8596	9.1677
46	40.1758	40.9456	41.7260	90	8.2913	8.5832	8.8845
47	38.5917	39.3468	40.1127	91	8.0313	8.3167	8.6114
48	37.0786	37.8191	38.5705	92	7.7808	8.0598	8.3480
49	35.6329	36.3588	37.0958	93	7.5392	7.8120	8.0939
50	34.2513	34.9627	35.6854	94	7.3062	7.5730	7.8486
51	32.9306	33.6277	34.3362	95	7.0815	7.3423	7.6120
52	31.6678	32.3507	33.0451	96	6.8648	7.1198	7.3835
53	30.4601	31.1290	31.8093	97	6.6557	6.9050	7.1630
54	29.3049	29.9598	30.6263	98	6.4539	6.6977	6.9501
55	28.1995	28.8407	29.4935	99	6.2592	6.4976	6.7445
56	27.1416	27.7692	28.4086	100	6.0712	6.3044	6.5458
57	26.1288	26.7432	27.3692	101	5.8897	6.1177	6.3540
58	25.1592	25.7604	26.3733	102	5.7145	5.9375	6.1686
59	24.2305	24.8188	25.4187	103	5.5452	5.7634	5.9895
60	23.3410	23.9164	24.5037	104	5.3818	5.5951	5.8164
61	22.4886	23.0516	23.6263	105	5.2239	5.4326	5.6491
62	21.6718	22.2224	22.7848	106	5.0713	5.2755	5.4873
63	20.8888	21.4273	21.9776	107	4.9239	5.1236	5.3309
64	20.1381	20.6647	21.2031	108	4.7814	4.9768	5.1796
65	19.4181	19.9332	20.4598	109	4.6436	4.8348	5.0333
66	18.7276	19.2312	19.7464	110	4.5105	4.6975	4.8918
67	18.0651	18.5575	19.0615	111	4.3817	4.5647	4.7549
68	17.4294	17.9108	18.4037	112	4.2572	4.4363	4.6224
69	16.8192	17.2899	17.7720	113	4.1368	4.3120	4.4942
70	16.2334	16.6936	17.1651	114	4.0203	4.1918	4.3701
71	15.6710	16.1209	16.5819	115	3.9076	4.0754	4.2500
72	15.1309	15.5706	16.0215	116	3.7985	3.9627	4.1337
73	14.6120	15.0419	15.4828	117	3.6929	3.8537	4.0211
74	14.1135	14.5337	14.9649	118	3.5908	3.7481	3.9120
75	13.6344	14.0452	14.4668	119	3.4919	3.6459	3.8064
76	13.1740	13.5755	13.9878	120	3.3961	3.5469	3.7040
77	12.7314	13.1238	13.5270	121	3.3034	3.4511	3.6049
78	12.3058	12.6893	13.0836	122	3.2137	3.3582	3.5088
79	11.8964	12.2714	12.6569	123	3.1267	3.2682	3.4157
80	11.5027	11.8692	12.2461	124	3.0424	3.1810	3.3255
81	11.1240	11.4822	11.8507	125	2.9608	3.0965	3.2380