

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	敏感型负温度系数热敏电阻 SN NTC THERMISTOR
规格型号 TYPE SPECIFICATION	SNS104B13950FE1CK058ETN20
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

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1、规格型号 PART IDENTIFICATION

SN S 104 B₁ 3950 F E I CK 058 E TN 20
 ① ② ③ ④ ④ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

① 产品类别 PART NUMBER ENTIFICATION	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	S指传感器
	S-FINGER SENSOR
③ 产品阻值 (25°零功率电阻值) PRODUCT RESISTANCE (25° ZERO POWER RESISTANCE)	104指100KΩ
	104 MEANS 100KΩ;
④ B 值代码 B-VALUE CODE	B1指 25/50
	B1 MEANS 25/50
⑤ B 值数值 B-VALUE TOLERANCE	3950指B值为3950K
	3950 MEANS THAT B VALUE IS 3950K
⑥ 阻值误差 PACKAGING STYLE	F 指±1%
	F INDICATES ±1%
⑦ 头部外观结构 HEAD APPEARANCE STRUCTURE	E指环氧树脂包封;
	E MEANS EPOXY RESIN ENCAPSULATION;
⑧ 线材颜色 WIRE COLOR	1指线材颜色为黑色;
	1 THE COLOR OF THE FINGER WIRE IS BLACK
⑨ 线材规格 WIRE SPECIFICATION	CK指UL3656 #30并线;
	CK REFERS TO UL3656 #30 PARALLEL;
⑩ 线材长度	058指产品总长度为57.5mm;

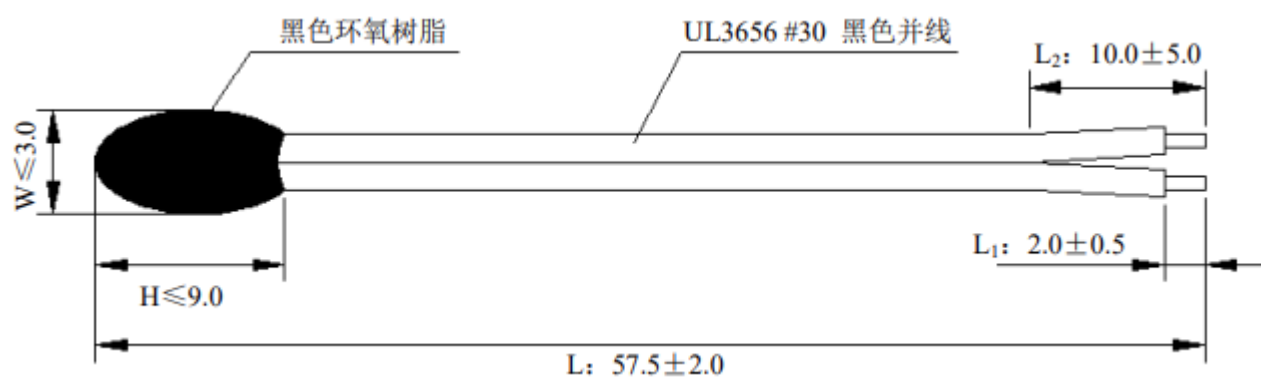
WIRE LENGTH	058 MEANS THE TOTAL LENGTH OF THE PRODUCT IS 57.5MM;
⑪ 环保产品 ENVIRONMENTAL PROTECTION PRODUCTS	E表示环保;
	E IS FOR ENVIRONMENTAL PROTECTION
⑫ 特殊定义 SPECIAL DEFINITION	TN表示产品线尾撕线 $10\pm 5\text{mm}$;
	TN INDICATES THE TAIL TEAR LINE OF THE PRODUCT LINE $10\pm 5\text{MM}$;
⑬ 线尾剥线长度 STRIP LENGTH OF WIRE TAIL	20指产品线尾剥线长度为2.0mm。
	THE TAIL STRIP LENGTH OF THE 20-FINGER PRODUCT LINE IS 2.0MM.

2、产品特性PRODUCTION FEATURES

2.1 技术参数TECHNICAL PARAMETER

型号规格 SPECIFICATION AND MODEL	额定零功率电阻值 RATED ZERO POWER RESISTANCE VALUE	B (K)	耗散系数 DISSIPATION COEFFICIENT (S)	热时间常数 THERMAL TIME CONSTANT (S)	额定功率 RATED POWER (mw)	工作温度范围 (°C)
SNS104B13950FE1CK058ETN20	100K	3950	≥ 2.5	≤ 15	150	-40~150

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	检验方法 INSPECTION METHOD	性能要求 PERFORMANCE REQUIREMENT
(1)	R_{25}	将待测品置于 25℃高精度油槽内稳定后测量 THE PRODUCT TO BE MEASURED IS PLACED IN A 25°C HIGH PRECISION OIL TANK FOR STABILITY	$100K\Omega \pm 1\%$
(2)	$B_{25/50}$	将待测品置于25℃、50℃精度油槽内稳定后测量 THE PRODUCT TO BE TESTED IS PLACED IN A HIGH PRECISION OIL TANK AT 25°C AND 85AND THEN MEASURED	$3950K \pm 1\%$
(3)	外观 APPEARANCE	目测检查 VISUAL INSPECTION	产品符合2.2的外形要求，无针孔、氧化、烫伤等 THE PRODUCT MEETS THE APPEARANCE REQUIREMENTS OF 2.2,WITHOUT PINHOLES,OXIDATION,BURNS,ETC
(4)	尺寸 DIMENSION	用精度为0.01mm卡尺测量 MEASURE WITH A CALIPER ACCURACY OF 0.01MM	符合2.2的外形尺寸 CONFORM TO THE DIMENSIONS OF 2.2
(5)	绝缘电阻测试 INSULATION RESISTANCE TEST	绝缘电压INSULATION VOLTAGE: 300V _{DC} 时间TIME: 1min	无外观损伤 NO APPARENT DAMAGE 绝缘电阻 INSULATION RESISTANCE: $\geq 150 M\Omega$

3.2 型式检验 PATTERN INSPECTION

序号 SEQUENCE	检验项目 ITEMS	检验标准 STANDARD	检验标准 STANDARD	性能要求 PERFORMANCE REQUIREMENTS
(1)	跌落 FALL	IEC68-2-32	跌落高度 DROP HEIGHT: 1±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} \leq 1\%$ $ \Delta B/B \leq 2\%$
(2)	湿热负载 MOIST HEAT LOAD	IEC68-2-2/IEC68-2-3/CNS5550	温度 TEMPERATURE: 40±2°C 湿度 HUMIDITY: 90~95%RH 时间 TIME: 500±12h; 工作电流 PERATING CURRENT	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 5\%$ $ \Delta B/B \leq 2\%$
(3)	高温存储 HIGHT TEMPERATURE LOADS	IEC68-2-2/CNS5550	温度 TEMPERATURE: 105±2°C 时间 TIME: 1000±24h	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 5\%$ $ \Delta B/B \leq 2\%$
(4)	冷热冲击 COLD AND HEAT SHOCK	IEC68-2-14	温度 TEMPERATURE: -40°C, +150°C 周期 PERIOD: 100,30min/cyc	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 5\%$ $ \Delta B/B \leq 2\%$
(5)	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} \leq 2\%$ $ \Delta B/B \leq 2\%$
(6)	耐久性 DURABILITY	UL1434	环境温度 ENVIRONMENT TEMPERATURE: 25±2°C 周期 PERIOD: 6000	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 5\%$ $ \Delta B/B \leq 2\%$

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 QUANTITY OF PRODUCT
(1)	包装袋 PACKING BAG	热封口袋 HEAT SEAL POCKET	1000PCS
(2)	内包装盒 INNER BOX	纸箱 CARTON, L×W×H=185mm×70mm×190mm	
(3)	外包装箱 OUTER PACKING BOX	纸箱 CARTON, 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℃、相遇湿度不大于70%，仓库内不允许有各、易爆的种有害气体、易爆的产品及有腐蚀腐蚀性的化学物品，并且无强烈的机械震动、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 TABLE

$R_{25}=100K\pm 1\%$
 $B25/85=3950K\pm 1\%$

T(°C)	R _{Min} (KΩ)	R _{Nor} (KΩ)	R _{Max} (KΩ)	T(°C)	R _{Min} (KΩ)	R _{Nor} (KΩ)	R _{Max} (KΩ)
-40	3174.9320	3321.3325	3474.1363	-1	334.9421	342.5164	350.2269
-39	2973.2107	3108.2479	3249.0932	0	318.4663	325.5021	332.6601
-38	2785.6621	2910.2652	3040.1378	1	302.8222	309.3549	315.9970
-37	2611.1992	2726.2170	2846.0164	2	288.0411	294.1062	300.2691
-36	2448.8250	2555.0331	2665.5809	3	274.0704	279.7009	285.4186
-35	2297.6246	2395.7322	2497.7791	4	260.8611	266.0875	271.3914
-34	2156.7580	2247.4139	2341.6461	5	248.3674	253.2179	258.1372
-33	2025.4535	2109.2515	2196.2968	6	236.5464	241.0472	245.6091
-32	1903.0018	1980.4857	2060.9184	7	225.3580	229.5336	233.7632
-31	1788.7503	1860.4184	1934.7645	8	214.7649	218.6379	222.5584
-30	1682.0986	1748.4076	1817.1488	9	204.7320	208.3234	211.9565
-29	1582.4940	1643.8627	1707.4404	10	195.2266	198.5558	201.9216
-28	1489.4271	1546.2397	1605.0589	11	186.3016	189.3891	192.5085
-27	1402.4285	1455.0378	1509.4697	12	177.8251	180.6871	183.5768
-26	1321.0652	1369.7952	1420.1805	13	169.7725	172.4242	175.0998
-25	1244.9378	1290.0859	1336.7377	14	162.1207	164.5762	167.0522
-24	1173.6773	1215.5173	1258.7229	15	154.8480	157.1205	159.4103
-23	1106.9432	1145.7265	1185.7500	16	147.9338	150.0356	152.1520
-22	1044.4206	1080.3787	1117.4629	17	141.3589	143.3014	145.2561
-21	985.8184	1019.1642	1053.5326	18	135.1051	136.8991	138.7031
-20	930.8673	961.7970	993.6550	19	129.1554	130.8108	132.4743
-19	879.2523	907.9437	937.4775	20	123.4935	125.0198	126.5522
-18	830.8189	857.4390	884.8235	21	118.1043	119.5101	120.9205
-17	785.3521	810.0548	835.4508	22	112.9735	114.2670	115.5636
-16	742.6526	765.5797	789.1357	23	108.0876	109.2763	110.4670
-15	702.5356	723.8181	745.6707	24	103.4337	104.5248	105.6167
-14	664.8297	684.5884	704.8638	25	99.0000	100.0000	101.0000
-13	629.3760	647.7223	666.5368	26	94.6951	95.6937	96.6932
-12	596.0267	613.0636	630.5245	27	90.6021	91.5977	92.5949
-11	564.6447	580.4674	596.6739	28	86.7096	87.7005	88.6938
-10	535.1027	549.7991	564.8425	29	83.0066	83.9914	84.9795
-9	507.2821	520.9334	534.8985	30	79.4828	80.4604	81.4418
-8	481.0728	493.7541	506.7191	31	76.1286	77.0978	78.0716
-7	456.3723	468.1532	480.1901	32	72.9350	73.8949	74.8600
-6	433.0851	444.0299	455.2057	33	69.8933	70.8431	71.7986
-5	411.1224	421.2906	431.6671	34	66.9956	67.9345	68.8796
-4	390.4013	399.8481	409.4825	35	64.2343	65.1616	66.0957
-3	370.8447	379.6212	388.5664	36	61.6022	62.5174	63.4399
-2	352.3807	360.5341	368.8393	37	59.0926	59.9952	60.9056
T(°C)	R _{Min} (KΩ)	R _{Nor} (KΩ)	R _{Max} (KΩ)	T(°C)	R _{Min} (KΩ)	R _{Nor} (KΩ)	R _{Max} (KΩ)
38	56.6992	57.5888	58.4866	82	11.3606	11.7240	12.0978
39	54.4159	55.2922	56.1771	83	10.9990	11.3545	11.7203
40	52.2372	53.0999	53.9715	84	10.6507	10.9984	11.3563
41	50.1577	51.0065	51.8646	85	10.3150	10.6551	11.0053

42	48.1723	49.0072	49.8515	86	9.9915	10.3242	10.6669
43	46.2764	47.0971	47.9276	87	9.6796	10.0051	10.3405
44	44.4653	45.2718	46.0884	88	9.3790	9.6974	10.0256
45	42.7350	43.5272	44.3297	89	9.0891	9.4006	9.7218
46	41.0814	41.8593	42.6477	90	8.8095	9.1143	9.4286
47	39.5006	40.2642	41.0385	91	8.5399	8.8380	9.1456
48	37.9891	38.7385	39.4987	92	8.2797	8.5714	8.8724
49	36.5436	37.2788	38.0249	93	8.0287	8.3141	8.6087
50	35.1608	35.8818	36.6140	94	7.7865	8.0657	8.3540
51	33.8376	34.5447	35.2629	95	7.5527	7.8258	8.1080
52	32.5713	33.2644	33.9689	96	7.3270	7.5942	7.8705
53	31.3590	32.0383	32.7291	97	7.1090	7.3705	7.6409
54	30.1982	30.8639	31.5412	98	6.8986	7.1545	7.4191
55	29.0865	29.7387	30.4026	99	6.6953	6.9457	7.2048
56	28.0215	28.6604	29.3110	100	6.4989	6.7440	6.9976
57	27.0010	27.6269	28.2644	101	6.3092	6.5491	6.7973
58	26.0230	26.6359	27.2605	102	6.1259	6.3606	6.6037
59	25.0855	25.6857	26.2975	103	5.9488	6.1785	6.4164
60	24.1866	24.7742	25.3735	104	5.7775	6.0024	6.2353
61	23.3245	23.8998	24.4868	105	5.6120	5.8321	6.0602
62	22.4976	23.0607	23.6355	106	5.4519	5.6673	5.8907
63	21.7042	22.2554	22.8182	107	5.2971	5.5080	5.7267
64	20.9428	21.4823	22.0333	108	5.1474	5.3539	5.5680
65	20.2121	20.7399	21.2795	109	5.0026	5.2047	5.4144
66	19.5105	20.0270	20.5552	110	4.8625	5.0604	5.2658
67	18.8367	19.3422	19.8592	111	4.7269	4.9207	5.1218
68	18.1897	18.6842	19.1903	112	4.5957	4.7854	4.9825
69	17.5681	18.0520	18.5473	113	4.4688	4.6545	4.8475
70	16.9709	17.4442	17.9290	114	4.3459	4.5277	4.7168
71	16.3969	16.8600	17.3345	115	4.2269	4.4050	4.5901
72	15.8452	16.2982	16.7626	116	4.1116	4.2861	4.4674
73	15.3148	15.7580	16.2124	117	4.0000	4.1709	4.3486
74	14.8047	15.2383	15.6829	118	3.8920	4.0593	4.2334
75	14.3142	14.7383	15.1734	119	3.7873	3.9512	4.1217
76	13.8423	14.2571	14.6829	120	3.6858	3.8464	4.0135
77	13.3882	13.7940	14.2107	121	3.5876	3.7448	3.9086
78	12.9513	13.3482	13.7560	122	3.4923	3.6464	3.8068
79	12.5308	12.9190	13.3180	123	3.4000	3.5509	3.7082
80	12.1259	12.5057	12.8961	124	3.3105	3.4584	3.6125
81	11.7361	12.1076	12.4896	125	3.2238	3.3686	3.5197

T(°C)	R _{Min} (KΩ)	R _{Nor} (KΩ)	R _{Max} (KΩ)	T(°C)	R _{Min} (KΩ)	R _{Nor} (KΩ)	R _{Max} (KΩ)
126	3.1397	3.2816	3.4296	139	2.2493	2.3587	2.4733
127	3.0581	3.1972	3.3423	140	2.1940	2.3013	2.4137
128	2.9790	3.1153	3.2575	141	2.1402	2.2455	2.3557
129	2.9023	3.0358	3.1752	142	2.0880	2.1913	2.2994



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130	2.8278	2.9587	3.0954	143	2.0373	2.1386	2.2446
131	2.7556	2.8839	3.0179	144	1.9880	2.0873	2.1914
132	2.6855	2.8113	2.9427	145	1.9401	2.0375	2.1396
133	2.6175	2.7408	2.8696	146	1.8936	1.9891	2.0893
134	2.5515	2.6724	2.7986	147	1.8483	1.9420	2.0403
135	2.4875	2.6059	2.7297	148	1.8043	1.8963	1.9927
136	2.4253	2.5414	2.6628	149	1.7616	1.8518	1.9464
137	2.3649	2.4787	2.5978	150	1.7200	1.8085	1.9013
138	2.3062	2.4179	2.5347				