

## 产品承认书

## PRODUCT SPECIFICATION FOR APPROVAL

|                                  |                                   |
|----------------------------------|-----------------------------------|
| 客户名称<br>CUSTOMER NAME            |                                   |
| 客户料号<br>P/N OF CUSTOMER          |                                   |
| 承认字号<br>APPROVAL NO.             |                                   |
| 产品名称<br>PRODUCT NAME             | 敏感型负温度系数热敏电阻<br>SN NTC THERMISTOR |
| 规格型号<br>TYPE SPECIFICATION       | SNS103B23435FG1DF045E30Y          |
| 承认书版本号<br>APPROVAL SHEET VERSION | 1.0                               |
| 承认日期<br>DATE OF APPROVAL         |                                   |

| 供 应 商<br>SUPPLIER            |               |                |
|------------------------------|---------------|----------------|
| 制定<br>DESIGNED               | 审核<br>CHECKED | 批准<br>APPROVED |
|                              |               |                |
| 供应商品管部印鉴<br>SUPPLIER QA SEAL |               |                |

| 客 户<br>CUSTOMER                  |               |                |
|----------------------------------|---------------|----------------|
| 检验<br>INSPECTED                  | 审核<br>CHECKED | 批准<br>APPROVED |
|                                  |               |                |
| 客户承认印鉴<br>CUSTOMER APPROVAL SEAL |               |                |



## 修订履历

[illegible]

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# 1、规格型号 PART IDENTIFICATION

SN S 103 B<sub>2</sub> 3435 F G 1 DF 045 E 30 Y  
 ① ② ③ ④ ④ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

|                                                                         |                                  |
|-------------------------------------------------------------------------|----------------------------------|
| ①<br>产品类别<br>PART NUMBER ENTIFICATION                                   | SN指敏感型负温度系数热敏电阻;                 |
|                                                                         | SN INDICATES SMD NTC THERMISTOR  |
| ②<br>系列类别<br>SERIES CATEGORY                                            | S指传感器                            |
|                                                                         | S-FINGER SENSOR                  |
| ③<br>产品阻值 (25°零功率电阻值)<br>PRODUCT RESISTANCE (25° ZERO POWER RESISTANCE) | 103指10KΩ                         |
|                                                                         | 103 MEANS 10KΩ;                  |
| ④<br>B 值代码<br>B-VALUE CODE                                              | B2指 25/85;                       |
|                                                                         | B2 MEANS 25/85                   |
| ⑤<br>B 值数值<br>B-VALUE TOLERANCE                                         | 3435指B值为3435K                    |
|                                                                         | 3435 MEANS THAT B VALUE IS 3435K |
| ⑥<br>阻值误差<br>PACKAGING STYLE                                            | F指±1%                            |
|                                                                         | F INDICATES ±1%                  |
| ⑦<br>头部外观结构<br>HEAD APPEARANCE STRUCTURE                                | G指头部使用玻封管;                       |
|                                                                         | G FINGER WITH GLASS SEAL TUBE;   |
| ⑧<br>线材颜色<br>WIRE COLOR                                                 | 1指线材颜色为黑色;                       |
|                                                                         | 1 FINGER WIRE COLOR IS BLACK;    |
| ⑨<br>线材规格<br>WIRE SPECIFIVATION                                         | DF指UL4484 #24并线;                 |
|                                                                         | DF MEANS UL4484 #24 PARALLEL;    |
| ⑩<br>线材长度                                                               | 045指产品总长度为45mm;                  |

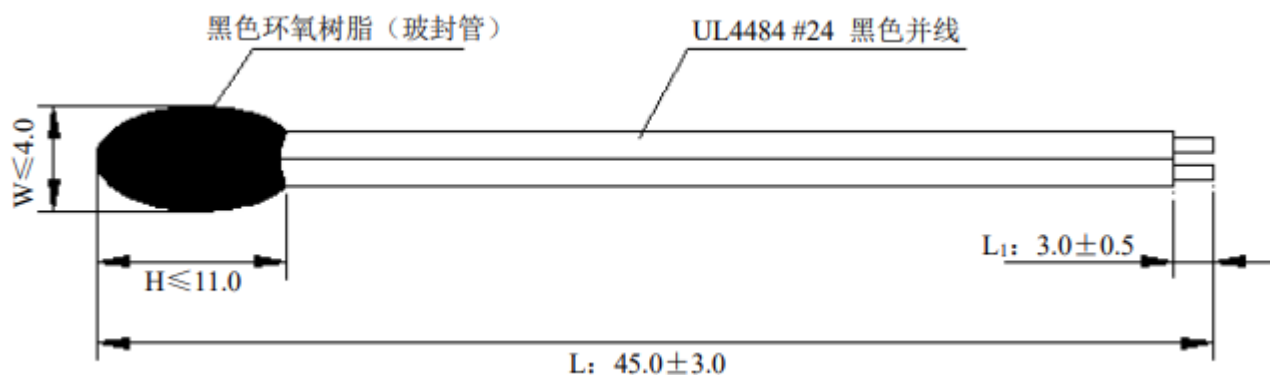
|                                                |                                                     |
|------------------------------------------------|-----------------------------------------------------|
| WIRE LENGTH                                    | 045 MEANS THE TOTAL LENGTH OF THE PRODUCT IS 45MM;  |
| ⑪<br>环保产品<br>ENVIRONMENTAL PROTECTION PRODUCTS | E表示环保;                                              |
|                                                | E STANDS FOR ENVIRONMENTAL PROTECTION;              |
| ⑫<br>线尾剥线长度<br>STRIP LENGTH OF WIRE TAIL       | 30指产品总长度为3.0mm;                                     |
|                                                | THE TOTAL LENGTH OF THE 30-FINGER PRODUCT IS 3.0MM; |
| ⑬<br>特殊码<br>SPECIAL CODE                       | Y指特殊码。                                              |
|                                                | Y STANDS FOR SPECIAL CODE.                          |

## 2、产品特性PRODUCTION FEATURES

### 2.1 技术参数TECHNICAL PARAMETER

| 型号规格<br>SPECIFICATION AND MODEL | 额定零功率电阻值<br>RATED ZERO POWER RESISTANCE VALUE | B (K) | 耗散系数<br>DISSIPATION COEFFICIENT (S) | 热时间常数<br>THERMAL TIME CONSTANT (S) | 额定功率<br>RATED POWER (mw) | 工作温度范围<br>(°C) |
|---------------------------------|-----------------------------------------------|-------|-------------------------------------|------------------------------------|--------------------------|----------------|
| SNS103B23435FG1DF045E30Y        | 10K                                           | 3435  | $\geq 2.5$                          | $\leq 15$                          | 150                      | -40~105        |

### 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<br>SEQUENCE | 检测项目<br>TEST ITEM                       | 检验方法<br>INSPECTION METHOD                                                                                                           | 性能要求<br>PERFORMANCE REQUIREMENT                                                                                                         |
|----------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| (1)            | $R_{25}$                                | 将待测品置于 25°C 高精度油槽<br>内稳定后测量<br>THE PRODUCT TO BE MEASURED<br>IS PLACED IN A 25°C HIGH<br>PRECISION OIL TANK FOR<br>STABILITY        | $10K\Omega \pm 1\%$                                                                                                                     |
| (2)            | $B_{25/85}$                             | 将待测品置于 25°C、85°C 精度油<br>槽内稳定后测量<br>THE PRODUCT TO BE TESTED IS<br>PLACED IN A 25°C, 85°C<br>PRECISION OIL TANK AND THEN<br>MEASURED | $3435K \pm 1\%$                                                                                                                         |
| (3)            | 外观<br>APPEARANCE                        | 目测<br>VISUAL INSPECTION                                                                                                             | 产品符合 2.2 的外形要求，无针孔、<br>氧化、烫伤等<br>THE PRODUCT MEETS THE<br>APPEARANCE REQUIREMENTS OF<br>2.2, WITHOUT<br>PINHOLES, OXIDATION, BURNS, ETC |
| (4)            | 尺寸<br>DIMENSION                         | 用游标卡尺、卷尺测量<br>MEASURE WITH VERNIER CALIPER<br>AND TAPE MEASURE                                                                      | 符合 2.2 的外形尺寸<br>CONFORM TO THE DIMENSIONS OF<br>2.2                                                                                     |
| (5)            | 绝缘电阻测试<br>INSULATION<br>RESISTANCE TEST | 绝缘电压 INSULATION VOLTAGE:<br>$300V_{DC}$<br>时间 TIME: 1min                                                                            | 无外观损伤 NO APPARENT DAMAGE<br>绝缘电阻 INSULATION RESISTANCE:<br>$\geq 150 M\Omega$                                                           |

### 3.2 型式检验 PATTERN INSPECTION

| 序号<br>SEQUENCE | 检验项目<br>ITEMS                   | 检验标准<br>STANDARD            | 检验标准<br>STANDARD                                                                           | 性能要求<br>PERFORMANCE<br>REQUIREMENTS                                                         |
|----------------|---------------------------------|-----------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| (1)            | 跌落<br>FALL                      | IEC68-2-32                  | 跌落高度 DROP HEIGHT: 1±0.1m<br>跌落次数 NUMBER OF DROPS: 1<br>跌落面 FALLING SURFACE: 水泥 CEMENT      | 无外观损伤<br>NO COSMETIC DAMAGE<br>$ \Delta R_{25}/R_{25}  \leq 1\%$<br>$ \Delta B/B  \leq 2\%$ |
| (2)            | 湿热负载<br>MOIST HEAT LOAD         | IEC68-2-2/IEC68-2-3/CNS5550 | 温度 TEMPERATURE: 40±2°C<br>湿度 HUMIDITY: 90~95%RH<br>时间 TIME: 500±12h; 工作电流 PERATING CURRENT | 无外观损伤<br>NO COSMETIC DAMAGE<br>$ \Delta R_{25}/R_{25}  \leq 5\%$<br>$ \Delta B/B  \leq 2\%$ |
| (3)            | 高温存储<br>HIGHT TEMPERATURE LOADS | IEC68-2-2/CNS5550           | 温度 TEMPERATURE: 105±2°C<br>时间 TIME: 1000±24h                                               | 无外观损伤<br>NO COSMETIC DAMAGE<br>$ \Delta R_{25}/R_{25}  \leq 5\%$<br>$ \Delta B/B  \leq 2\%$ |
| (4)            | 冷热冲击<br>COLD AND HEAT SHOCK     | IEC68-2-14                  | 温度 TEMPERATURE: -40°C, +105°C<br>周期 PERIOD: 100,30min/cyc                                  | 无外观损伤<br>NO COSMETIC DAMAGE<br>$ \Delta R_{25}/R_{25}  \leq 5\%$<br>$ \Delta B/B  \leq 2\%$ |
| (5)            | 低温存储<br>LOW TEMPERATURE STORAGE | IEC68-2-1                   | 温度 TEMPERATURE: -40±2°C<br>时间 TIME: 1000±24h                                               | 无外观损伤<br>NO COSMETIC DAMAGE<br>$ \Delta R_{25}/R_{25}  \leq 2\%$<br>$ \Delta B/B  \leq 2\%$ |
| (6)            | 耐久性<br>DURABILITY               | UL1434                      | 环境温度 ENVIRONMENT TEMPERATURE: 25±2°C<br>工作电流 WORKING CURRENT<br>周期 PERIOD: 6000            | 无外观损伤<br>NO COSMETIC DAMAGE<br>$ \Delta R_{25}/R_{25}  \leq 5\%$<br>$ \Delta B/B  \leq 2\%$ |



#### 4、包装、贮存 PACKAGE & STORAGE

##### 4.1 包装 PACKAGE

| 序号<br>SEQUENCE | 包装方式<br>PACKAGING         | 包装材料、尺寸<br>PACKAGING MATERIAL & DIMENSION | 产品数量<br>QUANTITY OF PRODUCT |
|----------------|---------------------------|-------------------------------------------|-----------------------------|
| (1)            | 包装袋<br>PACKING BAG        | 热封口袋 HEAT SEAL POCKET                     | 1000PCS                     |
| (2)            | 内包装盒<br>INNER BOX         | 纸箱 CARTON,<br>L×W×H=185mm×70mm×190mm      |                             |
| (3)            | 外包装箱<br>OUTER PACKING BOX | 纸箱 CARTON,<br>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

$R_{25}=10K\Omega\pm1\%$   
 $B_{25/85}=3435K\pm1\%$

| T(°C) | R <sub>Min</sub> (KΩ) | R <sub>Nor</sub> (KΩ) | R <sub>Max</sub> (KΩ) | T(°C) | R <sub>Min</sub> (KΩ) | R <sub>Nor</sub> (KΩ) | R <sub>Max</sub> (KΩ) |
|-------|-----------------------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-----------------------|
| -40   | 190.715               | 198.485               | 206.551               | -1    | 27.783                | 28.358                | 28.941                |
| -39   | 180.106               | 187.335               | 194.835               | 0     | 26.622                | 27.161                | 27.708                |
| -38   | 170.169               | 176.898               | 183.874               | 1     | 25.516                | 26.021                | 26.534                |
| -37   | 160.856               | 167.122               | 173.614               | 2     | 24.462                | 24.936                | 25.416                |
| -36   | 152.125               | 157.961               | 164.005               | 3     | 23.458                | 23.902                | 24.352                |
| -35   | 143.935               | 149.374               | 155.003               | 4     | 22.500                | 22.917                | 23.339                |
| -34   | 136.250               | 141.320               | 146.564               | 5     | 21.587                | 21.978                | 22.373                |
| -33   | 129.034               | 133.762               | 138.649               | 6     | 20.717                | 21.083                | 21.453                |
| -32   | 122.256               | 126.667               | 131.223               | 7     | 19.886                | 20.229                | 20.576                |
| -31   | 115.886               | 120.002               | 124.252               | 8     | 19.093                | 19.414                | 19.739                |
| -30   | 109.897               | 113.739               | 117.704               | 9     | 18.336                | 18.637                | 18.941                |
| -29   | 104.263               | 107.851               | 111.551               | 10    | 17.614                | 17.895                | 18.180                |
| -28   | 98.960                | 102.312               | 105.766               | 11    | 16.923                | 17.187                | 17.453                |
| -27   | 93.967                | 97.098                | 100.324               | 12    | 16.264                | 16.511                | 16.760                |
| -26   | 89.263                | 92.190                | 95.203                | 13    | 15.634                | 15.865                | 16.097                |
| -25   | 84.830                | 87.566                | 90.382                | 14    | 15.031                | 15.247                | 15.465                |
| -24   | 80.649                | 83.208                | 85.840                | 15    | 14.456                | 14.658                | 14.861                |
| -23   | 76.705                | 79.099                | 81.559                | 16    | 13.905                | 14.094                | 14.283                |
| -22   | 72.982                | 75.222                | 77.523                | 17    | 13.378                | 13.554                | 13.732                |
| -21   | 69.466                | 71.563                | 73.715                | 18    | 12.874                | 13.039                | 13.204                |
| -20   | 66.145                | 68.108                | 70.121                | 19    | 12.392                | 12.546                | 12.700                |
| -19   | 63.006                | 64.844                | 66.728                | 20    | 11.930                | 12.074                | 12.217                |
| -18   | 60.038                | 61.759                | 63.522                | 21    | 11.488                | 11.622                | 11.756                |
| -17   | 57.230                | 58.842                | 60.493                | 22    | 11.065                | 11.190                | 11.314                |
| -16   | 54.573                | 56.083                | 57.628                | 23    | 10.660                | 10.776                | 10.892                |
| -15   | 52.056                | 53.471                | 54.919                | 24    | 10.272                | 10.380                | 10.487                |
| -14   | 49.673                | 50.999                | 52.355                | 25    | 9.900                 | 10.000                | 10.100                |
| -13   | 47.414                | 48.657                | 49.928                | 26    | 9.537                 | 9.636                 | 9.736                 |
| -12   | 45.273                | 46.438                | 47.629                | 27    | 9.188                 | 9.288                 | 9.388                 |
| -11   | 43.243                | 44.335                | 45.450                | 28    | 8.855                 | 8.954                 | 9.054                 |
| -10   | 41.317                | 42.341                | 43.386                | 29    | 8.535                 | 8.634                 | 8.733                 |
| -9    | 39.488                | 40.448                | 41.428                | 30    | 8.229                 | 8.327                 | 8.426                 |
| -8    | 37.752                | 38.653                | 39.570                | 31    | 7.935                 | 8.033                 | 8.131                 |
| -7    | 36.103                | 36.948                | 37.808                | 32    | 7.654                 | 7.751                 | 7.848                 |
| -6    | 34.536                | 35.328                | 36.135                | 33    | 7.384                 | 7.480                 | 7.577                 |
| -5    | 33.047                | 33.790                | 34.546                | 34    | 7.125                 | 7.220                 | 7.316                 |
| -4    | 31.631                | 32.328                | 33.037                | 35    | 6.877                 | 6.971                 | 7.066                 |
| -3    | 30.284                | 30.938                | 31.602                | 36    | 6.638                 | 6.732                 | 6.826                 |
| -2    | 29.003                | 29.616                | 30.238                | 37    | 6.410                 | 6.502                 | 6.596                 |
| T(°C) | R <sub>Min</sub> (KΩ) | R <sub>Nor</sub> (KΩ) | R <sub>Max</sub> (KΩ) | T(°C) | R <sub>Min</sub> (KΩ) | R <sub>Nor</sub> (KΩ) | R <sub>Max</sub> (KΩ) |
| 38    | 6.190                 | 6.282                 | 6.374                 | 72    | 2.093                 | 2.147                 | 2.202                 |
| 39    | 5.980                 | 6.070                 | 6.162                 | 73    | 2.029                 | 2.082                 | 2.136                 |
| 40    | 5.777                 | 5.867                 | 5.957                 | 74    | 1.967                 | 2.019                 | 2.072                 |
| 41    | 5.583                 | 5.672                 | 5.761                 | 75    | 1.907                 | 1.958                 | 2.010                 |



|    |       |       |       |     |       |       |       |
|----|-------|-------|-------|-----|-------|-------|-------|
| 42 | 5.397 | 5.484 | 5.572 | 76  | 1.850 | 1.900 | 1.951 |
| 43 | 5.218 | 5.304 | 5.391 | 77  | 1.794 | 1.843 | 1.893 |
| 44 | 5.046 | 5.131 | 5.217 | 78  | 1.740 | 1.788 | 1.837 |
| 45 | 4.880 | 4.964 | 5.049 | 79  | 1.688 | 1.735 | 1.783 |
| 46 | 4.721 | 4.804 | 4.888 | 80  | 1.637 | 1.683 | 1.731 |
| 47 | 4.568 | 4.650 | 4.733 | 81  | 1.588 | 1.634 | 1.680 |
| 48 | 4.422 | 4.502 | 4.583 | 82  | 1.541 | 1.586 | 1.631 |
| 49 | 4.280 | 4.360 | 4.440 | 83  | 1.496 | 1.540 | 1.584 |
| 50 | 4.144 | 4.223 | 4.302 | 84  | 1.452 | 1.495 | 1.539 |
| 51 | 4.120 | 4.198 | 4.277 | 85  | 1.409 | 1.451 | 1.494 |
| 52 | 3.986 | 4.063 | 4.140 | 86  | 1.368 | 1.409 | 1.452 |
| 53 | 3.856 | 3.932 | 4.008 | 87  | 1.328 | 1.369 | 1.410 |
| 54 | 3.731 | 3.806 | 3.881 | 88  | 1.290 | 1.330 | 1.370 |
| 55 | 3.611 | 3.684 | 3.758 | 89  | 1.253 | 1.292 | 1.332 |
| 56 | 3.494 | 3.566 | 3.639 | 90  | 1.217 | 1.255 | 1.294 |
| 57 | 3.381 | 3.452 | 3.524 | 91  | 1.182 | 1.220 | 1.258 |
| 58 | 3.273 | 3.342 | 3.413 | 92  | 1.148 | 1.185 | 1.223 |
| 59 | 3.168 | 3.236 | 3.306 | 93  | 1.116 | 1.152 | 1.189 |
| 60 | 3.067 | 3.134 | 3.202 | 94  | 1.084 | 1.120 | 1.156 |
| 61 | 2.969 | 3.035 | 3.102 | 95  | 1.054 | 1.089 | 1.124 |
| 62 | 2.875 | 2.940 | 3.006 | 96  | 1.025 | 1.058 | 1.093 |
| 63 | 2.784 | 2.847 | 2.912 | 97  | 0.996 | 1.029 | 1.063 |
| 64 | 2.696 | 2.758 | 2.822 | 98  | 0.968 | 1.001 | 1.034 |
| 65 | 2.611 | 2.672 | 2.735 | 99  | 0.942 | 0.974 | 1.007 |
| 66 | 2.529 | 2.589 | 2.651 | 100 | 0.916 | 0.947 | 0.979 |
| 67 | 2.450 | 2.509 | 2.570 | 101 | 0.891 | 0.921 | 0.953 |
| 68 | 2.374 | 2.432 | 2.491 | 102 | 0.866 | 0.897 | 0.928 |
| 69 | 2.300 | 2.357 | 2.415 | 103 | 0.843 | 0.873 | 0.903 |
| 70 | 2.229 | 2.285 | 2.342 | 104 | 0.820 | 0.849 | 0.879 |
| 71 | 2.160 | 2.215 | 2.271 | 105 | 0.798 | 0.827 | 0.856 |