1. **热敏电阻**

NTC热敏电阻 10K （型号：MF52AT） 5％精度 B值：3950 1％

1. **型号说明**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| MF | 52 | 103 | H | 3950 | F | A |
| NTC热敏电阻 | 环氧系列 | 电阻值 | 阻值允差 | B值 | B值允差 | B值类别 |
| 10KΩ | ±5% | 3950K | ±1% | B25/50 |

1. **电气性能**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 项目 | 符号 | 测试条件 | 最小值 | 正常值 | 最大值 | 单位 |
| 3-1. | 25℃的电阻值 | R25 | Ta=25±0.05℃  PT≦0.1mw | 9.9 | 10.0 | 10.1 | kΩ |
| 3-2. | 50℃的电阻值 | R50 | Ta=50±0.05℃  PT≦0.1mw | / | 4.0650 | / | kΩ |
| 3-3. | B值 | B25/50 |  | 3436 | 3470 | 3504 | K |
| 3-4. | 耗散系数 | σ | Ta=25±0.5℃ | 2.0 | / | / | mw/℃ |
| 3-5. | 时间常数 | τ | Ta=25±0.5℃ | / | / | 15 | sec |
| 3-6. | 绝缘电阻 | / | 500VDC | 50 | / | / | MΩ |
| 3-7. | 使用温度范围 | / | / | -55 | / | +125 | ℃ |

1. **机械试验**

|  |  |  |
| --- | --- | --- |
| 项目 | 技术要求 | 测试条件及方法 |
| 4-1.可焊性 | 引出端焊料自由流动和浸润良好，上锡面积95%以上 | 将引出端沾助焊剂后，浸入温度为230±5℃锡槽中，锡面距NTC本体下端2-2.5mm处，持续2±0.5S  (参照IEC60068-2-20试验Ta/GB2423.28 Ta) |
| 4-2.耐焊接热 | 无可见性损伤  ΔR/R25≤±2% | 将引出端浸入温度为260±5℃锡槽中，锡面距NTC本体下端5mm处持续5±1S  (参照IEC60068-2-20试验Tb/GB2423.28 Tb) |
| 4-3.引出端强度 | 无脱落  ΔR/R25≤2% | 试验Ua：拉力5N，持续10S；   (参照IEC60068-2-21 / GB2423.29 U试验) |

1. **可靠性试验**

|  |  |  |  |
| --- | --- | --- | --- |
| 序号 | 项目 | 技术要求 | 测试条件及方法 |
| 5-1. | 高温试验 | ΔR/R25≤±2% | 125±5℃，通电1000±24h，DC0.2mA  （参照IEC60068-2-2/GB2423.2试验） |
| 5-2. | 低温试验 | ΔR/R25≤±2% | -55±5℃，通电1000±24h，DC0.2mA  （参照IEC60068-2-1/GB2423.1试验） |
| 5-3. | 耐潮湿试验 | ΔR/R25≤±2% | 40±2℃,90%-95%RH环境下放置100±24h  （参照IEC60068-2-3/GB2423.3试验） |
| 5-4. | 温度冷热循环试验 | ΔR/R25≤±2% | –55℃×30min→80℃×5min→125℃×30min→80℃×5min，反复5次  （参照IEC60068-2-14/GB2423.22试验） |

1. **使用注意事项**

将产品引线裁剪成所需要的长度，注意最小长度≧5mm。

**6.MF52 10K B值（3950）**  
R25℃=10K

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** |
| -40 | 190.5562 | -27 | 99.5847 | -14 | 53.1766 | -1 | 29.2750 |
| -39 | 183.4132 | -26 | 94.6608 | -13 | 50.7456 | 0 | 28.0170 |
| -38 | 175.6740 | -25 | 90.0326 | -12 | 48.4294 | 1 | 26.8255 |
| -37 | 167.6467 | -24 | 85.6778 | -11 | 46.2224 | 2 | 25.6972 |
| -36 | 159.5647 | -23 | 81.5747 | -10 | 44.1201 | 3 | 24.6290 |
| -35 | 151.5975 | -22 | 77.7031 | -9 | 42.1180 | 4 | 23.6176 |
| -34 | 143.8624 | -21 | 74.0442 | -8 | 40.2121 | 5 | 22.6597 |
| -33 | 136.4361 | -20 | 70.5811 | -7 | 38.3988 | 6 | 21.7522 |
| -32 | 129.3641 | -19 | 67.2987 | -6 | 36.6746 | 7 | 20.8916 |
| -31 | 122.6678 | -18 | 64.1834 | -5 | 35.0362 | 8 | 20.0749 |
| -30 | 116.3519 | -17 | 61.2233 | -4 | 33.4802 | 9 | 19.2988 |
| -29 | 110.4098 | -16 | 58.4080 | -3 | 32.0035 | 10 | 18.5600 |
| -28 | 104.8272 | -15 | 55.7284 | -2 | 30.6028 | 11 | 18.4818 |
| **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** |
| 12 | 18.1489 | 25 | 10.0000 | 38 | 6.1418 | 51 | 3.9271 |
| 13 | 17.6316 | 26 | 9.5762 | 39 | 5.9343 | 52 | 3.7936 |
| 14 | 16.9917 | 27 | 9.1835 | 40 | 5.7340 | 53 | 3.6639 |
| 15 | 16.2797 | 28 | 8.8186 | 41 | 5.5405 | 54 | 3.5377 |
| 16 | 15.5350 | 29 | 8.4784 | 42 | 5.3534 | 55 | 3.4146 |
| 17 | 14.7867 | 30 | 8.1600 | 43 | 5.1725 | 56 | 3.2939 |
| 18 | 14.0551 | 31 | 7.8608 | 44 | 4.9976 | 57 | 3.1752 |
| 19 | 13.3536 | 32 | 7.5785 | 45 | 4.8286 | 58 | 3.0579 |
| 20 | 12.6900 | 33 | 7.3109 | 46 | 4.6652 | 59 | 2.9414 |
| 21 | 12.0684 | 34 | 7.0564 | 47 | 4.5073 | 60 | 2.8250 |
| 22 | 11.4900 | 35 | 6.8133 | 48 | 4.3548 | 61 | 2.7762 |
| 23 | 10.9539 | 36 | 6.5806 | 49 | 4.2075 | 62 | 2.7179 |
| 24 | 10.4582 | 37 | 6.3570 | 50 | 4.0650 | 63 | 2.6523 |
| **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** | **T(℃)** | **R(KΩ)** |
| 64 | 2.5817 | 77 | 1.7197 | 90 | 1.2360 | 103 | 0.8346 |
| 65 | 2.5076 | 78 | 1.6727 | 91 | 1.2037 | 104 | 0.8099 |
| 66 | 2.4319 | 79 | 1.6282 | 92 | 1.1714 | 105 | 0.7870 |
| 67 | 2.3557 | 80 | 1.5860 | 93 | 1.1390 | 106 | 0.7665 |
| 68 | 2.2803 | 81 | 1.5458 | 94 | 1.1067 | 107 | 0.7485 |
| 69 | 2.2065 | 82 | 1.5075 | 95 | 1.0744 | 108 | 0.7334 |
| 70 | 2.1350 | 83 | 1.4707 | 96 | 1.0422 | 109 | 0.7214 |
| 71 | 2.0661 | 84 | 1.4352 | 97 | 1.0104 | 110 | 0.7130 |
| 72 | 2.0004 | 85 | 1.4006 | 98 | 0.9789 |  |  |
| 73 | 1.9378 | 86 | 1.3669 | 99 | 0.9481 |  |  |
| 74 | 1.8785 | 87 | 1.3337 | 100 | 0.9180 |  |  |
| 75 | 1.8225 | 88 | 1.3009 | 101 | 0.8889 |  |  |
| 76 | 1.7696 | 89 | 1.2684 |  |  |  |  |

（二）