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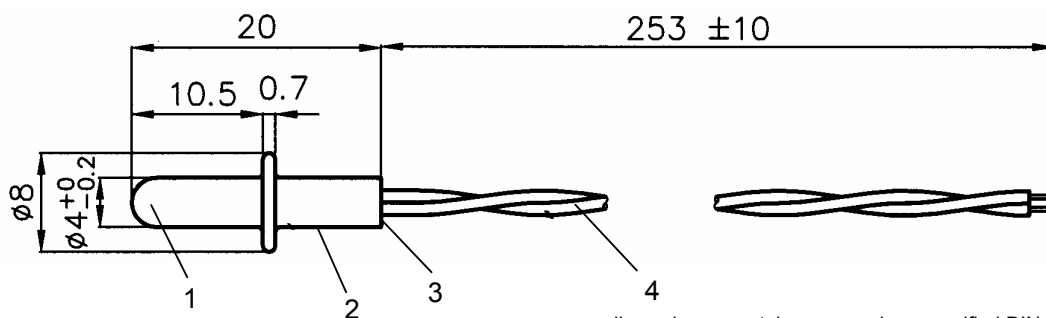
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Data sheet

Version: NTC soldered to AWG26 wire coated with epoxy resin and casted into stainless steel case



dimensions mm, tolerances unless specified DIN 2768-m

| No. | Item | Material | Property | Remarks |
|-----|-----------------|----------------------|--|---------|
| 1 | Thermistor | Ceramic | EPCOS NTC | |
| 2 | Protecting tube | Stainless steel case | | |
| 3 | Casting | epoxy resin | | black |
| 4 | Wire | Cu silvered, AWG26 | black insulation $\phi 1$ mm, heat proof 200°C | |

Ratings and characteristics

| Parameter | Specification | Test condition |
|---------------------------------|----------------------------------|----------------|
| Upper category temperature | 120 °C | |
| Lower category temperature | -20°C | |
| Rated resistance R_n | 3485 $\Omega \pm 2 \%$ | |
| Rated temperature T_n | 50 °C | |
| B-value : B(25/100) | 3988 K $\pm 1 \%$ | |
| R/T-curve Nr. | 8016 | |
| Resistance at 25 °C | 9672 Ω | |
| Thermal time constant (25/85°C) | ≤ 4 s | water |
| Withstand voltage | 1250 V _{AC} (50 Hz, 1s) | |

Remarks:

| | | | | | | | |
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Product Division: NTC

Product type: K504/10k/A3

Product name: NTC Probes

Ordering code: B57504K0103A003

Data sheet

NTC RESISTANCE-TEMPERATURE CURVE

R/T-Curve 8016
 R_N at 50 °C 3485 $\Omega \pm 2 \%$
 $B(25/100)$ 3988 K $\pm 1 \%$
 R at 25°C 9672 Ω

| Temp. [°C] | R Nom [Ω] | R Min [Ω] | R Max [Ω] | ΔR [$\pm\%$] |
|------------|--------------------|--------------------|--------------------|------------------------|
| -20 | 93891 | 88762 | 99020 | 5,5 |
| -19 | 88600 | 83815 | 93385 | 5,4 |
| -18 | 83642 | 79177 | 88108 | 5,3 |
| -17 | 78993 | 74824 | 83163 | 5,3 |
| -16 | 74633 | 70739 | 78527 | 5,2 |
| -15 | 70541 | 66903 | 74179 | 5,2 |
| -14 | 66699 | 63299 | 70099 | 5,1 |
| -13 | 63091 | 59912 | 66270 | 5,0 |
| -12 | 59701 | 56728 | 62674 | 5,0 |
| -11 | 56514 | 53733 | 59296 | 4,9 |
| -10 | 53518 | 50915 | 56121 | 4,9 |
| -9 | 50686 | 48250 | 53122 | 4,8 |
| -8 | 48022 | 45741 | 50302 | 4,7 |
| -7 | 45514 | 43378 | 47650 | 4,7 |
| -6 | 43153 | 41152 | 45154 | 4,6 |
| -5 | 40929 | 39054 | 42804 | 4,6 |
| -4 | 38834 | 37076 | 40591 | 4,5 |
| -3 | 36859 | 35211 | 38507 | 4,5 |
| -2 | 34996 | 33450 | 36542 | 4,4 |
| -1 | 33239 | 31789 | 34689 | 4,4 |
| 0 | 31581 | 30220 | 32942 | 4,3 |
| 1 | 30011 | 28734 | 31288 | 4,3 |
| 2 | 28529 | 27330 | 29728 | 4,2 |
| 3 | 27129 | 26003 | 28255 | 4,2 |
| 4 | 25806 | 24749 | 26864 | 4,1 |
| 5 | 24556 | 23562 | 25550 | 4,0 |
| 6 | 23374 | 22440 | 24308 | 4,0 |
| 7 | 22256 | 21378 | 23134 | 3,9 |
| 8 | 21198 | 20372 | 22023 | 3,9 |
| 9 | 20196 | 19420 | 20973 | 3,8 |
| 10 | 19248 | 18518 | 19978 | 3,8 |
| 11 | 18348 | 17661 | 19035 | 3,7 |
| 12 | 17495 | 16848 | 18141 | 3,7 |
| 13 | 16686 | 16078 | 17295 | 3,6 |
| 14 | 15920 | 15347 | 16493 | 3,6 |

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Product Division: NTC

Product type: K504/10k/A3

Product name: NTC Probes

Ordering code: B57504K0103A003

Data sheet

| Temp. [°C] | R Nom [Ω] | R Min [Ω] | R Max [Ω] | ΔR [±%] |
|------------|-------------|-------------|-------------|------------|
| 15 | 15193 | 14654 | 15733 | 3,5 |
| 16 | 14504 | 13996 | 15012 | 3,5 |
| 17 | 13850 | 13372 | 14329 | 3,5 |
| 18 | 13230 | 12779 | 13680 | 3,4 |
| 19 | 12641 | 12216 | 13065 | 3,4 |
| 20 | 12081 | 11681 | 12481 | 3,3 |
| 21 | 11549 | 11172 | 11926 | 3,3 |
| 22 | 11044 | 10688 | 11400 | 3,2 |
| 23 | 10564 | 10228 | 10899 | 3,2 |
| 24 | 10107 | 9791 | 10423 | 3,1 |
| 25 | 9672 | 9374 | 9971 | 3,1 |
| 26 | 9259 | 8977 | 9540 | 3,0 |
| 27 | 8865 | 8599 | 9130 | 3,0 |
| 28 | 8490 | 8239 | 8740 | 3,0 |
| 29 | 8133 | 7897 | 8369 | 2,9 |
| 30 | 7793 | 7570 | 8016 | 2,9 |
| 31 | 7469 | 7258 | 7680 | 2,8 |
| 32 | 7160 | 6961 | 7359 | 2,8 |
| 33 | 6866 | 6678 | 7053 | 2,7 |
| 34 | 6585 | 6408 | 6762 | 2,7 |
| 35 | 6317 | 6150 | 6485 | 2,7 |
| 36 | 6062 | 5904 | 6220 | 2,6 |
| 37 | 5819 | 5669 | 5968 | 2,6 |
| 38 | 5586 | 5445 | 5727 | 2,5 |
| 39 | 5364 | 5231 | 5498 | 2,5 |
| 40 | 5153 | 5027 | 5278 | 2,4 |
| 41 | 4950 | 4831 | 5069 | 2,4 |
| 42 | 4756 | 4644 | 4869 | 2,4 |
| 43 | 4571 | 4465 | 4678 | 2,3 |
| 44 | 4395 | 4294 | 4495 | 2,3 |
| 45 | 4226 | 4131 | 4320 | 2,2 |
| 46 | 4064 | 3974 | 4154 | 2,2 |
| 47 | 3910 | 3825 | 3994 | 2,2 |
| 48 | 3762 | 3682 | 3842 | 2,1 |
| 49 | 3620 | 3545 | 3696 | 2,1 |
| 50 | 3485 | 3415 | 3555 | 2,0 |
| 51 | 3355 | 3285 | 3425 | 2,1 |
| 52 | 3231 | 3162 | 3299 | 2,1 |
| 53 | 3112 | 3044 | 3179 | 2,2 |
| 54 | 2998 | 2932 | 3064 | 2,2 |
| 55 | 2888 | 2824 | 2953 | 2,2 |
| 56 | 2784 | 2720 | 2847 | 2,3 |
| 57 | 2683 | 2621 | 2745 | 2,3 |
| 58 | 2587 | 2526 | 2648 | 2,3 |

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Product Division: NTC

Product type: K504/10k/A3

Product name: NTC Probes

Ordering code: B57504K0103A003

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| Temp. [°C] | R Nom [Ω] | R Min [Ω] | R Max [Ω] | ΔR [±%] |
|------------|-----------|-----------|-----------|---------|
| 59 | 2495 | 2435 | 2554 | 2,4 |
| 60 | 2407 | 2348 | 2465 | 2,4 |
| 61 | 2322 | 2265 | 2379 | 2,5 |
| 62 | 2240 | 2184 | 2296 | 2,5 |
| 63 | 2162 | 2107 | 2217 | 2,5 |
| 64 | 2087 | 2033 | 2140 | 2,6 |
| 65 | 2015 | 1962 | 2067 | 2,6 |
| 66 | 1946 | 1894 | 1997 | 2,6 |
| 67 | 1879 | 1829 | 1929 | 2,7 |
| 68 | 1815 | 1766 | 1864 | 2,7 |
| 69 | 1754 | 1706 | 1802 | 2,7 |
| 70 | 1695 | 1648 | 1742 | 2,8 |
| 71 | 1638 | 1592 | 1684 | 2,8 |
| 72 | 1584 | 1539 | 1629 | 2,8 |
| 73 | 1532 | 1488 | 1575 | 2,9 |
| 74 | 1481 | 1438 | 1524 | 2,9 |
| 75 | 1433 | 1391 | 1475 | 2,9 |
| 76 | 1386 | 1345 | 1427 | 3,0 |
| 77 | 1341 | 1301 | 1382 | 3,0 |
| 78 | 1298 | 1259 | 1338 | 3,0 |
| 79 | 1257 | 1218 | 1295 | 3,1 |
| 80 | 1217 | 1179 | 1255 | 3,1 |
| 81 | 1178 | 1141 | 1215 | 3,1 |
| 82 | 1141 | 1105 | 1177 | 3,2 |
| 83 | 1105 | 1070 | 1140 | 3,2 |
| 84 | 1071 | 1036 | 1105 | 3,2 |
| 85 | 1037 | 1003 | 1071 | 3,3 |
| 86 | 1005 | 972 | 1038 | 3,3 |
| 87 | 974,1 | 941,8 | 1006,0 | 3,3 |
| 88 | 944,3 | 912,6 | 975,9 | 3,3 |
| 89 | 915,4 | 884,5 | 946,4 | 3,4 |
| 90 | 887,6 | 857,4 | 917,9 | 3,4 |
| 91 | 860,9 | 831,2 | 890,5 | 3,4 |
| 92 | 835,0 | 806,0 | 864,0 | 3,5 |
| 93 | 810,0 | 781,7 | 838,4 | 3,5 |
| 94 | 786,0 | 758,2 | 813,7 | 3,5 |
| 95 | 762,7 | 735,6 | 789,8 | 3,6 |
| 96 | 740,2 | 713,7 | 766,8 | 3,6 |
| 97 | 718,5 | 692,5 | 744,5 | 3,6 |
| 98 | 697,6 | 672,1 | 723,0 | 3,6 |
| 99 | 677,3 | 652,4 | 702,2 | 3,7 |
| 100 | 657,7 | 633,4 | 682,1 | 3,7 |
| 101 | 638,8 | 615,0 | 662,7 | 3,7 |
| 102 | 620,6 | 597,2 | 643,9 | 3,8 |

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Product Division: NTC

Product type: K504/10k/A3

Product name: NTC Probes

Ordering code: B57504K0103A003

Data sheet

| Temp. [°C] | R Nom [Ω] | R Min [Ω] | R Max [Ω] | ΔR [$\pm\%$] |
|------------|--------------------|--------------------|--------------------|------------------------|
| 103 | 602,9 | 580,1 | 625,8 | 3,8 |
| 104 | 585,8 | 563,5 | 608,2 | 3,8 |
| 105 | 569,3 | 547,4 | 591,2 | 3,8 |
| 106 | 553,3 | 531,9 | 574,8 | 3,9 |
| 107 | 537,9 | 516,9 | 558,9 | 3,9 |
| 108 | 522,9 | 502,4 | 543,5 | 3,9 |
| 109 | 508,5 | 488,4 | 528,6 | 4,0 |
| 110 | 494,5 | 474,8 | 514,2 | 4,0 |
| 111 | 480,9 | 461,6 | 500,2 | 4,0 |
| 112 | 467,8 | 448,9 | 486,6 | 4,0 |
| 113 | 455,1 | 436,6 | 473,5 | 4,1 |
| 114 | 442,7 | 424,6 | 460,9 | 4,1 |
| 115 | 430,8 | 413,1 | 448,6 | 4,1 |
| 116 | 419,3 | 401,9 | 436,6 | 4,1 |
| 117 | 408,1 | 391,1 | 425,1 | 4,2 |
| 118 | 397,2 | 380,6 | 413,9 | 4,2 |
| 119 | 386,7 | 370,4 | 403,1 | 4,2 |
| 120 | 376,6 | 360,6 | 392,5 | 4,2 |

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RELIABILITY REQUIREMENTS:

| Test | Test conditions | $\Delta R_{25}/R_{25}$ (typical) | Remarks |
|------------------------------------|--|-------------------------------------|-------------------|
| Storage in dry heat | Storage at upper category temperature in air Temperature: 125°C Voltage: 5 V _{DC} over serial resistance 6,8 kΩ Duration: 1000 h | < 2 % | No visible damage |
| Storage in coldness | Storage at lower category temperature in air Temperature: -20°C Voltage: 5 V _{DC} over serial resistance 6,8 kΩ Duration: 1000 h | < 2 % | No visible damage |
| Storage in damp heat, steady state | Temperature of air: 60°C Relative humidity of air: 93 % Voltage: 5 V _{DC} over serial resistance 6,8 kΩ Duration: 56 days | < 2 % | No visible damage |
| Vibration test DIN IEC 60068 | Frequency range: 10 Hz to 2000 Hz Amplitude: 1.5 mm / 10 g Linear sweep; X,Y and Z direction for 2h each | < 3 % | No visible damage |
| Natural falling test | Drop Sensor 3 times from a height of 75 cm spontaneously onto hard surface | < 2 % | No visible damage |
| bending test | bend sensor head 5 times 90° to the left and right | < 2 % | No visible damage |
| boiling test | storage at 96°C in water for 6h then natural cooling for 16h | < 2 % | No visible damage |

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