# NTC THERMISTOR R-T CHARACTERISTICS

| TYPE | TH20-3V103F[T,B] |
|---|---|

| | | | |
|---|---|---|---|
| RESISTANCE(at25℃) | 10000 Ω | R-TOLERANCE(±) | 1 % |
| B-VALUE(25/50℃) | 3924 K | B-TOLERANCE(±) | 1 % |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| -40 | 3.330E+005 | 3.489E+005 | 3.656E+005 |
| -39 | 3.122E+005 | 3.269E+005 | 3.423E+005 |
| -38 | 2.928E+005 | 3.064E+005 | 3.205E+005 |
| -37 | 2.747E+005 | 2.872E+005 | 3.003E+005 |
| -36 | 2.577E+005 | 2.693E+005 | 2.813E+005 |
| -35 | 2.419E+005 | 2.526E+005 | 2.637E+005 |
| -34 | 2.271E+005 | 2.370E+005 | 2.472E+005 |
| -33 | 2.133E+005 | 2.224E+005 | 2.319E+005 |
| -32 | 2.004E+005 | 2.088E+005 | 2.175E+005 |
| -31 | 1.883E+005 | 1.961E+005 | 2.041E+005 |
| -30 | 1.770E+005 | 1.842E+005 | 1.916E+005 |
| -29 | 1.663E+005 | 1.730E+005 | 1.799E+005 |
| -28 | 1.564E+005 | 1.626E+005 | 1.689E+005 |
| -27 | 1.471E+005 | 1.528E+005 | 1.587E+005 |
| -26 | 1.385E+005 | 1.437E+005 | 1.491E+005 |
| -25 | 1.303E+005 | 1.352E+005 | 1.402E+005 |
| -24 | 1.228E+005 | 1.272E+005 | 1.319E+005 |
| -23 | 1.156E+005 | 1.198E+005 | 1.241E+005 |
| -22 | 1.090E+005 | 1.128E+005 | 1.168E+005 |
| -21 | 1.028E+005 | 1.063E+005 | 1.100E+005 |
| -20 | 9.694E+004 | 1.002E+005 | 1.036E+005 |
| -19 | 9.148E+004 | 9.454E+004 | 9.768E+004 |
| -18 | 8.636E+004 | 8.919E+004 | 9.210E+004 |
| -17 | 8.156E+004 | 8.418E+004 | 8.687E+004 |
| -16 | 7.704E+004 | 7.947E+004 | 8.197E+004 |
| -15 | 7.281E+004 | 7.506E+004 | 7.737E+004 |
| -14 | 6.882E+004 | 7.091E+004 | 7.305E+004 |
| -13 | 6.508E+004 | 6.701E+004 | 6.900E+004 |
| -12 | 6.156E+004 | 6.336E+004 | 6.519E+004 |
| -11 | 5.825E+004 | 5.992E+004 | 6.162E+004 |
| -10 | 5.514E+004 | 5.668E+004 | 5.826E+004 |
| -9 | 5.221E+004 | 5.364E+004 | 5.510E+004 |
| -8 | 4.945E+004 | 5.077E+004 | 5.213E+004 |
| -7 | 4.685E+004 | 4.808E+004 | 4.933E+004 |
| -6 | 4.440E+004 | 4.554E+004 | 4.671E+004 |
| -5 | 4.210E+004 | 4.316E+004 | 4.424E+004 |
| -4 | 3.993E+004 | 4.091E+004 | 4.191E+004 |
| -3 | 3.789E+004 | 3.879E+004 | 3.972E+004 |
| -2 | 3.596E+004 | 3.680E+004 | 3.766E+004 |
| -1 | 3.414E+004 | 3.492E+004 | 3.572E+004 |
| 0 | 3.242E+004 | 3.315E+004 | 3.389E+004 |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| 0 | 3.242E+004 | 3.315E+004 | 3.389E+004 |
| 1 | 3.081E+004 | 3.148E+004 | 3.216E+004 |
| 2 | 2.928E+004 | 2.990E+004 | 3.053E+004 |
| 3 | 2.784E+004 | 2.841E+004 | 2.900E+004 |
| 4 | 2.647E+004 | 2.701E+004 | 2.755E+004 |
| 5 | 2.518E+004 | 2.568E+004 | 2.618E+004 |
| 6 | 2.396E+004 | 2.442E+004 | 2.489E+004 |
| 7 | 2.281E+004 | 2.324E+004 | 2.367E+004 |
| 8 | 2.172E+004 | 2.212E+004 | 2.252E+004 |
| 9 | 2.069E+004 | 2.106E+004 | 2.143E+004 |
| 10 | 1.971E+004 | 2.005E+004 | 2.040E+004 |
| 11 | 1.879E+004 | 1.910E+004 | 1.942E+004 |
| 12 | 1.791E+004 | 1.820E+004 | 1.850E+004 |
| 13 | 1.708E+004 | 1.735E+004 | 1.762E+004 |
| 14 | 1.630E+004 | 1.655E+004 | 1.680E+004 |
| 15 | 1.555E+004 | 1.578E+004 | 1.601E+004 |
| 16 | 1.485E+004 | 1.506E+004 | 1.527E+004 |
| 17 | 1.418E+004 | 1.437E+004 | 1.457E+004 |
| 18 | 1.354E+004 | 1.372E+004 | 1.390E+004 |
| 19 | 1.294E+004 | 1.310E+004 | 1.327E+004 |
| 20 | 1.236E+004 | 1.252E+004 | 1.267E+004 |
| 21 | 1.182E+004 | 1.196E+004 | 1.210E+004 |
| 22 | 1.130E+004 | 1.143E+004 | 1.156E+004 |
| 23 | 1.081E+004 | 1.093E+004 | 1.105E+004 |
| 24 | 1.034E+004 | 1.045E+004 | 1.056E+004 |
| 25 | 9.900E+003 | 1.000E+004 | 1.010E+004 |
| 26 | 9.470E+003 | 9.570E+003 | 9.669E+003 |
| 27 | 9.061E+003 | 9.160E+003 | 9.260E+003 |
| 28 | 8.672E+003 | 8.771E+003 | 8.870E+003 |
| 29 | 8.302E+003 | 8.401E+003 | 8.499E+003 |
| 30 | 7.951E+003 | 8.048E+003 | 8.146E+003 |
| 31 | 7.616E+003 | 7.713E+003 | 7.810E+003 |
| 32 | 7.297E+003 | 7.393E+003 | 7.490E+003 |
| 33 | 6.994E+003 | 7.089E+003 | 7.185E+003 |
| 34 | 6.705E+003 | 6.799E+003 | 6.894E+003 |
| 35 | 6.430E+003 | 6.523E+003 | 6.617E+003 |
| 36 | 6.168E+003 | 6.260E+003 | 6.352E+003 |
| 37 | 5.918E+003 | 6.009E+003 | 6.100E+003 |
| 38 | 5.680E+003 | 5.769E+003 | 5.859E+003 |
| 39 | 5.453E+003 | 5.541E+003 | 5.629E+003 |
| 40 | 5.236E+003 | 5.323E+003 | 5.410E+003 |

# NTC THERMISTOR R-T CHARACTERISTICS

| TYPE | TH20-3V103F[T,B] |
|---|---|

| | | | |
|---|---|---|---|
| RESISTANCE(at25℃) | 10000 Ω | R-TOLERANCE(±) | 1 % |
| B-VALUE(25/50℃) | 3924 K | B-TOLERANCE(±) | 1 % |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| 40 | 5.236E+003 | 5.323E+003 | 5.410E+003 |
| 41 | 5.030E+003 | 5.115E+003 | 5.201E+003 |
| 42 | 4.832E+003 | 4.916E+003 | 5.001E+003 |
| 43 | 4.644E+003 | 4.726E+003 | 4.809E+003 |
| 44 | 4.464E+003 | 4.545E+003 | 4.627E+003 |
| 45 | 4.292E+003 | 4.372E+003 | 4.452E+003 |
| 46 | 4.128E+003 | 4.206E+003 | 4.285E+003 |
| 47 | 3.971E+003 | 4.048E+003 | 4.125E+003 |
| 48 | 3.821E+003 | 3.896E+003 | 3.972E+003 |
| 49 | 3.677E+003 | 3.751E+003 | 3.826E+003 |
| 50 | 3.540E+003 | 3.612E+003 | 3.686E+003 |
| 51 | 3.409E+003 | 3.480E+003 | 3.552E+003 |
| 52 | 3.283E+003 | 3.353E+003 | 3.423E+003 |
| 53 | 3.163E+003 | 3.231E+003 | 3.300E+003 |
| 54 | 3.047E+003 | 3.114E+003 | 3.182E+003 |
| 55 | 2.937E+003 | 3.003E+003 | 3.069E+003 |
| 56 | 2.831E+003 | 2.895E+003 | 2.961E+003 |
| 57 | 2.730E+003 | 2.793E+003 | 2.857E+003 |
| 58 | 2.633E+003 | 2.695E+003 | 2.757E+003 |
| 59 | 2.540E+003 | 2.600E+003 | 2.662E+003 |
| 60 | 2.451E+003 | 2.510E+003 | 2.570E+003 |
| 61 | 2.365E+003 | 2.423E+003 | 2.482E+003 |
| 62 | 2.283E+003 | 2.340E+003 | 2.398E+003 |
| 63 | 2.205E+003 | 2.260E+003 | 2.317E+003 |
| 64 | 2.129E+003 | 2.184E+003 | 2.239E+003 |
| 65 | 2.057E+003 | 2.110E+003 | 2.165E+003 |
| 66 | 1.987E+003 | 2.039E+003 | 2.093E+003 |
| 67 | 1.920E+003 | 1.971E+003 | 2.024E+003 |
| 68 | 1.856E+003 | 1.906E+003 | 1.957E+003 |
| 69 | 1.794E+003 | 1.843E+003 | 1.894E+003 |
| 70 | 1.735E+003 | 1.783E+003 | 1.832E+003 |
| 71 | 1.678E+003 | 1.725E+003 | 1.773E+003 |
| 72 | 1.623E+003 | 1.670E+003 | 1.717E+003 |
| 73 | 1.571E+003 | 1.616E+003 | 1.662E+003 |
| 74 | 1.520E+003 | 1.564E+003 | 1.610E+003 |
| 75 | 1.472E+003 | 1.515E+003 | 1.559E+003 |
| 76 | 1.425E+003 | 1.467E+003 | 1.510E+003 |
| 77 | 1.380E+003 | 1.421E+003 | 1.464E+003 |
| 78 | 1.336E+003 | 1.377E+003 | 1.418E+003 |
| 79 | 1.294E+003 | 1.334E+003 | 1.375E+003 |
| 80 | 1.254E+003 | 1.293E+003 | 1.333E+003 |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| 80 | 1.254E+003 | 1.293E+003 | 1.333E+003 |
| 81 | 1.215E+003 | 1.254E+003 | 1.293E+003 |
| 82 | 1.178E+003 | 1.215E+003 | 1.254E+003 |
| 83 | 1.142E+003 | 1.179E+003 | 1.216E+003 |
| 84 | 1.108E+003 | 1.143E+003 | 1.180E+003 |
| 85 | 1.074E+003 | 1.109E+003 | 1.145E+003 |
| 86 | 1.042E+003 | 1.076E+003 | 1.112E+003 |
| 87 | 1.011E+003 | 1.044E+003 | 1.079E+003 |
| 88 | 9.809E+002 | 1.014E+003 | 1.048E+003 |
| 89 | 9.520E+002 | 9.842E+002 | 1.017E+003 |
| 90 | 9.241E+002 | 9.557E+002 | 9.883E+002 |
| 91 | 8.972E+002 | 9.281E+002 | 9.601E+002 |
| 92 | 8.712E+002 | 9.015E+002 | 9.328E+002 |
| 93 | 8.462E+002 | 8.759E+002 | 9.065E+002 |
| 94 | 8.219E+002 | 8.510E+002 | 8.811E+002 |
| 95 | 7.985E+002 | 8.270E+002 | 8.565E+002 |
| 96 | 7.759E+002 | 8.038E+002 | 8.327E+002 |
| 97 | 7.541E+002 | 7.814E+002 | 8.097E+002 |
| 98 | 7.329E+002 | 7.598E+002 | 7.875E+002 |
| 99 | 7.125E+002 | 7.388E+002 | 7.660E+002 |
| 100 | 6.928E+002 | 7.185E+002 | 7.452E+002 |
| 101 | 6.736E+002 | 6.989E+002 | 7.250E+002 |
| 102 | 6.551E+002 | 6.799E+002 | 7.055E+002 |
| 103 | 6.372E+002 | 6.615E+002 | 6.866E+002 |
| 104 | 6.199E+002 | 6.437E+002 | 6.683E+002 |
| 105 | 6.032E+002 | 6.265E+002 | 6.506E+002 |
| 106 | 5.870E+002 | 6.098E+002 | 6.335E+002 |
| 107 | 5.713E+002 | 5.937E+002 | 6.169E+002 |
| 108 | 5.562E+002 | 5.781E+002 | 6.009E+002 |
| 109 | 5.415E+002 | 5.630E+002 | 5.853E+002 |
| 110 | 5.273E+002 | 5.484E+002 | 5.703E+002 |
| 111 | 5.135E+002 | 5.342E+002 | 5.557E+002 |
| 112 | 5.002E+002 | 5.205E+002 | 5.416E+002 |
| 113 | 4.873E+002 | 5.072E+002 | 5.279E+002 |
| 114 | 4.748E+002 | 4.944E+002 | 5.147E+002 |
| 115 | 4.627E+002 | 4.819E+002 | 5.018E+002 |
| 116 | 4.510E+002 | 4.698E+002 | 4.893E+002 |
| 117 | 4.396E+002 | 4.581E+002 | 4.772E+002 |
| 118 | 4.286E+002 | 4.467E+002 | 4.655E+002 |
| 119 | 4.179E+002 | 4.357E+002 | 4.541E+002 |
| 120 | 4.075E+002 | 4.250E+002 | 4.431E+002 |
| 121 | 3.975E+002 | 4.146E+002 | 4.324E+002 |
| 122 | 3.877E+002 | 4.045E+002 | 4.220E+002 |
| 123 | 3.783E+002 | 3.947E+002 | 4.119E+002 |
| 124 | 3.691E+002 | 3.852E+002 | 4.021E+002 |
| 125 | 3.601E+002 | 3.760E+002 | 3.925E+002 |