

# R-T Characteristics

**NTC10k ±0.5 %, B<sub>25/50</sub> = 3950K**  
**E+E Order Code: TP11**

Sensor Type	Nominal Resistance	Sensitivity	E+E Order Code
NTC10k	R <sub>25</sub> : 10 kΩ ± 0.5 %	B <sub>25/50</sub> : 3950K (B <sub>25/85</sub> : 3989K) ± 1.0 %	TP11

**Tabulated R-T Characteristics** (according to supplier's specifications)

T [°C]	Rmin [Ω]	Rnom [Ω]	Rmax [Ω]
-40	3.327E+05	3.470E+05	3.618E+05
-39	3.113E+05	3.244E+05	3.380E+05
-38	2.913E+05	3.034E+05	3.159E+05
-37	2.728E+05	2.839E+05	2.954E+05
-36	2.556E+05	2.658E+05	2.763E+05
-35	2.395E+05	2.489E+05	2.587E+05
-34	2.246E+05	2.333E+05	2.422E+05
-33	2.107E+05	2.187E+05	2.269E+05
-32	1.978E+05	2.051E+05	2.127E+05
-31	1.857E+05	1.925E+05	1.995E+05
-30	1.745E+05	1.807E+05	1.871E+05
-29	1.640E+05	1.697E+05	1.757E+05
-28	1.542E+05	1.595E+05	1.649E+05
-27	1.451E+05	1.499E+05	1.550E+05
-26	1.365E+05	1.410E+05	1.456E+05
-25	1.285E+05	1.327E+05	1.369E+05
-24	1.211E+05	1.249E+05	1.288E+05
-23	1.141E+05	1.176E+05	1.212E+05
-22	1.075E+05	1.108E+05	1.141E+05
-21	1.014E+05	1.044E+05	1.075E+05

T [°C]	Rmin [Ω]	Rnom [Ω]	Rmax [Ω]
-20	9.569E+04	9.846E+04	1.013E+05
-19	9.031E+04	9.287E+04	9.550E+04
-18	8.528E+04	8.764E+04	9.007E+04
-17	8.055E+04	8.274E+04	8.497E+04
-16	7.612E+04	7.813E+04	8.020E+04
-15	7.196E+04	7.382E+04	7.573E+04
-14	6.805E+04	6.977E+04	7.153E+04
-13	6.438E+04	6.596E+04	6.759E+04
-12	6.093E+04	6.239E+04	6.389E+04
-11	5.768E+04	5.903E+04	6.042E+04
-10	5.463E+04	5.588E+04	5.716E+04
-9	5.176E+04	5.292E+04	5.409E+04
-8	4.906E+04	5.013E+04	5.121E+04
-7	4.652E+04	4.750E+04	4.850E+04
-6	4.412E+04	4.503E+04	4.595E+04
-5	4.186E+04	4.269E+04	4.355E+04
-4	3.972E+04	4.050E+04	4.128E+04
-3	3.771E+04	3.842E+04	3.915E+04
-2	3.581E+04	3.647E+04	3.714E+04
-1	3.402E+04	3.463E+04	3.524E+04

T [°C]	Rmin [Ω]	Rnom [Ω]	Rmax [Ω]
0	3.233E+04	3.289E+04	3.345E+04
1	3.073E+04	3.124E+04	3.176E+04
2	2.921E+04	2.969E+04	3.017E+04
3	2.779E+04	2.822E+04	2.866E+04
4	2.644E+04	2.684E+04	2.724E+04
5	2.516E+04	2.553E+04	2.590E+04
6	2.395E+04	2.429E+04	2.463E+04
7	2.281E+04	2.312E+04	2.343E+04
8	2.173E+04	2.201E+04	2.230E+04
9	2.071E+04	2.097E+04	2.123E+04
10	1.974E+04	1.997E+04	2.022E+04
11	1.882E+04	1.904E+04	1.926E+04
12	1.795E+04	1.815E+04	1.835E+04
13	1.712E+04	1.731E+04	1.749E+04

T [°C]	Rmin [Ω]	Rnom [Ω]	Rmax [Ω]
14	1.634E+04	1.651E+04	1.667E+04
15	1.560E+04	1.575E+04	1.590E+04
16	1.489E+04	1.503E+04	1.517E+04
17	1.423E+04	1.435E+04	1.447E+04
18	1.359E+04	1.370E+04	1.382E+04
19	1.299E+04	1.309E+04	1.319E+04
20	1.242E+04	1.251E+04	1.260E+04
21	1.187E+04	1.195E+04	1.203E+04
22	1.135E+04	1.143E+04	1.150E+04
23	1.086E+04	1.093E+04	1.099E+04
24	1.039E+04	1.045E+04	1.051E+04
25	9.950E+03	1.000E+04	1.005E+04
26	9.518E+03	9.570E+03	9.622E+03
27	9.107E+03	9.161E+03	9.215E+03

T [°C]	Rmin [Ω]	Rnom [Ω]	Rmax [Ω]
28	8.717E+03	8.772E+03	8.828E+03
29	8.345E+03	8.402E+03	8.458E+03
30	7.991E+03	8.049E+03	8.107E+03
31	7.654E+03	7.713E+03	7.772E+03
32	7.333E+03	7.393E+03	7.452E+03
33	7.028E+03	7.087E+03	7.148E+03
34	6.736E+03	6.797E+03	6.857E+03
35	6.459E+03	6.519E+03	6.580E+03
36	6.194E+03	6.255E+03	6.316E+03
37	5.942E+03	6.003E+03	6.064E+03
38	5.701E+03	5.762E+03	5.823E+03
39	5.472E+03	5.532E+03	5.593E+03
40	5.253E+03	5.313E+03	5.373E+03
41	5.043E+03	5.103E+03	5.163E+03
42	4.843E+03	4.903E+03	4.963E+03
43	4.653E+03	4.711E+03	4.771E+03
44	4.470E+03	4.529E+03	4.588E+03
45	4.296E+03	4.354E+03	4.412E+03
46	4.130E+03	4.187E+03	4.245E+03
47	3.971E+03	4.027E+03	4.084E+03
48	3.818E+03	3.874E+03	3.931E+03
49	3.673E+03	3.728E+03	3.784E+03
50	3.534E+03	3.588E+03	3.643E+03
51	3.401E+03	3.454E+03	3.509E+03
52	3.273E+03	3.326E+03	3.380E+03
53	3.151E+03	3.204E+03	3.256E+03
54	3.035E+03	3.086E+03	3.138E+03
55	2.923E+03	2.973E+03	3.025E+03
56	2.816E+03	2.866E+03	2.916E+03
57	2.713E+03	2.762E+03	2.812E+03
58	2.615E+03	2.663E+03	2.712E+03
59	2.521E+03	2.568E+03	2.616E+03
60	2.430E+03	2.477E+03	2.524E+03
61	2.343E+03	2.389E+03	2.435E+03
62	2.260E+03	2.305E+03	2.351E+03
63	2.180E+03	2.224E+03	2.269E+03
64	2.104E+03	2.147E+03	2.191E+03
65	2.030E+03	2.073E+03	2.116E+03
66	1.960E+03	2.001E+03	2.044E+03
67	1.892E+03	1.933E+03	1.975E+03
68	1.827E+03	1.867E+03	1.908E+03
69	1.764E+03	1.804E+03	1.844E+03

T [°C]	Rmin [Ω]	Rnom [Ω]	Rmax [Ω]
70	1.704E+03	1.743E+03	1.782E+03
71	1.647E+03	1.684E+03	1.723E+03
72	1.591E+03	1.628E+03	1.666E+03
73	1.538E+03	1.574E+03	1.611E+03
74	1.486E+03	1.522E+03	1.559E+03
75	1.437E+03	1.472E+03	1.508E+03
76	1.390E+03	1.424E+03	1.459E+03
77	1.344E+03	1.378E+03	1.412E+03
78	1.300E+03	1.333E+03	1.367E+03
79	1.258E+03	1.290E+03	1.323E+03
80	1.217E+03	1.249E+03	1.281E+03
81	1.178E+03	1.209E+03	1.240E+03
82	1.140E+03	1.170E+03	1.201E+03
83	1.104E+03	1.133E+03	1.164E+03
84	1.069E+03	1.098E+03	1.128E+03
85	1.035E+03	1.063E+03	1.093E+03
86	1.002E+03	1.030E+03	1.059E+03
87	9.709E+02	9.983E+02	1.026E+03
88	9.407E+02	9.675E+02	9.951E+02
89	9.116E+02	9.379E+02	9.649E+02
90	8.835E+02	9.092E+02	9.357E+02
91	8.565E+02	8.817E+02	9.076E+02
92	8.304E+02	8.551E+02	8.805E+02
93	8.052E+02	8.294E+02	8.543E+02
94	7.809E+02	8.046E+02	8.290E+02
95	7.574E+02	7.807E+02	8.046E+02
96	7.348E+02	7.575E+02	7.810E+02
97	7.129E+02	7.352E+02	7.581E+02
98	6.918E+02	7.136E+02	7.361E+02
99	6.714E+02	6.927E+02	7.148E+02
100	6.516E+02	6.726E+02	6.942E+02
101	6.326E+02	6.531E+02	6.743E+02
102	6.142E+02	6.343E+02	6.550E+02
103	5.964E+02	6.160E+02	6.364E+02
104	5.791E+02	5.984E+02	6.184E+02
105	5.625E+02	5.814E+02	6.009E+02
106	5.464E+02	5.649E+02	5.840E+02
107	5.308E+02	5.490E+02	5.677E+02
108	5.158E+02	5.335E+02	5.519E+02
109	5.012E+02	5.186E+02	5.366E+02
110	4.871E+02	5.042E+02	5.218E+02