

R/T CHARACTERISTICS NTC THERMISTORS

CURVE Z				CURVE Y				CURVE T				CURVE W			
-4.4%/°C @ 25° C				-3.9%/°C @ 25° C				-3.5%/°C @ 25° C				-4.7%/°C @ 25° C			
TEMP (°C)	RT/R25	MAX DEV	NTC	TEMP (°C)	RT/R25	MAX DEV	NTC	TEMP (°C)	RT/R25	MAX DEV	NTC	TEMP (°C)	RT/R25	MAX DEV	NTC
-55	96.40000	3.80	7.400	-55	54.78000	8.90	6.500	-55	36.60000	20.90	5.800	-55	117.50000	4.30	7.400
-50	67.06000	3.50	7.200	-50	40.06000	8.20	6.100	-50	27.50000	18.50	5.500	-50	81.32000	3.60	7.100
-45	47.08421	3.25	6.961	-45	29.53146	7.49	5.909	-45	20.90389	16.77	5.374	-45	56.69045	3.22	6.918
-40	33.66000	3.00	6.700	-40	22.05000	6.80	5.800	-40	16.10000	15.40	5.300	-40	40.16000	3.00	6.800
-35	24.28525	2.70	6.442	-35	16.59240	6.18	5.613	-35	12.46138	13.95	5.130	-35	28.66344	2.71	6.666
-30	17.70000	2.40	6.200	-30	12.58000	5.60	5.400	-30	9.70000	12.50	4.900	-30	20.64000	2.40	6.500
-25	13.03128	2.16	5.984	-25	9.61546	5.01	5.238	-25	7.61934	11.18	4.682	-25	14.99955	2.15	6.304
-20	9.71200	1.90	5.800	-20	7.42200	4.40	5.100	-20	6.05000	9.90	4.500	-20	11.03000	1.90	6.100
-15	7.29800	1.60	5.650	-15	5.77700	3.80	4.950	-15	.84000	8.60	4.350	-15	8.17500	1.60	5.900
-10	5.53400	1.40	5.500	-10	4.52700	3.30	4.800	-10	3.89000	7.40	4.200	-10	6.11900	1.40	5.700
-5	4.23400	1.20	5.300	-5	3.58000	2.80	4.650	-5	3.15000	6.20	4.100	-5	4.61500	1.20	5.550
0	3.26600	1.00	5.100	0	2.84800	2.30	4.500	0	2.57000	5.00	4.000	0	3.51000	1.00	5.400
5	2.54000	0.75	4.950	5	.28200	1.70	4.350	5	2.10000	3.90	3.900	5	2.69000	0.75	5.250
10	1.99000	0.50	4.800	10	1.83800	1.20	4.200	10	1.73000	2.70	3.800	10	2.07800	0.50	5.100
15	1.57100	0.30	4.650	15	1.49200	0.70	4.100	15	1.43000	1.60	3.700	15	1.61700	0.30	4.950
20	1.24900	0.10	4.500	20	1.21800	0.30	4.000	20	1.19000	0.50	3.600	20	1.26700	0.10	4.800
25	1.00000	0.00	4.400	25	1.00000	0.00	3.900	25	1.00000	0.00	3.500	25	1.00000	0.00	4.700
30	0.80580	0.20	4.300	30	0.82610	0.60	3.800	30	0.84100	.40	3.400	30	0.79420	0.20	.600
35	0.65320	0.40	4.150	35	0.68620	1.00	3.700	35	0.71100	2.30	3.300	35	0.63480	0.40	4.450
40	0.53260	0.60	4.000	40	0.57270	1.40	3.600	40	0.60400	3.20	3.200	40	0.51050	0.60	4.300
45	0.43680	0.80	3.900	45	0.48040	1.80	3.500	45	0.51500	4.10	3.150	45	0.41290	0.80	4.200
50	0.36020	1.00	3.800	50	0.40450	2.20	3.400	50	0.44200	.00	3.100	50	0.33590	1.00	4.100
55	0.29860	1.10	3.700	55	0.34270	2.60	3.300	55	0.38000	5.90	3.000	55	0.27480	1.10	4.000
60	0.24880	1.20	3.600	60	0.29140	3.00	3.200	60	0.32800	6.70	2.900	60	0.22950	1.20	3.900
65	0.20820	1.40	3.500	65	0.24900	3.30	3.100	65	0.28500	7.50	2.850	65	0.18670	1.40	3.800
70	0.17510	1.60	3.400	70	0.21370	3.60	3.000	70	0.24800	8.20	2.800	70	0.15500	1.60	3.700
75	0.14800	1.75	3.350	75	0.18410	4.00	2.900	75	0.21600	9.00	2.700	75	0.12930	1.75	3.600
80	0.12560	1.90	3.300	80	0.15920	4.30	2.800	80	0.18900	9.80	2.600	80	0.10840	1.90	3.500
85	0.10710	2.00	3.200	85	0.13820	4.60	2.750	85	0.16700	10.50	2.550	85	0.09120	2.00	3.400
90	0.09164	2.10	3.100	90	0.12040	4.90	2.700	90	0.14700	11.20	2.500	90	0.07710	2.10	3.300
95	0.07874	2.25	3.000	95	0.10530	4.20	2.600	95	0.13000	11.90	2.400	95	0.06540	2.25	3.250
100	0.06792	2.40	2.900	100	0.09230	5.50	2.500	100	0.11500	12.60	2.350	100	0.05570	2.40	3.200
105	0.05880	2.50	2.850	105	0.08130	5.80	2.450	105	0.10173	13.40	2.300	105	0.04760	2.50	3.100
110	0.05108	2.60	2.800	110	0.07180	6.10	2.400	110	0.08996	14.20	2.250	110	0.04080	2.60	3.000
115	0.04452	2.75	2.750	115	0.06360	6.40	2.350	115	0.07949	15.10	2.200	115	0.03510	2.75	2.950
120	0.03894	2.90	2.700	120	0.05650	6.70	2.300	120	0.07076	16.00	2.150	120	0.03030	2.90	2.900
125	0.03416	3.00	2.600	125	0.05040	6.90	2.250	125	0.06183	16.90	2.100	125	0.02630	3.00	.850
130	0.03006	3.10	2.500	130	0.04514	7.30	2.200	130	0.05436	17.90	2.050	130	0.02280	3.10	2.800
135	0.02653	3.25	2.440	135	0.04057	7.58	2.176	135	0.04772	18.55	2.020	135	0.01982	3.25	2.750
140	0.02348	3.40	2.400	140	0.03660	7.80	2.150	140	0.04161	19.00	2.000	140	0.01730	3.40	2.700
145	0.02084	3.47	2.353	145	.03314	8.11	2.087	145	0.03608	19.52	1.977	145	0.01516	3.47	2.650
150	0.01854	3.50	2.300	150	0.03010	8.50	2.000	150	0.03119	20.10	1.950	150	0.01330	3.50	2.600

NTC

The NTC column above indicates the slope at discrete points on the Resistance vs. Temperature response curve for each formulation offered by Quality Thermistor. The rate is expressed in the percentage of resistance value change per degree Celsius. For example: The response curve of a 10,000 ohm, Curve Z thermistor exhibits a slope of -4.4%/°C at 25°C.

The NTC column can also be used to determine the temperature tolerance of a thermistor which has its tolerance expressed by a percentage. Since each unit of NTC change equates to one degree Celsius, one can use the NTC value to determine temperature tolerance at any given temperature. For example: a 10,000-ohm, Curve Z thermistor with a resistance tolerance of +/-5% at 25°C will have a temperature tolerance of +/- 1.136°C (divide 5% part tolerance by the NTC value at 25°C of 4.4 equals 1.136).

MAX DEV

The MAX DEV column above represents the manufacturing tolerance of each NTC curve at each corresponding temperature above the advertised tolerance of the part number. For example: a Curve Z thermistor which has an advertised tolerance of +/-5% at 25°C will have a maximum deviation of 0.00% added to the specified part tolerance at 25°C to yield overall part tolerance of +/-5%. The same +/-5%, 10,000 ohm Curve Z thermistor would be a +/-6.6% part at 70°C as the 5% part tolerance would be added to the 1.6% MAX DEV value to yield +/-6.6%.