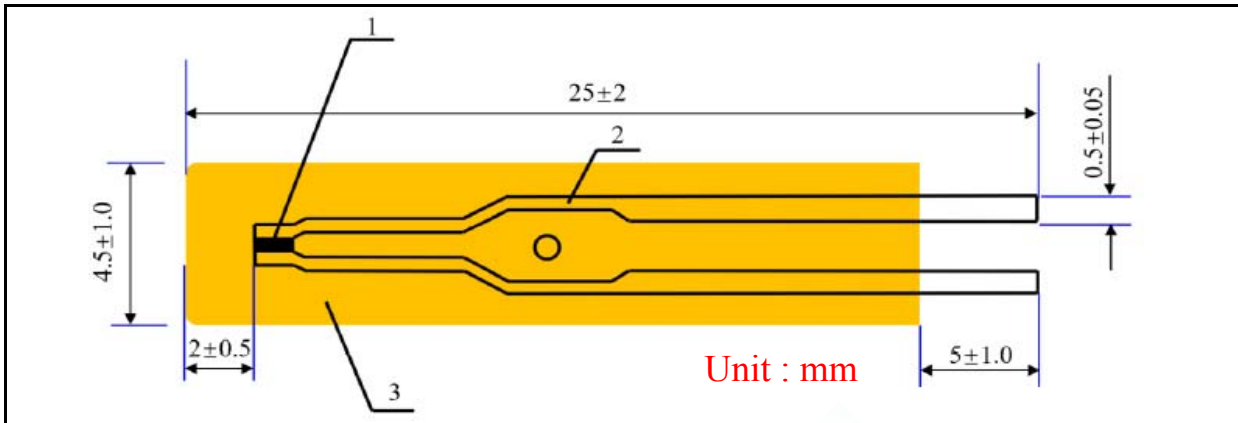


Technical Data

103F-JT-45-3435FA025 NTC Thermistor Specifications

1 Part Number 103F-JT-45-3435FA025

2 Dimensions



1	NTC Chip	10KΩ ± 1%, B=3435K ± 1% @25/85°C
2	Tinned Phosphor Copper Frame	Phosphorized Copper
3	Polyimide Film	Yellow

3 Rating

- a) Rated zero-power resistance. $R = 10K\Omega \pm 1\%$ (at 25°C)
- b) B constant $B (25 / 85^\circ C) = 3435K \pm 1\%$
The B constant is calculated using the zero-power resistance values measured at 25°C and 85°C
- c) Dissipation constant : 0.7 mW / °C Min. (in still air)
- d) Thermal time constant : Approx. 10 sec. (in still air)
- e) Operating temperature : -50°C to +90°C
- f) Power consumption : 3.5 mW (max.)

4 Reliability

- a) High Temperature Aging Test (HTAT)
Elements are placed in a chamber of temperature at 110°C ± 5°C for 1,000 hours. Drift of electric characteristics (R₂₅, B_{25/85}) after HTAT are less than ±1%.
- b) Low Temperature Aging Test (LTAT)
Elements are placed in an oil bath of temperature at -30°C ± 5°C for 1,000 hours. Drift of electric characteristics (R₂₅, B_{25/85}) after LTAT are less than ±1%.
- c) Heat Cycling Test (HCT)
Elements are dipped into an oil bath of temperature at -30°C for 5 minute and then dipped into another bath of temperature at 90°C for 5 minute. Drift of the characteristics (R₂₅, B_{25/85}), after 1,000 times of HCT, are less than ±1%.
- d) High Temperature Aging Test at DC 5V
Elements are placed in atmosphere of 110°C ± 5°C at DC 5V for 1,000 hours. Drift of electric characteristics (R₂₅, B_{25/85}) after test are less than ±1%.

5 Soldering

- a) Solderability
Terminals shall be immersed into solder bath up to 2.5mm from the body at 235°C ± 5°C for 5 ± 0.5 seconds. More than 90% of its terminals shall be covered with solder.
- b) Resistance to soldering heat
After lead wires are immersed into solder bath up to 2.5mm from the body at 350°C ± 5°C for 3.5 ± 0.5 seconds, the change ratio of R₂₅ shall be within ± 2% of the initial value.

Technical Data

103F-JT-45-3435FA025 NTC Thermistor Specifications

6 R / T table for 103F-JT-45-3435FA025

Temperature °C	Minimum (KΩ)	Center (KΩ)	Maximum (KΩ)	Res. Tolerance (%)		Tolerance (°C)	
				ΔR	-ΔR	Max	Min
-40	189.674	197.390	205.400	4.06%	-3.91%	0.7	-0.7
-39	179.349	186.540	194.000	4.00%	-3.85%	0.7	-0.7
-38	169.647	176.350	183.299	3.94%	-3.80%	0.7	-0.7
-37	160.550	166.800	173.276	3.88%	-3.75%	0.7	-0.7
-36	151.990	157.820	163.857	3.83%	-3.69%	0.7	-0.7
-35	143.951	149.390	155.019	3.77%	-3.64%	0.7	-0.7
-34	136.431	141.510	146.763	3.71%	-3.59%	0.7	-0.7
-33	129.347	134.090	138.993	3.66%	-3.54%	0.7	-0.7
-32	122.680	127.110	131.687	3.60%	-3.49%	0.7	-0.7
-31	116.391	120.530	124.804	3.55%	-3.43%	0.7	-0.7
-30	110.472	114.340	118.332	3.49%	-3.38%	0.7	-0.7
-29	104.913	108.530	112.260	3.44%	-3.33%	0.7	-0.7
-28	99.658	103.040	106.526	3.38%	-3.28%	0.7	-0.7
-27	94.706	97.870	101.129	3.33%	-3.23%	0.7	-0.6
-26	90.029	92.989	96.037	3.28%	-3.18%	0.7	-0.6
-25	85.611	88.381	91.231	3.23%	-3.13%	0.7	-0.6
-24	81.443	84.036	86.702	3.17%	-3.09%	0.6	-0.6
-23	77.504	79.931	82.426	3.12%	-3.04%	0.6	-0.6
-22	73.779	76.052	78.387	3.07%	-2.99%	0.6	-0.6
-21	70.256	72.384	74.569	3.02%	-2.94%	0.6	-0.6
-20	66.922	68.915	70.961	2.97%	-2.89%	0.6	-0.6
-19	63.767	65.634	67.549	2.92%	-2.85%	0.6	-0.6
-18	60.779	62.529	64.323	2.87%	-2.80%	0.6	-0.6
-17	57.949	59.589	61.269	2.82%	-2.75%	0.6	-0.6
-16	55.268	56.804	58.377	2.77%	-2.70%	0.6	-0.6
-15	52.726	54.166	55.640	2.72%	-2.66%	0.6	-0.6
-14	50.315	51.665	53.046	2.67%	-2.61%	0.6	-0.6
-13	48.029	49.294	50.588	2.62%	-2.57%	0.6	-0.6
-12	45.860	47.046	48.258	2.58%	-2.52%	0.6	-0.6
-11	43.801	44.913	46.049	2.53%	-2.48%	0.6	-0.5
-10	41.846	42.889	43.953	2.48%	-2.43%	0.6	-0.5
-9	39.989	40.967	41.964	2.43%	-2.39%	0.5	-0.5
-8	38.225	39.142	40.077	2.39%	-2.34%	0.5	-0.5
-7	36.549	37.408	38.284	2.34%	-2.30%	0.5	-0.5
-6	34.955	35.761	36.582	2.30%	-2.25%	0.5	-0.5
-5	33.440	34.196	34.965	2.25%	-2.21%	0.5	-0.5
-4	31.998	32.707	33.428	2.20%	-2.17%	0.5	-0.5
-3	30.627	31.291	31.966	2.16%	-2.12%	0.5	-0.5
-2	29.322	29.945	30.578	2.11%	-2.08%	0.5	-0.5
-1	28.080	28.664	29.257	2.07%	-2.04%	0.5	-0.5
0	26.898	27.445	28.001	2.02%	-1.99%	0.5	-0.5
1	25.770	26.283	26.804	1.98%	-1.95%	0.5	-0.5
2	24.696	25.177	25.665	1.94%	-1.91%	0.5	-0.5
3	23.673	24.124	24.581	1.89%	-1.87%	0.5	-0.4
4	22.699	23.121	23.549	1.85%	-1.83%	0.4	-0.4
5	21.769	22.165	22.566	1.81%	-1.78%	0.4	-0.4
6	20.882	21.253	21.628	1.76%	-1.74%	0.4	-0.4
7	20.037	20.384	20.735	1.72%	-1.70%	0.4	-0.4
8	19.230	19.555	19.883	1.68%	-1.66%	0.4	-0.4
9	18.460	18.764	19.071	1.64%	-1.62%	0.4	-0.4
10	17.725	18.010	18.297	1.60%	-1.58%	0.4	-0.4

R = 10KΩ ± 1% (at 25°C)

B (25 / 85°C) = 3435K ± 1%

Technical Data

103F-JT-45-3435FA025 NTC Thermistor Specifications

Temperature °C	Minimum (KΩ)	Center (KΩ)	Maximum (KΩ)	Res. Tolerance (%)		Tolerance (°C)	
				ΔR	-ΔR	Max	Min
10	17.725	18.010	18.297	1.60%	-1.58%	0.4	-0.4
11	17.024	17.290	17.559	1.55%	-1.54%	0.4	-0.4
12	16.353	16.602	16.853	1.51%	-1.50%	0.4	-0.4
13	15.713	15.946	16.181	1.47%	-1.46%	0.4	-0.4
14	15.101	15.319	15.538	1.43%	-1.42%	0.4	-0.4
15	14.517	14.720	14.925	1.39%	-1.38%	0.4	-0.4
16	13.958	14.148	14.339	1.35%	-1.34%	0.3	-0.3
17	13.424	13.601	13.779	1.31%	-1.30%	0.3	-0.3
18	12.913	13.078	13.244	1.27%	-1.27%	0.3	-0.3
19	12.424	12.578	12.733	1.23%	-1.23%	0.3	-0.3
20	11.955	12.099	12.243	1.19%	-1.19%	0.3	-0.3
21	11.508	11.642	11.776	1.15%	-1.15%	0.3	-0.3
22	11.079	11.204	11.329	1.11%	-1.11%	0.3	-0.3
23	10.669	10.785	10.901	1.08%	-1.07%	0.3	-0.3
24	10.276	10.384	10.492	1.04%	-1.04%	0.3	-0.3
25	9.900	10.000	10.100	1.00%	-1.00%	0.3	-0.3
26	9.532	9.632	9.732	1.04%	-1.04%	0.3	-0.3
27	9.180	9.280	9.380	1.08%	-1.07%	0.3	-0.3
28	8.844	8.943	9.043	1.11%	-1.11%	0.3	-0.3
29	8.520	8.619	8.718	1.15%	-1.15%	0.3	-0.3
30	8.211	8.309	8.408	1.19%	-1.18%	0.3	-0.3
31	7.914	8.012	8.110	1.22%	-1.22%	0.3	-0.3
32	7.630	7.727	7.824	1.26%	-1.25%	0.4	-0.4
33	7.357	7.453	7.550	1.30%	-1.29%	0.4	-0.4
34	7.096	7.191	7.287	1.33%	-1.33%	0.4	-0.4
35	6.845	6.939	7.034	1.37%	-1.36%	0.4	-0.4
36	6.604	6.698	6.792	1.41%	-1.40%	0.4	-0.4
37	6.373	6.466	6.559	1.44%	-1.43%	0.4	-0.4
38	6.152	6.243	6.335	1.48%	-1.47%	0.4	-0.4
39	5.939	6.029	6.120	1.51%	-1.50%	0.4	-0.4
40	5.735	5.824	5.914	1.55%	-1.53%	0.5	-0.5
41	5.539	5.627	5.716	1.58%	-1.57%	0.5	-0.5
42	5.350	5.437	5.525	1.62%	-1.60%	0.5	-0.5
43	5.169	5.255	5.342	1.65%	-1.63%	0.5	-0.5
44	4.995	5.080	5.166	1.69%	-1.67%	0.5	-0.5
45	4.827	4.911	4.996	1.72%	-1.70%	0.5	-0.5
46	4.667	4.749	4.832	1.75%	-1.73%	0.5	-0.5
47	4.512	4.593	4.675	1.79%	-1.77%	0.5	-0.5
48	4.363	4.443	4.524	1.82%	-1.80%	0.6	-0.6
49	4.220	4.299	4.379	1.86%	-1.83%	0.6	-0.6
50	4.082	4.160	4.239	1.89%	-1.86%	0.6	-0.6
51	3.951	4.027	4.104	1.92%	-1.90%	0.6	-0.6
52	3.823	3.898	3.974	1.96%	-1.93%	0.6	-0.6
53	3.700	3.774	3.849	1.99%	-1.96%	0.6	-0.6
54	3.581	3.654	3.728	2.02%	-1.99%	0.6	-0.6
55	3.467	3.539	3.612	2.05%	-2.02%	0.7	-0.7
56	3.359	3.429	3.501	2.09%	-2.05%	0.7	-0.7
57	3.253	3.322	3.392	2.12%	-2.09%	0.7	-0.7
58	3.151	3.219	3.288	2.15%	-2.12%	0.7	-0.7
59	3.052	3.119	3.187	2.18%	-2.15%	0.7	-0.7
60	2.958	3.024	3.091	2.22%	-2.18%	0.7	-0.7

R = 10KΩ ± 1% (at 25°C)

B (25 / 85°C) = 3435K ± 1%

Technical Data

103F-JT-45-3435FA025 NTC Thermistor Specifications

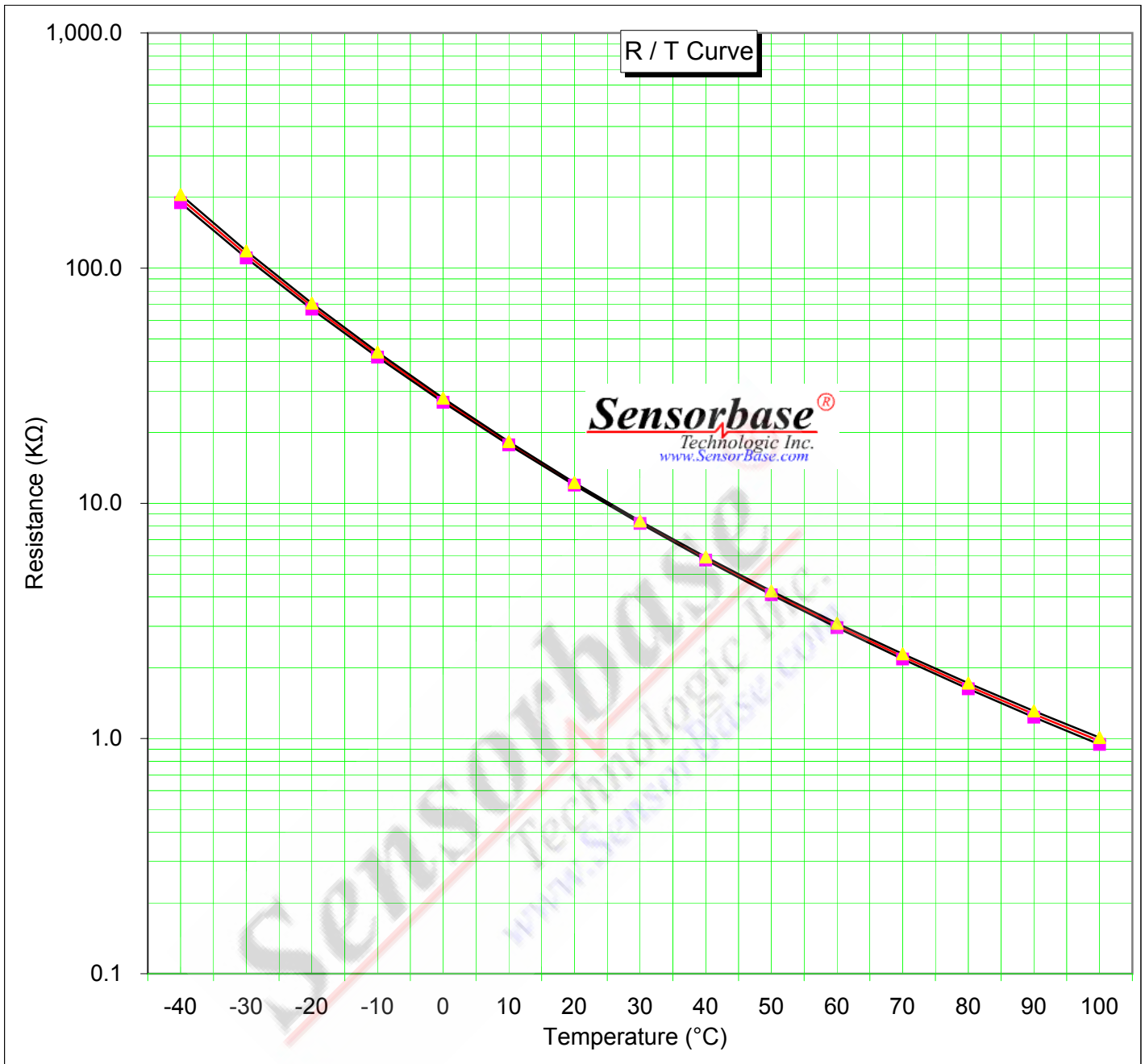
Temperature °C	Minimum (KΩ)	Center (KΩ)	Maximum (KΩ)	Res. Tolerance (%)		Tolerance (°C)	
				ΔR	-ΔR	Max	Min
60	2.958	3.024	3.091	2.22%	-2.18%	0.7	-0.7
61	2.866	2.931	2.997	2.25%	-2.21%	0.7	-0.7
62	2.778	2.842	2.907	2.28%	-2.24%	0.8	-0.7
63	2.694	2.756	2.820	2.31%	-2.27%	0.8	-0.8
64	2.612	2.673	2.736	2.34%	-2.30%	0.8	-0.8
65	2.533	2.593	2.655	2.37%	-2.33%	0.8	-0.8
66	2.457	2.516	2.576	2.40%	-2.36%	0.8	-0.8
67	2.383	2.441	2.500	2.43%	-2.39%	0.8	-0.8
68	2.312	2.369	2.427	2.47%	-2.42%	0.8	-0.8
69	2.244	2.300	2.357	2.50%	-2.44%	0.9	-0.8
70	2.178	2.233	2.289	2.53%	-2.47%	0.9	-0.8
71	2.114	2.168	2.223	2.56%	-2.50%	0.9	-0.9
72	2.052	2.105	2.159	2.59%	-2.53%	0.9	-0.9
73	1.992	2.044	2.097	2.62%	-2.56%	0.9	-0.9
74	1.935	1.986	2.039	2.65%	-2.59%	0.9	-0.9
75	1.879	1.929	1.981	2.68%	-2.62%	0.9	-0.9
76	1.824	1.874	1.925	2.71%	-2.64%	1.0	-0.9
77	1.772	1.821	1.871	2.73%	-2.67%	1.0	-1.0
78	1.722	1.770	1.819	2.76%	-2.70%	1.0	-1.0
79	1.673	1.720	1.768	2.79%	-2.73%	1.0	-1.0
80	1.627	1.673	1.720	2.82%	-2.75%	1.0	-1.0
81	1.581	1.626	1.672	2.85%	-2.78%	1.0	-1.0
82	1.537	1.581	1.627	2.88%	-2.81%	1.1	-1.0
83	1.494	1.538	1.583	2.91%	-2.84%	1.1	-1.0
84	1.453	1.496	1.540	2.94%	-2.86%	1.1	-1.0
85	1.413	1.455	1.498	2.97%	-2.89%	1.1	-1.1
86	1.375	1.416	1.458	2.99%	-2.92%	1.1	-1.1
87	1.336	1.377	1.419	3.02%	-2.94%	1.1	-1.1
88	1.300	1.340	1.381	3.05%	-2.97%	1.1	-1.1
89	1.265	1.304	1.344	3.08%	-3.00%	1.2	-1.1
90	1.232	1.270	1.309	3.11%	-3.02%	1.2	-1.1
91	1.198	1.236	1.275	3.13%	-3.05%	1.2	-1.2
92	1.167	1.204	1.242	3.16%	-3.07%	1.2	-1.2
93	1.136	1.172	1.209	3.19%	-3.10%	1.2	-1.2
94	1.105	1.141	1.178	3.22%	-3.13%	1.3	-1.2
95	1.077	1.112	1.148	3.24%	-3.15%	1.2	-1.2
96	1.049	1.083	1.118	3.27%	-3.18%	1.3	-1.2
97	1.021	1.055	1.090	3.30%	-3.20%	1.3	-1.3
98	0.995	1.028	1.062	3.32%	-3.23%	1.3	-1.3
99	0.969	1.002	1.036	3.35%	-3.25%	1.3	-1.3
100	0.944	0.976	1.009	3.38%	-3.28%	1.3	-1.3
101	0.920	0.951	0.983	3.40%	-3.30%	1.3	-1.3
102	0.896	0.927	0.959	3.43%	-3.33%	1.4	-1.3
103	0.874	0.904	0.935	3.46%	-3.35%	1.4	-1.4
104	0.852	0.882	0.913	3.48%	-3.37%	1.4	-1.4
105	0.831	0.860	0.890	3.51%	-3.40%	1.4	-1.4

R = 10KΩ ± 1% (at 25°C)
 B (25 / 85°C) = 3435K ± 1%

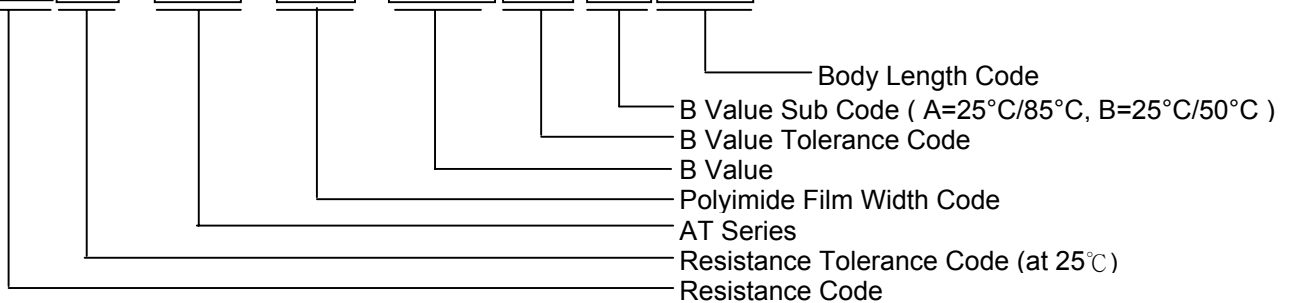
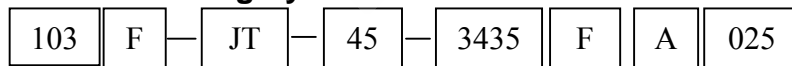
Technical Data

103F-JT-45-3435FA025 NTC Thermistor Specifications

7 R / T Curve



8 Part Numbering System



* All coding please see Coding page

R = 10KΩ ± 1% (at 25°C)

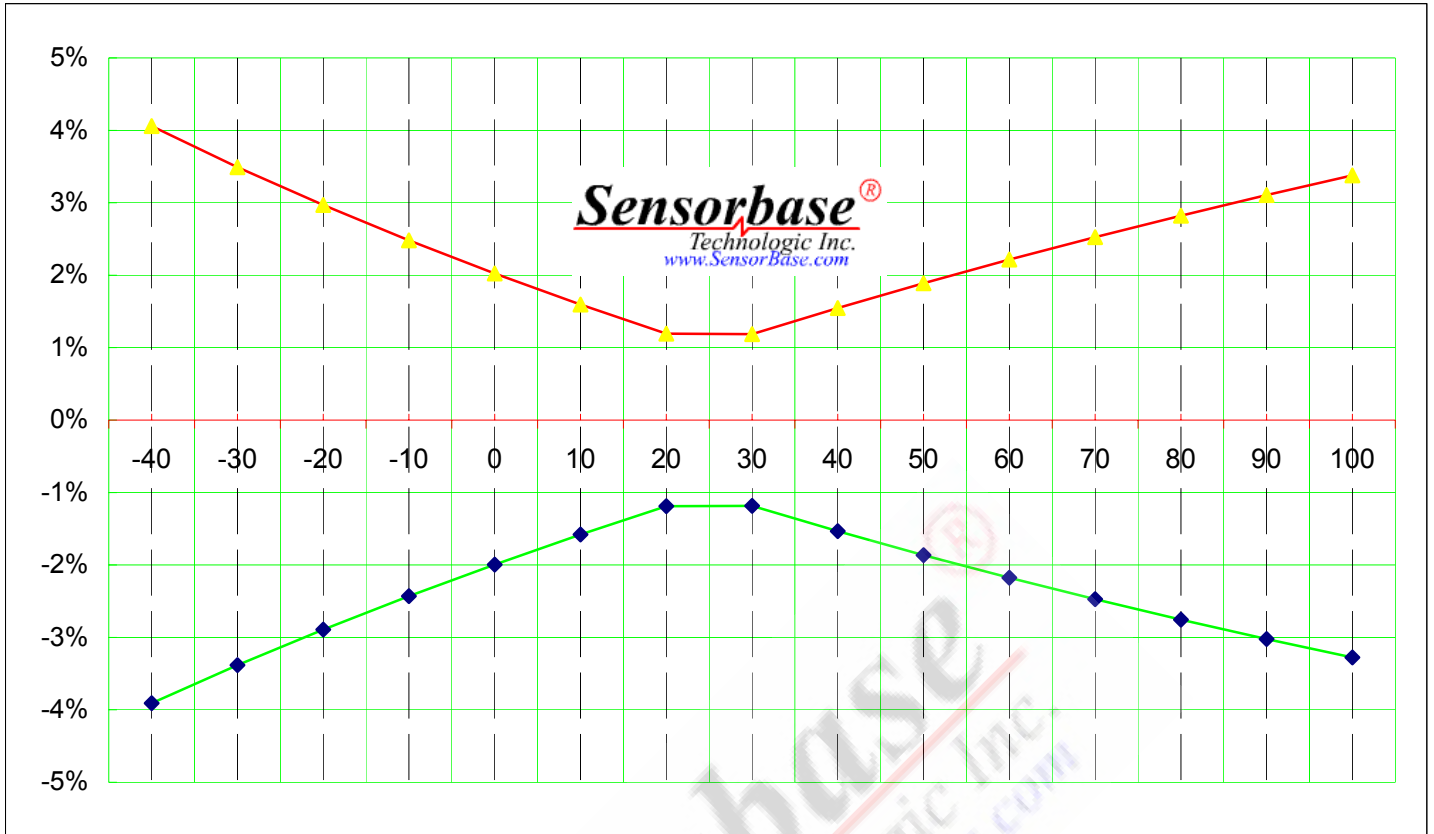
B (25 / 85°C) = 3435K ± 1%

Technical Data

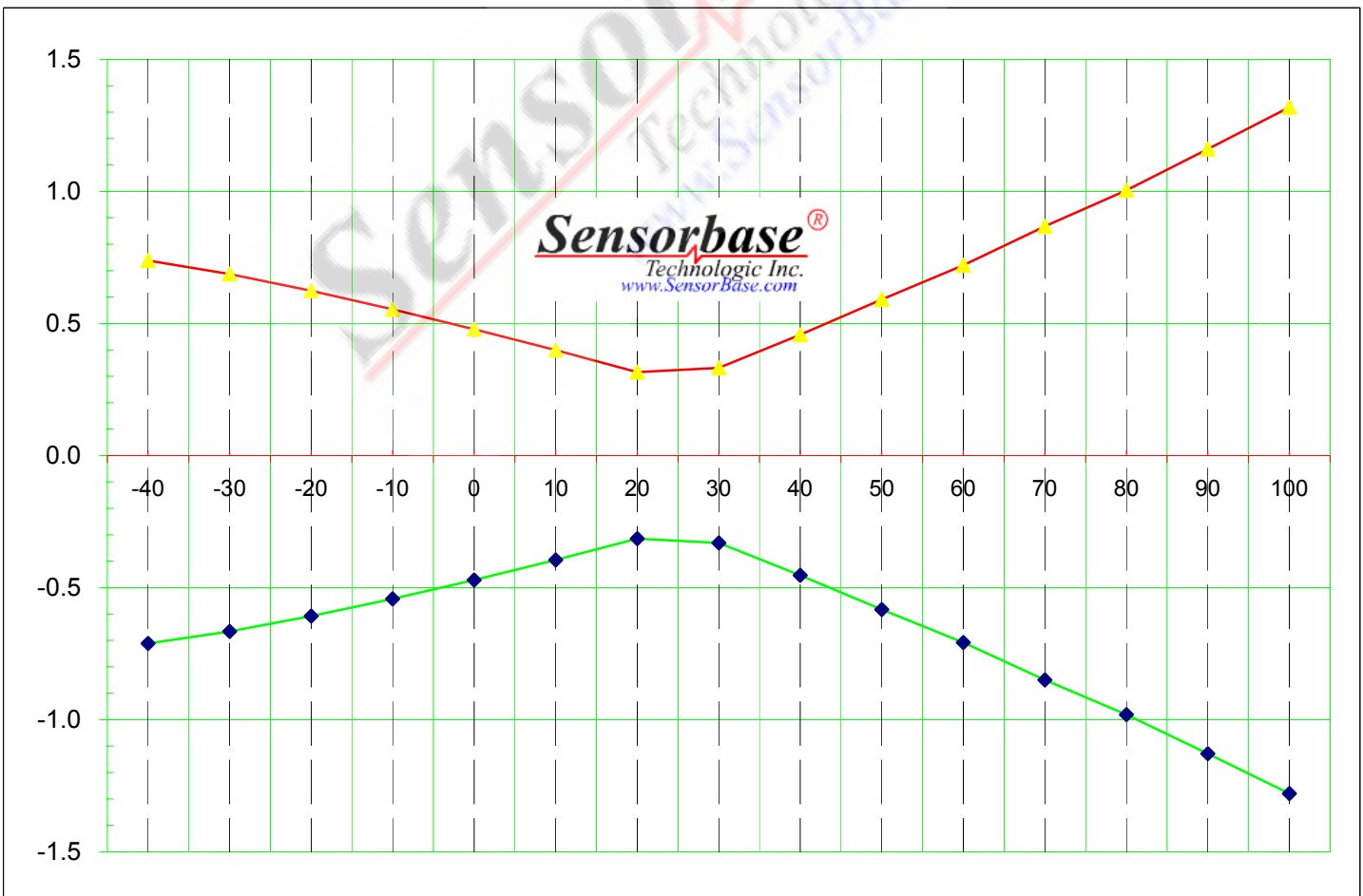
103F-JT-45-3435FA025

N T C Thermistor Specifications

9 Resistance Tolerance (%)



10 Temperature Tolerance (°C)



R = 10KΩ ± 1% (at 25°C)
B (25 / 85°C) = 3435K ± 1%

Sensorbase[®]
Technologic Inc.
www.SensorBase.com