



MEAS HD DO-35 SERIES THERMISTOR 10K BETA ^{25/85} 3977

- High Stability DO-35 Thermistor
- Highly Density (HD) electroceramic thermistor
- Hermetically sealed elements, glass encapsulation
- Axial Leads for PCB mounting
- High temperature devices for applications up to +300°C
- RoHS Compliant
- Copper clad steel (CCS Wire)

Features

- Hermetically sealed glass package
- Proven Stability at elevated temperatures
- High temperature capability to +300°C
- 24 AWG Nickel Plated CCS Wire
- Cost effective for high volume applications
- Temp range (Nickel plated) -40°C to +300 °C
- Temp range (Tinned) -40 °C to +200 °C

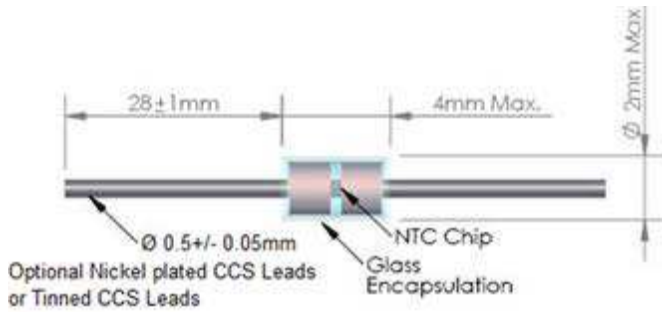
Applications

- HVAC and refrigeration probe assemblies
- High humidity due to glass protection
- Consumer electronics
- PCB temperature sensing
- Air conditioning

TE has recently developed new advanced ceramic processing techniques and proprietary formulations for the manufacture of high-stability electroceramic thermistor materials. These materials are now used in a select range of DO-35 thermistor sensor components. The newly developed high-density thermistor chip is hermetically sealed in a glass (DO-35 diode style) package to provide protection where high humidity is present and long-term performance is required.

MEAS NTC DO-35 THERMISTOR 10K BETA_{25/85} 3977

Dimensions



Electrical Specifications

PARAMETERS	UNITS	VALUE
Resistance @ +25°C	Ohms	10,000
Resistance tolerance @ +25°C	%	± 1
Beta Value 25/85	K	3977
Tolerance on Beta Value 25/85	%	± 1
Time response in liquid	Seconds	Approx.2
Dissipation Constant in still air	mW/°C	1.9
Operating Temperature (Nickel plated CCS Leads)	°C	-40 to +300
Operating Temperature (Tinned CCS Leads)	°C	-40 to +200
Max' Permissible Current (25°C, Still Air)	A max	0.25mA
Max' Power Rating (25°C, Still Air)	P max	110 mW

General Test

TEST ITEM	PERFORMANCE REQUIREMENTS	TEST CONDITION
A. Appearance	No Cracking	Visual examination
B. Dimension	Dimension tolerances	Caliper, Micrometer
C. Resistance (R25)	10K±1%	At zero power, 25°C
D. Beta Value	B25/85=3977K±1%	B = $\frac{\ln R25 - \ln R85}{1/298.15 - 1/358.15}$
		R25=Resistance at 25.0±0.1°C
		R85=Resistance at 85.0±0.1°C
E. Thermal time constant (τ)	Approx.2 sec	Measured in stirred water
F. Thermal Dissipation Constant (δ)	Approx.1.9m W/°C	Measured in still air, normal temp

Reliability

TEST ITEM	TEST METHODS	CRITERIA
A. Low temperature storage	After placing a thermistor in -40°C±3°C for 1000 hours, keep it in normal temperature and humidity for one hour.	$\Delta R/R \leq 2\%$ $\Delta B/B \leq 1\%$
B. High temperature storage	Tinned Version: After placing a thermistor in 200°C±3°C for 1000 hours, keep it in normal temperature and humidity for one hour.	$\Delta R/R \leq 2\%$ $\Delta B/B \leq 1\%$
	Nickel Plated Version: After placing a thermistor in 300°C±3°C for 1000 hours, keep it in normal temperature and humidity for one hour.	$\Delta R/R \leq 3\%$ $\Delta B/B \leq 2\%$
C. Thermal cycle test	After 100 cycles test under the conditions as shown below, keep the thermistor in normal temperature and humidity for one hour.	$\Delta R/R \leq 2\%$ $\Delta B/B \leq 1\%$
<p>The diagram illustrates the thermal cycle test waveform. It features three horizontal lines representing temperature levels: 80°C±3°C (in air) at the top, Normal temp (in air) in the middle, and -20°C±3°C (in air) at the bottom. The waveform shows a sequence of temperature steps: a 30-minute dwell at 80°C±3°C, a 15-minute dwell at Normal temp, a 30-minute dwell at -20°C±3°C, and a 15-minute dwell at Normal temp. This sequence is repeated for two cycles. Arrows at the bottom indicate the duration of each segment and the total duration of one and two cycles.</p>		
D. Humidity test	After placing a thermistor in 40°C±2°C, 90~95%RH, for 1000 hours, keep it in normal temperature and humidity for one hour.	$\Delta R/R \leq 2\%$ $\Delta B/B \leq 1\%$

Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
-40.0	319.727	337.479	356.182	-6.64
-39.0	299.519	315.888	333.119	-6.59
-38.0	280.716	295.815	311.695	-6.55
-37.0	263.212	277.144	291.783	-6.50
-36.0	246.910	259.768	273.268	-6.46
-35.0	231.719	243.590	256.044	-6.41
-34.0	217.557	228.520	240.012	-6.37
-33.0	204.349	214.476	225.083	-6.33
-32.0	192.024	201.382	211.174	-6.28
-31.0	180.518	189.167	198.211	-6.24
-30.0	169.772	177.768	186.122	-6.20
-29.0	159.731	167.125	174.844	-6.16
-28.0	150.345	157.184	164.318	-6.12
-27.0	141.567	147.895	154.489	-6.08
-26.0	133.355	139.210	145.307	-6.04
-25.0	125.668	131.087	136.726	-6.00
-24.0	118.471	123.487	128.703	-5.96
-23.0	111.728	116.373	121.198	-5.92
-22.0	105.409	109.710	114.175	-5.88
-21.0	99.485	103.469	107.601	-5.84
-20.0	93.929	97.619	101.443	-5.81
-19.0	88.715	92.134	95.674	-5.77
-18.0	83.822	86.989	90.267	-5.73
-17.0	79.226	82.161	85.197	-5.70
-16.0	74.910	77.630	80.440	-5.66
-15.0	70.853	73.374	75.977	-5.62
-14.0	67.039	69.376	71.787	-5.59
-13.0	63.453	65.619	67.852	-5.55
-12.0	60.078	62.086	64.155	-5.52
-11.0	56.903	58.764	60.680	-5.49
-10.0	53.913	55.638	57.413	-5.45
-9.0	51.097	52.697	54.341	-5.42

Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
-8.0	48.444	49.927	51.450	-5.39
-7.0	45.944	47.318	48.729	-5.35
-6.0	43.586	44.860	46.167	-5.32
-5.0	41.363	42.544	43.754	-5.29
-4.0	39.265	40.359	41.480	-5.26
-3.0	37.285	38.299	39.337	-5.23
-2.0	35.416	36.356	37.317	-5.20
-1.0	33.651	34.521	35.411	-5.17
0.0	31.983	32.790	33.613	-5.14
1.0	30.407	31.153	31.915	-5.10
2.0	28.917	29.609	30.313	-5.07
3.0	27.510	28.150	28.801	-5.04
4.0	26.179	26.771	27.374	-5.01
5.0	24.921	25.469	26.026	-4.97
6.0	23.731	24.237	24.752	-4.94
7.0	22.604	23.072	23.548	-4.91
8.0	21.538	21.970	22.409	-4.88
9.0	20.528	20.927	21.333	-4.85
10.0	19.571	19.940	20.314	-4.82
11.0	18.665	19.005	19.350	-4.79
12.0	17.806	18.120	18.437	-4.76
13.0	16.991	17.280	17.573	-4.73
14.0	16.218	16.485	16.754	-4.70
15.0	15.485	15.731	15.978	-4.67
16.0	14.790	15.015	15.242	-4.64
17.0	14.129	14.336	14.545	-4.61
18.0	13.502	13.692	13.883	-4.59
19.0	12.906	13.080	13.255	-4.56
20.0	12.340	12.499	12.660	-4.53
21.0	11.802	11.947	12.094	-4.50
22.0	11.290	11.423	11.556	-4.48
23.0	10.803	10.925	11.046	-4.45
24.0	10.341	10.451	10.561	-4.42
25.0	9.900	10.000	10.100	-4.40
26.0	9.470	9.571	9.672	-4.37

Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
27.0	9.062	9.163	9.265	-4.35
28.0	8.673	8.775	8.877	-4.32
29.0	8.303	8.405	8.508	-4.29
30.0	7.951	8.053	8.155	-4.27
31.0	7.615	7.717	7.820	-4.24
32.0	7.296	7.398	7.500	-4.22
33.0	6.992	7.093	7.195	-4.20
34.0	6.702	6.802	6.904	-4.17
35.0	6.426	6.525	6.626	-4.15
36.0	6.162	6.261	6.361	-4.12
37.0	5.911	6.009	6.108	-4.10
38.0	5.671	5.768	5.866	-4.08
39.0	5.443	5.538	5.635	-4.05
40.0	5.224	5.319	5.415	-4.03
41.0	5.016	5.109	5.204	-4.01
42.0	4.817	4.909	5.003	-3.99
43.0	4.627	4.718	4.810	-3.96
44.0	4.446	4.535	4.626	-3.94
45.0	4.272	4.360	4.450	-3.92
46.0	4.106	4.193	4.281	-3.90
47.0	3.948	4.033	4.120	-3.88
48.0	3.796	3.880	3.966	-3.86
49.0	3.651	3.734	3.818	-3.84
50.0	3.513	3.594	3.677	-3.81
51.0	3.380	3.460	3.541	-3.79
52.0	3.253	3.332	3.411	-3.77
53.0	3.132	3.209	3.287	-3.75
54.0	3.016	3.091	3.168	-3.73
55.0	2.904	2.978	3.054	-3.70
56.0	2.798	2.870	2.945	-3.68
57.0	2.696	2.767	2.840	-3.66
58.0	2.598	2.668	2.739	-3.64
59.0	2.504	2.573	2.643	-3.62
60.0	2.414	2.481	2.550	-3.60
61.0	2.328	2.394	2.461	-3.58

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TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
62.0	2.245	2.310	2.376	-3.56
63.0	2.166	2.229	2.294	-3.54
64.0	2.090	2.152	2.216	-3.52
65.0	2.017	2.078	2.140	-3.50
66.0	1.947	2.007	2.068	-3.48
67.0	1.880	1.938	1.998	-3.46
68.0	1.815	1.872	1.931	-3.44
69.0	1.753	1.809	1.867	-3.42
70.0	1.694	1.748	1.805	-3.41
71.0	1.636	1.690	1.745	-3.39
72.0	1.581	1.634	1.688	-3.37
73.0	1.528	1.580	1.633	-3.35
74.0	1.478	1.528	1.580	-3.33
75.0	1.429	1.478	1.529	-3.32
76.0	1.382	1.430	1.480	-3.30
77.0	1.336	1.384	1.433	-3.28
78.0	1.293	1.339	1.387	-3.26
79.0	1.251	1.296	1.343	-3.25
80.0	1.211	1.255	1.301	-3.23
81.0	1.172	1.215	1.260	-3.21
82.0	1.135	1.177	1.221	-3.19
83.0	1.099	1.140	1.183	-3.18
84.0	1.064	1.105	1.147	-3.16
85.0	1.030	1.070	1.112	-3.14
86.0	0.998	1.037	1.078	-3.13
87.0	0.967	1.005	1.045	-3.11
88.0	0.937	0.975	1.014	-3.10
89.0	0.908	0.945	0.983	-3.08
90.0	0.881	0.916	0.954	-3.06
91.0	0.854	0.889	0.925	-3.05
92.0	0.828	0.862	0.898	-3.03
93.0	0.803	0.837	0.872	-3.02
94.0	0.779	0.812	0.846	-3.00
95.0	0.756	0.788	0.821	-2.99
96.0	0.733	0.765	0.798	-2.97

Resistance vs. Temperature Table

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TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
97.0	0.711	0.742	0.775	-2.96
98.0	0.691	0.721	0.752	-2.94
99.0	0.670	0.700	0.731	-2.93
100.0	0.651	0.680	0.710	-2.95
101.0	0.632	0.660	0.690	-2.94
102.0	0.613	0.641	0.670	-2.92
103.0	0.595	0.623	0.651	-2.91
104.0	0.578	0.605	0.633	-2.89
105.0	0.562	0.588	0.615	-2.88
106.0	0.545	0.571	0.598	-2.86
107.0	0.530	0.555	0.581	-2.84
108.0	0.515	0.539	0.565	-2.83
109.0	0.500	0.524	0.550	-2.81
110.0	0.486	0.510	0.535	-2.80
111.0	0.473	0.496	0.520	-2.78
112.0	0.460	0.482	0.506	-2.77
113.0	0.447	0.469	0.492	-2.75
114.0	0.435	0.456	0.479	-2.74
115.0	0.423	0.444	0.466	-2.72
116.0	0.411	0.432	0.454	-2.71
117.0	0.400	0.421	0.442	-2.70
118.0	0.390	0.410	0.431	-2.68
119.0	0.379	0.399	0.419	-2.67
120.0	0.369	0.388	0.408	-2.65
121.0	0.359	0.378	0.398	-2.64
122.0	0.350	0.368	0.388	-2.63
123.0	0.341	0.359	0.378	-2.61
124.0	0.332	0.350	0.368	-2.60
125.0	0.323	0.341	0.359	-2.59
126.0	0.315	0.332	0.350	-2.57
127.0	0.307	0.324	0.341	-2.56
128.0	0.299	0.315	0.333	-2.55
129.0	0.291	0.307	0.324	-2.53
130.0	0.284	0.300	0.316	-2.52
131.0	0.277	0.292	0.309	-2.51

Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
132.0	0.270	0.285	0.301	-2.49
133.0	0.263	0.278	0.294	-2.48
134.0	0.257	0.271	0.287	-2.47
135.0	0.250	0.265	0.280	-2.46
136.0	0.244	0.258	0.273	-2.44
137.0	0.238	0.252	0.267	-2.43
138.0	0.233	0.246	0.260	-2.42
139.0	0.227	0.240	0.254	-2.41
140.0	0.221	0.234	0.248	-2.40
141.0	0.216	0.229	0.242	-2.38
142.0	0.211	0.224	0.237	-2.37
143.0	0.206	0.218	0.231	-2.36
144.0	0.201	0.213	0.226	-2.35
145.0	0.196	0.208	0.221	-2.34
146.0	0.192	0.203	0.216	-2.33
147.0	0.187	0.199	0.211	-2.31
148.0	0.183	0.194	0.206	-2.30
149.0	0.179	0.190	0.202	-2.29
150.0	0.175	0.186	0.197	-2.29
151.0	0.171	0.181	0.193	-2.28
152.0	0.167	0.177	0.188	-2.27
153.0	0.163	0.173	0.184	-2.26
154.0	0.159	0.169	0.180	-2.25
155.0	0.156	0.166	0.176	-2.24
156.0	0.152	0.162	0.172	-2.23
157.0	0.149	0.158	0.169	-2.22
158.0	0.146	0.155	0.165	-2.21
159.0	0.142	0.152	0.161	-2.20
160.0	0.139	0.148	0.158	-2.19
161.0	0.136	0.145	0.155	-2.18
162.0	0.133	0.142	0.151	-2.17
163.0	0.130	0.139	0.148	-2.16
164.0	0.128	0.136	0.145	-2.15
165.0	0.125	0.133	0.142	-2.14
166.0	0.122	0.130	0.139	-2.13

Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
167.0	0.120	0.128	0.136	-2.12
168.0	0.117	0.125	0.133	-2.11
169.0	0.115	0.122	0.131	-2.10
170.0	0.112	0.120	0.128	-2.09
171.0	0.110	0.117	0.125	-2.08
172.0	0.108	0.115	0.123	-2.07
173.0	0.105	0.113	0.120	-2.07
174.0	0.103	0.110	0.118	-2.06
175.0	0.101	0.108	0.115	-2.05
176.0	0.099	0.106	0.113	-2.04
177.0	0.097	0.104	0.111	-2.03
178.0	0.095	0.102	0.109	-2.02
179.0	0.093	0.100	0.107	-2.01
180.0	0.091	0.098	0.104	-2.00
181.0	0.089	0.096	0.102	-2.00
182.0	0.088	0.094	0.100	-1.99
183.0	0.086	0.092	0.098	-1.98
184.0	0.084	0.090	0.097	-1.97
185.0	0.082	0.088	0.095	-1.96
186.0	0.081	0.087	0.093	-1.95
187.0	0.079	0.085	0.091	-1.94
188.0	0.078	0.083	0.089	-1.94
189.0	0.076	0.082	0.088	-1.93
190.0	0.075	0.080	0.086	-1.92
191.0	0.073	0.079	0.084	-1.91
192.0	0.072	0.077	0.083	-1.90
193.0	0.071	0.076	0.081	-1.90
194.0	0.069	0.074	0.080	-1.89
195.0	0.068	0.073	0.078	-1.88
196.0	0.067	0.072	0.077	-1.87
197.0	0.065	0.070	0.076	-1.87
198.0	0.064	0.069	0.074	-1.86
199.0	0.063	0.068	0.073	-1.85
200.0	0.062	0.066	0.071	-1.84
201.0	0.061	0.065	0.070	-1.83

Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
202.0	0.060	0.064	0.069	-1.83
203.0	0.058	0.063	0.068	-1.82
204.0	0.057	0.062	0.066	-1.81
205.0	0.056	0.061	0.065	-1.80
206.0	0.055	0.060	0.064	-1.80
207.0	0.054	0.059	0.063	-1.79
208.0	0.053	0.057	0.062	-1.78
209.0	0.052	0.056	0.061	-1.78
210.0	0.051	0.055	0.060	-1.77
211.0	0.051	0.055	0.059	-1.76
212.0	0.050	0.054	0.058	-1.75
213.0	0.049	0.053	0.057	-1.75
214.0	0.048	0.052	0.056	-1.74
215.0	0.047	0.051	0.055	-1.73
216.0	0.046	0.050	0.054	-1.73
217.0	0.045	0.049	0.053	-1.72
218.0	0.045	0.048	0.052	-1.71
219.0	0.044	0.047	0.051	-1.70
220.0	0.043	0.047	0.050	-1.70
221.0	0.042	0.046	0.050	-1.69
222.0	0.042	0.045	0.049	-1.68
223.0	0.041	0.044	0.048	-1.68
224.0	0.040	0.044	0.047	-1.67
225.0	0.040	0.043	0.046	-1.66
226.0	0.039	0.042	0.046	-1.66
227.0	0.038	0.042	0.045	-1.65
228.0	0.038	0.041	0.044	-1.65
229.0	0.037	0.040	0.043	-1.64
230.0	0.036	0.040	0.043	-1.63
231.0	0.036	0.039	0.042	-1.63
232.0	0.035	0.038	0.041	-1.62
233.0	0.035	0.038	0.041	-1.61
234.0	0.034	0.037	0.040	-1.61
235.0	0.034	0.036	0.039	-1.60
236.0	0.033	0.036	0.039	-1.59
237.0	0.033	0.035	0.038	-1.59

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TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
238.0	0.032	0.035	0.038	-1.58
239.0	0.032	0.034	0.037	-1.58
240.0	0.031	0.034	0.037	-1.57
241.0	0.031	0.033	0.036	-1.56
242.0	0.030	0.033	0.035	-1.56
243.0	0.030	0.032	0.035	-1.55
244.0	0.029	0.032	0.034	-1.55
245.0	0.029	0.031	0.034	-1.54
246.0	0.028	0.031	0.033	-1.54
247.0	0.028	0.030	0.033	-1.53
248.0	0.027	0.030	0.032	-1.52
249.0	0.027	0.029	0.032	-1.52
250.0	0.027	0.029	0.031	-1.51
251.0	0.026	0.028	0.031	-1.51
252.0	0.026	0.028	0.030	-1.50
253.0	0.025	0.028	0.030	-1.50
254.0	0.025	0.027	0.030	-1.49
255.0	0.025	0.027	0.029	-1.48
256.0	0.024	0.026	0.029	-1.48
257.0	0.024	0.026	0.028	-1.47
258.0	0.024	0.026	0.028	-1.47
259.0	0.023	0.025	0.027	-1.46
260.0	0.023	0.025	0.027	-1.46
261.0	0.023	0.025	0.027	-1.45
262.0	0.022	0.024	0.026	-1.45
263.0	0.022	0.024	0.026	-1.44
264.0	0.022	0.023	0.026	-1.44
265.0	0.021	0.023	0.025	-1.43
266.0	0.021	0.023	0.025	-1.42
267.0	0.021	0.022	0.025	-1.42
268.0	0.020	0.022	0.024	-1.41
269.0	0.020	0.022	0.024	-1.41
270.0	0.020	0.022	0.024	-1.40
271.0	0.019	0.021	0.023	-1.40

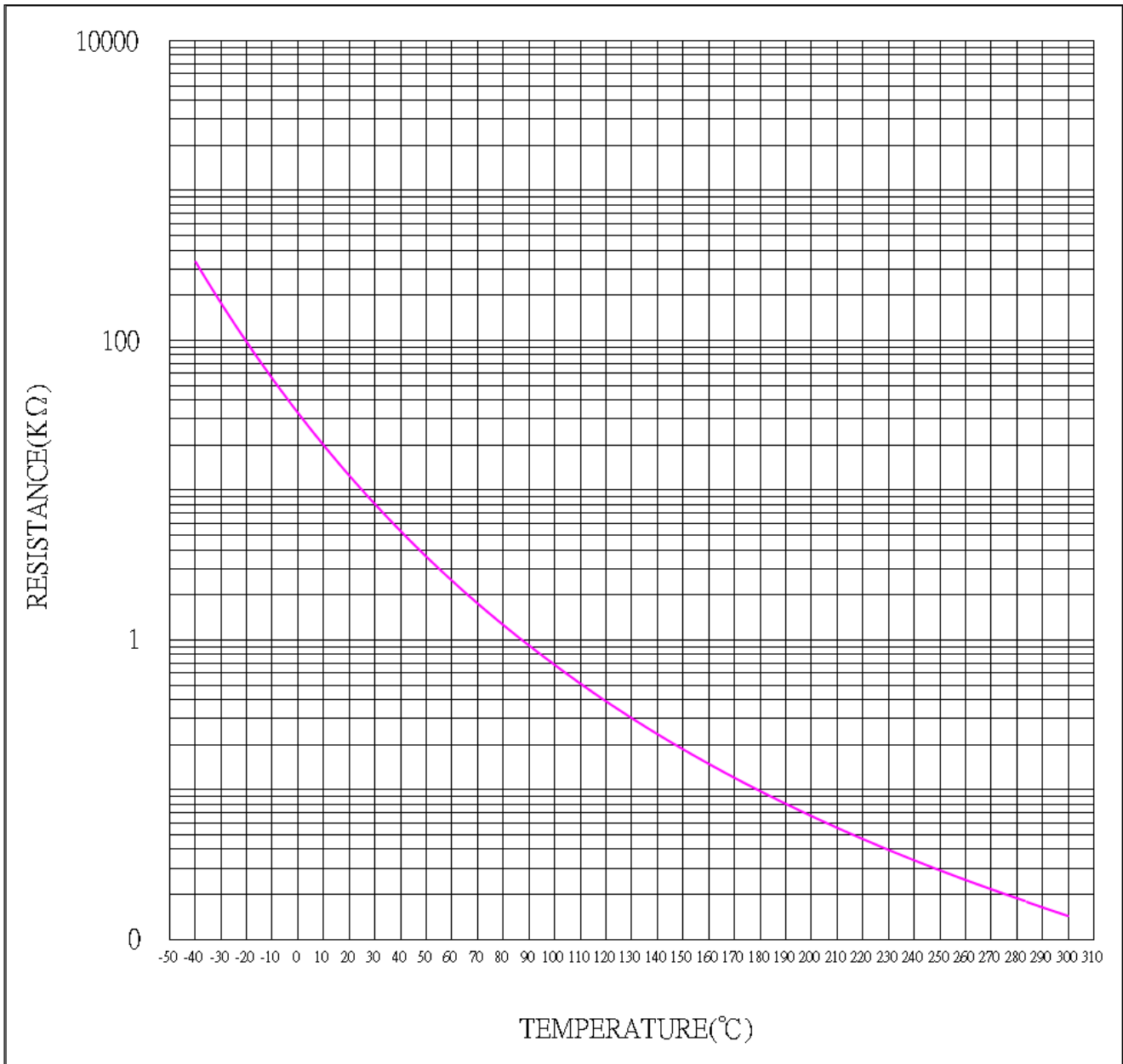
Resistance vs. Temperature Table

R25=10KΩ±1% B25/85=3977K±1%

TEMP. (°C)	MINIMUM (KΩ)	NOMINAL (KΩ)	MAXIMUM (KΩ)	ALPHA(%/°C)
272.0	0.019	0.021	0.023	-1.39
273.0	0.019	0.021	0.023	-1.39
274.0	0.019	0.020	0.022	-1.38
275.0	0.018	0.020	0.022	-1.38
276.0	0.018	0.020	0.022	-1.37
277.0	0.018	0.020	0.021	-1.37
278.0	0.018	0.019	0.021	-1.36
279.0	0.017	0.019	0.021	-1.36
280.0	0.017	0.019	0.021	-1.35
281.0	0.017	0.019	0.020	-1.35
282.0	0.017	0.018	0.020	-1.34
283.0	0.017	0.018	0.020	-1.34
284.0	0.016	0.018	0.019	-1.34
285.0	0.016	0.018	0.019	-1.33
286.0	0.016	0.017	0.019	-1.33
287.0	0.016	0.017	0.019	-1.32
288.0	0.015	0.017	0.018	-1.32
289.0	0.015	0.017	0.018	-1.31
290.0	0.015	0.016	0.018	-1.31
291.0	0.015	0.016	0.018	-1.30
292.0	0.015	0.016	0.018	-1.30
293.0	0.014	0.016	0.017	-1.29
294.0	0.014	0.016	0.017	-1.29
295.0	0.014	0.015	0.017	-1.28
296.0	0.014	0.015	0.017	-1.28
297.0	0.014	0.015	0.016	-1.28
298.0	0.014	0.015	0.016	-1.27
299.0	0.013	0.015	0.016	-1.27
300.0	0.013	0.014	0.016	-1.26

Resistance vs. Temperature Table

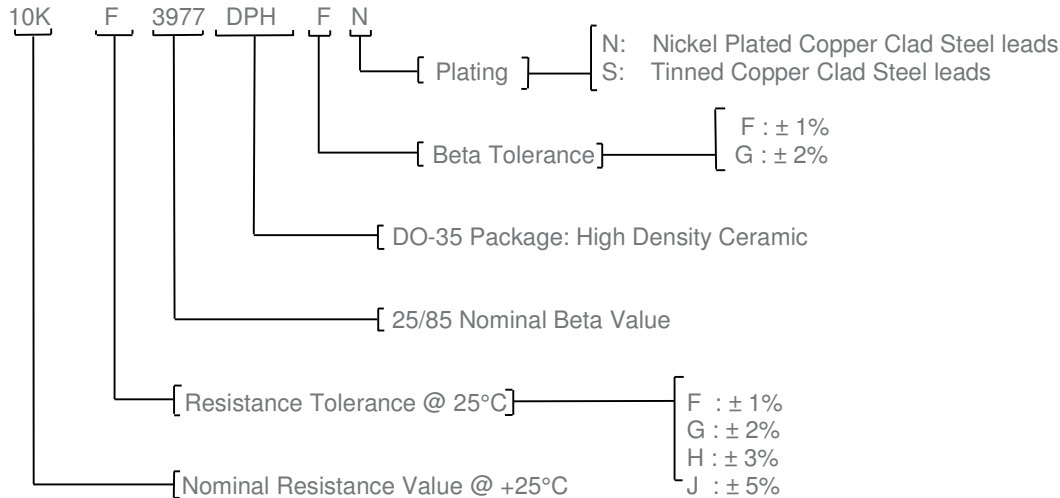
R₂₅=10KΩ±1% B_{25/85}=3977K±1%



MEAS NTC DO-35 THERMISTOR 10K BETA_{25/85} 3977

Ordering Information

PART NUMBER	DESCRIPTION	NOM. Ω @25°C	RES. TOLERANCE	PACKAGING
10KF3977DPHFN	DO-35 Series Thermistor (+300°C) [®] for Nickel version	10,000	± 1%	Bulk
10KF3977DPHFS	DO-35 Series Thermistor (+200°C) [®] for Tinned version	10,000	± 1%	Bulk



Other Resistance values available in this series

MEAS PART NUMBER	RESISTANCE [Ω] @ +25°C	TOLERANCE @ +25°C	BETA VALUE 25/85	BETA TOLERANCE	OPERATING TEMPERATURE
5KF3950DPHFN	5000	± 1%	3950	± 1%	-40 ^o to +300°C
5KF3950DPHFS	5000	± 1%	3950	± 1%	-40 ^o to +200°C
10KF3450DPHFN	10000	± 1%	3450	± 1%	-40 ^o to +300°C
10KF3450DPHFS	10000	± 1%	3450	± 1%	-40 ^o to +200°C
50KF4050DPHFN	50000	± 1%	4050	± 1%	-40 ^o to +300°C
50KF4050DPHFS	50000	± 1%	4050	± 1%	-40 ^o to +200°C

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