

# NTC DIODE THERMISTOR

GLASS SEALED TYPE SUPERIOR TO ANTI-ENVIRONMENTAL FEATURE



This thermistor is the type which the thermistor chip has been glass sealed in DHD type (double heat sink diode). Due to its particular feature, it is superior to anti-environmental character, which enjoying its high quality and high reliability.

**NTC - 10K G J G**  
① ② ③ ④ ⑤

- ① SYMBOL
- ② RESISTANCE AT 25 °C (10KG : 10k $\Omega$ )
- ③ GLASS DIODE TYPE
- ④ RESISTANCE TOLERANCE (J :  $\pm 5\%$ )
- ⑤ B TOLERANCE (G :  $\pm 2\%$ )

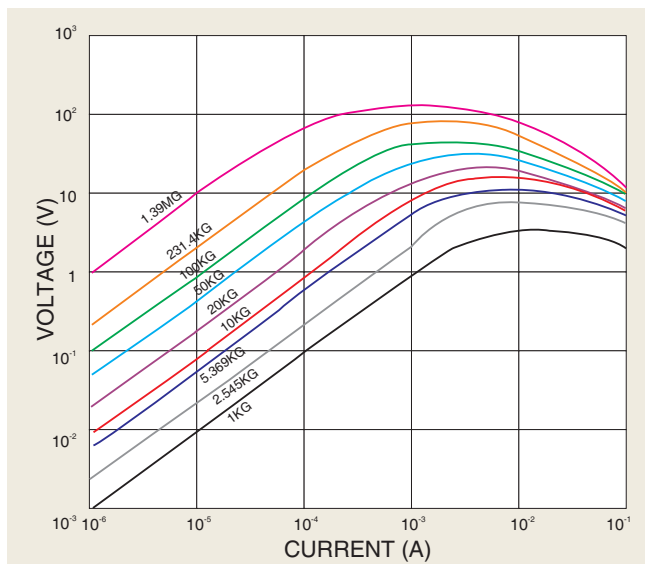
## FEATURES

- As being sealed into the glass, you may use them free from care under any bad environment of having oil vapor at high temperature.
- Due to its small size and light weight, automatic placement into the printed board could be easily made.
- Owing to its DHD construction, it carries mechanical strength.
- As the production line being mechanized, it enjoys high productivity. Therefore, you will be satisfied with the price, quality and delivery.

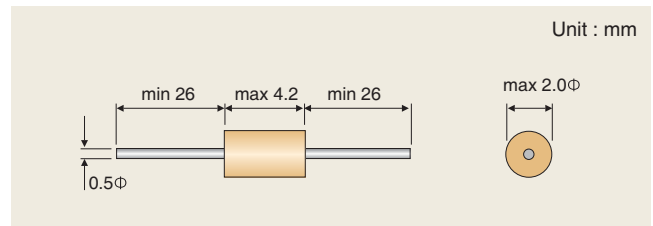
## APPLICATION

- Thermal sensor for household appliances such as rice-cooker, electronic range, oven, etc.
- Thermal sensor for industrial products such as medicines, chemicals, food, etc.

## I - V CHARACTERISTICS



## DIMENSION



## SPECIFICATIONS

Dissipation factor (in still air)	Time constant (in still air)	Operating temperature range	Maximum power rating at 25 °C
2.0 (mW/°C)	25 (sec)	-40 °C ~ 250 °C	25 (mW)

Part No.	Resistance (25 °C)	B constant (25/85 °C)	Max. Operating Current 25 °C	Maxi. Permissible Current 25 °C
NTC-1KGJG	1.0k $\Omega$	3420K	0.25mA	35.0mA
TNTC-2KGJG	2.0k $\Omega$	3420K	0.22mA	30.0mA
NTC-2.545KGJG	2.545k $\Omega$	3755K	0.22mA	30.0mA
NTC-3.896KGJG	3.896k $\Omega$	3482K	0.20mA	26.5mA
NTC-5.369KGJG	5.369k $\Omega$	3482K	0.16mA	24.0mA
NTC-10.74KGJG	10.74k $\Omega$	3482K	0.13mA	20.0mA
NTC-10KGJG(3727)	10.0k $\Omega$	3727K	0.14mA	20.0mA
NTC-10KGJG(3976)	10.0k $\Omega$	3976K	0.14mA	20.0mA
NTC-20KGJG	20.0k $\Omega$	3991K	0.10mA	15.0mA
NTC-49.12KGJG	49.12k $\Omega$	3991K	0.06mA	10.0mA
NTC-50KGJG	50.0k $\Omega$	3991K	0.06mA	10.0mA
NTC-98.63KGJG	98.63k $\Omega$	4065K	0.045mA	5.0mA
NTC-100KGJG	100.0k $\Omega$	4065K	0.045mA	5.0mA
NTC-231.4KGJG	231.4k $\Omega$	4240K	0.015mA	3.5mA
NTC-1MGJG	1.0M $\Omega$	4550K	0.007mA	1.5mA
NTC-1.39MGJG	1.39M $\Omega$	4550K	0.005mA	1.0mA

\* Resistance tolerance is = 5% for standard device.

\* B constant tolerance is = 2% for standard device.

The B constant is determined by the equation :

$$B = 1779.71 \ln(R_{25}/R_{85})$$

R<sub>25</sub> and R<sub>85</sub> represent the thermistor resistance at 25 °C and 85 °C respectively.

\* Others : Subject to consultation.

## RESISTANCE RATIO [R/R25℃] - TEMPERATURE

B constant (25/85℃)	3420K	3482K	3727K	3755K	3976K	3991K	4065K	3509K	4240K	4550K
-40	19.184	20.983	27.550	28.828	34.268	35.642	36.810	20.245	41.111	56.395
-35	15.037	15.812	20.170	21.085	24.593	25.441	26.229	15.380	29.050	38.600
-30	11.511	12.032	14.937	15.587	17.864	18.391	18.925	11.782	20.785	26.793
-25	8.8892	9.2410	11.182	11.640	13.125	13.454	13.816	9.0985	15.045	18.844
-20	6.9218	7.1598	8.4574	8.7770	9.7480	9.9525	10.198	7.0803	11.012	13.419
-15	5.4327	5.5935	6.4584	6.6790	7.3136	7.4409	7.6069	5.5506	8.1446	9.6686
-10	4.2962	4.4043	4.9772	5.1273	5.5403	5.6191	5.7306	4.3823	6.0834	7.0439
-5	3.4221	3.4940	3.8689	3.9692	4.2355	4.2837	4.3576	3.4836	4.5856	5.1857
0	2.7446	2.7916	3.0321	3.0974	3.2661	3.2951	3.3431	2.7874	3.4888	3.8558
5	2.2158	2.2456	2.3949	2.4357	2.5394	2.5563	2.5865	2.2444	2.6762	2.8941
10	1.8002	1.8180	1.9056	1.9296	1.9900	1.9992	2.0172	1.8182	2.0693	2.1917
15	1.4714	1.4810	1.5270	1.5395	1.5710	1.5756	1.5851	1.4815	1.6123	1.6739
20	1.2097	1.2135	1.2318	1.2367	1.2492	1.2509	1.2547	1.2139	1.2654	1.2888
25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
30	0.83109	0.82850	0.81689	0.81374	0.80574	0.80447	0.80226	0.82808	0.79550	0.78159
35	0.69426	0.68997	0.67106	0.66624	0.65325	0.65178	0.64767	0.68914	0.63683	0.61517
40	0.49157	0.48561	0.46044	0.45450	0.43699	0.43523	0.42966	0.48412	0.41546	0.38868
50	0.41651	0.41024	0.38449	0.37857	0.36038	0.35867	0.35288	0.40853	0.33841	0.31183
55	0.35445	0.34811	0.32243	0.31702	0.29876	0.29715	0.29136	0.34622	0.27711	0.25164
60	0.30292	0.29664	0.27177	0.26686	0.24893	0.24744	0.24177	0.29462	0.22808	0.20421
65	0.25993	0.25382	0.23015	0.22578	0.20841	0.20705	0.20160	0.25172	0.18864	0.16661
70	0.22392	0.21804	0.19569	0.19197	0.17530	0.17407	0.16889	0.21590	0.15676	0.13663
75	0.19363	0.18802	0.16706	0.16400	0.14811	0.14700	0.14210	0.18586	0.13085	0.11260
80	0.16805	0.16274	0.14323	0.14077	0.12568	0.12468	0.12009	0.16058	0.10971	0.093241
85	0.14636	0.14136	0.12321	0.12137	0.10709	0.10619	0.10190	0.13922	0.092363	0.077562
90	0.12791	0.12321	0.10648	0.10512	0.091621	0.090802	0.086814	0.12110	0.078077	0.064803
95	0.11215	0.10775	0.092234	0.091433	0.078689	0.077947	0.074244	0.10569	0.066259	0.054373
100	0.098642	0.094542	0.080227	0.079868	0.067835	0.067161	0.063729	0.092520	0.056442	0.045807
105	0.087030	0.083212	0.070016	0.070055	0.058691	0.058076	0.054899	0.081240	0.048255	0.038743
110	0.077013	0.073465	0.061301	0.061697	0.050958	0.050395	0.047455	0.071543	0.041401	0.032892
115	0.068346	0.065053	0.053839	0.054552	0.044395	0.043876	0.041157	0.063182	0.035642	0.028028
120	0.060823	0.057771	0.047428	0.048422	0.038804	0.038325	0.035810	0.055951	0.030785	0.023967
125	0.054274	0.051449	0.041902	0.043144	0.034026	0.033581	0.031254	0.049679	0.026675	0.020565
130	0.048557	0.045944	0.037125	0.038586	0.029929	0.029513	0.027361	0.044224	0.023186	0.017704
135	0.043553	0.041138	0.032983	0.034636	0.026405	0.026015	0.024022	0.039465	0.020213	0.015289
140	0.039160	0.036931	0.029381	0.031202	0.023364	0.022997	0.021151	0.035304	0.017673	0.013245
145	0.035295	0.033238	0.026240	0.028208	0.020732	0.020385	0.018673	0.031655	0.015497	0.011509
150	0.031885	0.029989	0.023494	0.025590	0.018447	0.018118	0.016530	0.028447	0.013625	0.010029
155	0.028869	0.027123	0.021086	0.023295	0.016459	0.016145	0.014671	0.025621	0.012012	0.0087646
160	0.026195	0.024589	0.018970	0.021276	0.014723	0.014423	0.013053	0.023125	0.010617	0.0076802
165	0.023820	0.022343	0.017105	0.019498	0.013204	0.012916	0.011642	0.020915	0.0094083	0.0067479
170	0.021705	0.020348	0.015459	0.017926	0.011871	0.011595	0.010409	0.018954	0.0083576	0.0059441
175	0.019818	0.018573	0.014001	0.016534	0.010699	0.010432	0.0093270	0.017210	0.0074420	0.0052491
180	0.018130	0.016989	0.012708	0.015298	0.0096652	0.0094078	0.0083766	0.015657	0.0066423	0.0046466
185	0.016618	0.015573	0.011558	0.014200	0.0087516	0.0085024	0.0075394	0.014270	0.0059420	0.0041231
190	0.015260	0.014305	0.010533	0.013220	0.0079423	0.0077006	0.0068003	0.013029	0.0053275	0.0036670
195	0.014039	0.013167	0.0096186	0.012346	0.0072237	0.0069890	0.0061464	0.011916	0.0047868	0.0032686
200	0.012938	0.012144	0.0088000	0.011564	0.0065844	0.0063559	0.0055667	0.010917	0.0043102	0.0029199
205						0.0057917	0.0050515	0.010018	0.0038891	0.0026139
210						0.0052878	0.0045928	0.0092079	0.0035162	0.0023448
215						0.0048367	0.0041836	0.0084763	0.0031854	0.0021077
220						0.0044323	0.0038179	0.0078146	0.0028913	0.0018983
225						0.0040690	0.0034904	0.0072152	0.0026293	0.0017130
230						0.0037421	0.0031966	0.0066712	0.0023956	0.0015487
235						0.0034473	0.0029325	0.0061769	0.0021865	0.0014027
240						0.0031811	0.0026947	0.0057270	0.0019993	0.0012728
245						0.0029403	0.0024803	0.0053168	0.0018313	0.0011569
250						0.0027220	0.0022866	0.0049424	0.0016803	0.0010534
R(25℃)	1.0 kΩ 2.0 kΩ	3.896 kΩ 5.369 kΩ 10.74 kΩ	10.0 kΩ	2.545 kΩ	10.0 kΩ	20.0 kΩ 49.12 kΩ 50.0 kΩ	98.63 kΩ 100.0 kΩ	200.0 kΩ	231.4 kΩ	1000 kΩ 1388 kΩ