

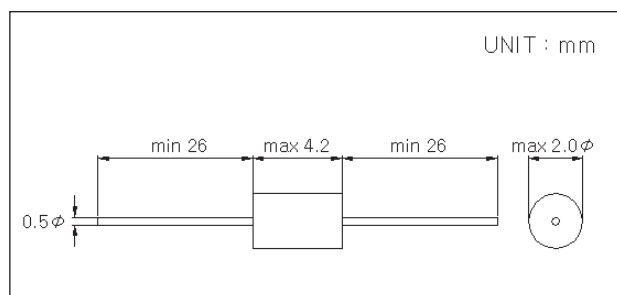


DIODE TYPE THERMISTOR

GLASS ENCAPSULATED RADIAL LEAD THERMISTOR

This product is a thermistor chip that has been glass sealed in DHD type (double heat sink diode package). This construction results in a high reliability durable product.

DIMENSIONS



FEATURES

- Suitable for hostile environments
- Low cost automated manufacturing
- Reel tape available
- Rugged

APPLICATION

Temperature sensing for household appliances such as rice cookers, electronic ranges, ovens, etc.

Temperature sensing for industrial products such as pharmaceuticals, chemicals, food, etc.

SPECIFICATIONS

Part Number	Resistance (25Ω)	β constant (25/50)	Recommended Max. Operating Current at 25°C	Maximum Permissible Current at 25°C
TH220J33G	2.0 K	3375 K	0.22mA	30.0mA
TH225J13G	2.545 K	3745 K	0.22mA	30.0mA
TH238J34G	3.896 K	3434 K	0.20mA	26.5mA
TH253J34G	5.369 K	3434 K	0.16mA	24.0mA
TH310J34G	10.74 K	3434 K	0.13mA	20.0mA
TH310J36G	10.0 K	3684 K	0.14mA	20.0mA
TH310J39G	10.0 K	3933 K	0.14mA	20.0mA
TH315J39G	15.0 K	3933 K	0.12mA	17.0mA
TH320J39G	20.0 K	3952 K	0.10mA	15.0mA
TH349J39G	49.12 K	3952 K	0.06mA	10.0mA
TH350J39G	50.0 K	3952 K	0.06mA	10.0mA
TH398J40G	98.63 K	4014 K	0.045mA	5.0mA
TH410J40G	100.0 K	4014 K	0.045mA	5.0mA
TH420J34G	200.0 K	3450 K	0.015mA	3.5mA
TH423J41G	231.4 K	4176 K	0.015mA	3.5mA
TH510J44G	1,000 K	4491 K	0.007mA	1.5mA
TH513J44G	1,388 K	4491 K	0.005mA	1.0mA

- The tolerance of resistance is $\pm 5\%$ for standard device.
- The tolerance of B constant is $\pm 2\%$ for standard device.
The constant is determined by the equation:
 $B = 3853.9 \ln (R_{25}/R_{50})$
R25 and R50 represent the thermistor resistance at 25Ω and 50Ω respectively.
- Others: For non-standard devices consult Thermometrics Global Business.

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





DIODE TYPE THERMISTOR

RESISTANCE RATIO [R/R25°C] – TEMPERATURE

B constant (25/50°C)	3375K	3434K	3684K	3745K	3933K	3952K	4014K	3450K	4176K	4491K
-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	4.5865	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 °C)	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

