

TEWA TEMPERATURE SENSORS

HIGH PRECISION NTC THERMISTORS AND TEMPERATURE SENSORS

Specification of Glass NTC Thermistor

PART NUMBER: **TT2-30KC5-3**

No. of pages: 4

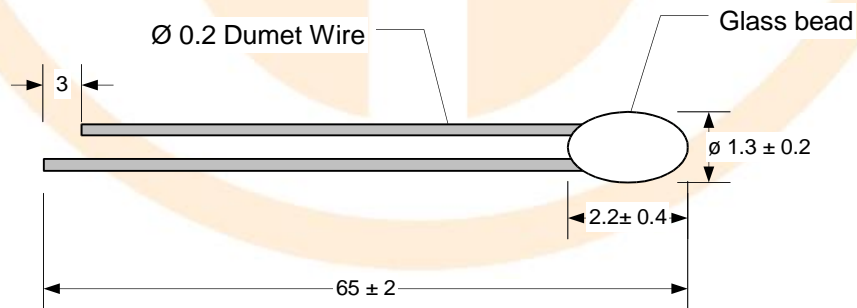
Date: **24.09.2015**

Revision: **00**

FEATURES:

Sensing Element	Glass NTC Thermistor
No-load resistance at 25°C	30 000 Ω
Tolerances at 25°C	± 1%
Beta(25/85) Constant	3990K ± 1%
Operating temperature range	-40°C ÷ 300°C
Dissipation constant	0.7~1.2mW/°C (min, in air)
Thermal time constant	3.5~6.5sec (max, in still air)
RoHS Compatible	YES

DRAWING:



UNITS: [mm]

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R/T CHARACTERISTIC:

T(°C)	Rmin(kΩ)	Rcent(kΩ)	Rmax(kΩ)	DR(%)	DT(°C)	T(°C)	Rmin(kΩ)	Rcent(kΩ)	Rmax(kΩ)	DR(%)	DT(°C)
-40	886.5	926.7	968.6	4.52%	0.67	21	35.355	35.775	36.196	1.18%	0.26
-39	831.6	868.8	907.5	4.46%	0.67	22	33.835	34.222	34.610	1.13%	0.26
-38	780.58	814.9	850.7	4.39%	0.66	23	32.389	32.745	33.101	1.09%	0.25
-37	733.00	764.77	797.84	4.32%	0.66	24	31.012	31.339	31.666	1.04%	0.24
-36	688.65	718.05	748.63	4.26%	0.65	25	29.700	30.000	30.300	1.00%	0.23
-35	647.29	674.50	702.78	4.19%	0.65	26	28.426	28.725	29.025	1.04%	0.24
-34	608.69	633.88	660.05	4.13%	0.64	27	27.212	27.511	27.810	1.09%	0.25
-33	572.65	595.98	620.21	4.06%	0.64	28	26.057	26.354	26.652	1.13%	0.26
-32	538.98	560.60	583.03	4.00%	0.63	29	24.956	25.252	25.548	1.17%	0.28
-31	507.51	527.55	548.32	3.94%	0.62	30	23.907	24.201	24.495	1.22%	0.29
-30	478.08	496.65	515.90	3.87%	0.62	31	22.908	23.199	23.491	1.26%	0.30
-29	450.54	467.77	485.60	3.81%	0.61	32	21.955	22.243	22.533	1.30%	0.31
-28	424.77	440.75	457.28	3.75%	0.61	33	21.047	21.332	21.619	1.34%	0.32
-27	400.63	415.45	430.78	3.69%	0.60	34	20.181	20.463	20.747	1.39%	0.34
-26	378.01	391.77	405.98	3.63%	0.60	35	19.354	19.633	19.914	1.43%	0.35
-25	356.81	369.58	382.77	3.57%	0.59	36	18.566	18.841	19.118	1.47%	0.36
-24	336.92	348.78	361.02	3.51%	0.59	37	17.814	18.085	18.359	1.51%	0.37
-23	318.27	329.28	340.63	3.45%	0.58	38	17.096	17.363	17.633	1.55%	0.39
-22	300.76	310.98	321.52	3.39%	0.57	39	16.410	16.674	16.940	1.59%	0.40
-21	284.31	293.81	303.60	3.33%	0.57	40	15.756	16.015	16.277	1.64%	0.41
-20	268.86	277.69	286.78	3.27%	0.56	41	15.130	15.385	15.643	1.68%	0.42
-19	254.34	262.55	270.99	3.21%	0.56	42	14.533	14.784	15.038	1.72%	0.44
-18	240.69	248.32	256.16	3.16%	0.55	43	13.962	14.209	14.458	1.76%	0.45
-17	227.85	234.94	242.22	3.10%	0.54	44	13.416	13.659	13.904	1.80%	0.46
-16	215.77	222.36	229.13	3.04%	0.54	45	12.895	13.133	13.374	1.84%	0.47
-15	204.40	210.53	216.81	2.99%	0.53	46	12.396	12.630	12.867	1.88%	0.49
-14	193.69	199.39	205.23	2.93%	0.52	47	11.919	12.148	12.381	1.92%	0.50
-13	183.60	188.90	194.33	2.88%	0.52	48	11.462	11.688	11.917	1.96%	0.51
-12	174.09	179.02	184.07	2.82%	0.51	49	11.026	11.247	11.471	2.00%	0.53
-11	165.13	169.72	174.41	2.77%	0.51	50	10.608	10.825	11.045	2.03%	0.54
-10	156.68	160.94	165.31	2.71%	0.50	51	10.208	10.421	10.637	2.07%	0.55
-9	148.71	152.67	156.73	2.66%	0.49	52	9.825	10.034	10.246	2.11%	0.57
-8	141.18	144.87	148.65	2.60%	0.49	53	9.458	9.663	9.871	2.15%	0.58
-7	134.08	137.51	141.02	2.55%	0.48	54	9.107	9.308	9.511	2.19%	0.60
-6	127.38	130.57	133.83	2.50%	0.47	55	8.771	8.967	9.167	2.23%	0.61
-5	121.04	124.01	127.04	2.44%	0.46	56	8.448	8.641	8.836	2.27%	0.62
-4	115.05	117.82	120.63	2.39%	0.46	57	8.139	8.328	8.519	2.30%	0.64
-3	109.40	111.97	114.58	2.34%	0.45	58	7.843	8.028	8.216	2.34%	0.65
-2	104.05	106.44	108.87	2.29%	0.44	59	7.559	7.740	7.924	2.38%	0.66
-1	98.99	101.21	103.47	2.24%	0.44	60	7.287	7.464	7.644	2.41%	0.68
0	94.20	96.26	98.37	2.18%	0.43	61	7.026	7.199	7.375	2.45%	0.69
1	89.67	91.59	93.54	2.13%	0.42	62	6.775	6.945	7.117	2.49%	0.71
2	85.38	87.16	88.98	2.08%	0.41	63	6.535	6.701	6.870	2.53%	0.72
3	81.32	82.98	84.66	2.03%	0.41	64	6.304	6.466	6.632	2.56%	0.74
4	77.47	79.01	80.58	1.98%	0.40	65	6.083	6.241	6.404	2.60%	0.75
5	73.82	75.26	76.71	1.93%	0.39	66	5.870	6.025	6.184	2.63%	0.77
6	70.37	71.70	73.05	1.88%	0.38	67	5.666	5.818	5.973	2.67%	0.78
7	67.09	68.33	69.58	1.83%	0.38	68	5.470	5.619	5.771	2.71%	0.79
8	63.99	65.13	66.30	1.79%	0.37	69	5.282	5.427	5.576	2.74%	0.81
9	61.04	62.11	63.18	1.74%	0.36	70	5.101	5.243	5.388	2.78%	0.82
10	58.243	59.233	60.234	1.69%	0.35	71	4.927	5.066	5.208	2.81%	0.84
11	55.590	56.508	57.435	1.64%	0.35	72	4.760	4.896	5.035	2.85%	0.85
12	53.071	53.922	54.781	1.59%	0.34	73	4.599	4.732	4.868	2.88%	0.87
13	50.679	51.468	52.264	1.55%	0.33	74	4.444	4.575	4.708	2.92%	0.89
14	48.406	49.137	49.874	1.50%	0.32	75	4.2959	4.423	4.554	2.95%	0.90
15	46.248	46.924	47.606	1.45%	0.31	76	4.1530	4.2774	4.405	2.99%	0.92
16	44.196	44.822	45.453	1.41%	0.31	77	4.0155	4.1372	4.2622	3.02%	0.93
17	42.246	42.825	43.408	1.36%	0.30	78	3.8832	4.0023	4.1246	3.06%	0.95
18	40.392	40.927	41.465	1.31%	0.29	79	3.7560	3.8724	3.9920	3.09%	0.96
19	38.629	39.123	39.619	1.27%	0.28	80	3.6334	3.7473	3.8643	3.12%	0.98
20	36.951	37.407	37.864	1.22%	0.27						

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81	3.5155	3.6268	3.7413	3.16%	0.99	141	0.6298	0.6610	0.6935	4.9%	2.08
82	3.4019	3.5108	3.6228	3.19%	1.01	142	0.6144	0.6449	0.6768	5.0%	2.10
83	3.2925	3.3990	3.5086	3.22%	1.03	143	0.5994	0.6293	0.6606	5.0%	2.12
84	3.1872	3.2913	3.3985	3.26%	1.04	144	0.5848	0.6141	0.6448	5.0%	2.14
85	3.0857	3.1876	3.2924	3.29%	1.06	145	0.5706	0.5994	0.6295	5.0%	2.16
86	2.9879	3.0875	3.1901	3.32%	1.07	146	0.5568	0.5850	0.6146	5.1%	2.18
87	2.8937	2.9911	3.0915	3.36%	1.09	147	0.5434	0.5711	0.6001	5.1%	2.21
88	2.8029	2.8982	2.9964	3.39%	1.11	148	0.5304	0.5576	0.5861	5.1%	2.23
89	2.7153	2.8085	2.9046	3.42%	1.12	149	0.5178	0.5444	0.5724	5.1%	2.25
90	2.6309	2.7221	2.8161	3.45%	1.14	150	0.5055	0.5316	0.5591	5.2%	2.27
91	2.5495	2.6387	2.7306	3.49%	1.16	151	0.4936	0.5192	0.5461	5.2%	2.29
92	2.4710	2.5582	2.6482	3.52%	1.17	152	0.4820	0.5071	0.5335	5.2%	2.31
93	2.3953	2.4806	2.5686	3.55%	1.19	153	0.4707	0.4954	0.5213	5.2%	2.33
94	2.3222	2.4056	2.4918	3.58%	1.21	154	0.4597	0.4839	0.5094	5.3%	2.35
95	2.2517	2.3333	2.4176	3.61%	1.22	155	0.4490	0.4728	0.4978	5.3%	2.37
96	2.1837	2.2635	2.3460	3.64%	1.24	156	0.4387	0.4620	0.4865	5.3%	2.40
97	2.1180	2.1961	2.2768	3.68%	1.26	157	0.4286	0.4514	0.4755	5.3%	2.42
98	2.0546	2.1310	2.2100	3.71%	1.27	158	0.4187	0.4412	0.4648	5.4%	2.44
99	1.9934	2.0681	2.1454	3.74%	1.29	159	0.4092	0.4312	0.4544	5.4%	2.46
100	1.9343	2.0074	2.0830	3.77%	1.31	160	0.3999	0.4215	0.4443	5.4%	2.48
101	1.8772	1.9487	2.0228	3.80%	1.33	161	0.3908	0.4121	0.4344	5.4%	2.51
102	1.8220	1.8920	1.9645	3.83%	1.34	162	0.3820	0.4029	0.4248	5.4%	2.53
103	1.7688	1.8372	1.9082	3.86%	1.36	163	0.3735	0.3939	0.4155	5.5%	2.55
104	1.7173	1.7843	1.8537	3.89%	1.38	164	0.3651	0.3852	0.4064	5.5%	2.57
105	1.6675	1.7331	1.8010	3.92%	1.40	165	0.3570	0.3767	0.3975	5.5%	2.59
106	1.6194	1.6836	1.7501	3.95%	1.41	166	0.3491	0.3685	0.3889	5.5%	2.62
107	1.5729	1.6357	1.7008	3.98%	1.43	167	0.3414	0.3604	0.3805	5.6%	2.64
108	1.5280	1.5894	1.6532	4.01%	1.45	168	0.3339	0.3526	0.3723	5.6%	2.66
109	1.4845	1.5446	1.6071	4.04%	1.47	169	0.3266	0.3450	0.3643	5.6%	2.68
110	1.4425	1.5013	1.5624	4.07%	1.48	170	0.3195	0.3375	0.3565	5.6%	2.71
111	1.4018	1.4594	1.5193	4.10%	1.50	171	0.3126	0.3303	0.3490	5.7%	2.73
112	1.3625	1.4189	1.4775	4.13%	1.52	172	0.3058	0.3232	0.3416	5.7%	2.75
113	1.3244	1.3796	1.4370	4.16%	1.54	173	0.2992	0.3163	0.3344	5.7%	2.78
114	1.2876	1.3416	1.3978	4.19%	1.56	174	0.2928	0.3096	0.3273	5.7%	2.80
115	1.2519	1.3049	1.3599	4.22%	1.58	175	0.2866	0.3031	0.3205	5.7%	2.82
116	1.2174	1.2693	1.3231	4.25%	1.59	176	0.2805	0.2967	0.3138	5.8%	2.84
117	1.1841	1.2348	1.2876	4.27%	1.61	177	0.2746	0.2905	0.3073	5.8%	2.87
118	1.1517	1.2014	1.2531	4.30%	1.63	178	0.2688	0.2844	0.3010	5.8%	2.89
119	1.1204	1.1691	1.2197	4.33%	1.65	179	0.2631	0.2785	0.2948	5.8%	2.91
120	1.0901	1.1377	1.1873	4.36%	1.67	180	0.2576	0.2728	0.2887	5.9%	2.94
121	1.0607	1.1074	1.1560	4.39%	1.69	181	0.2523	0.2671	0.2829	5.9%	2.96
122	1.0323	1.0780	1.1256	4.42%	1.71	182	0.2471	0.2617	0.2771	5.9%	2.98
123	1.0047	1.0495	1.0961	4.44%	1.73	183	0.2420	0.2563	0.2715	5.9%	3.01
124	0.9780	1.0218	1.0675	4.47%	1.74	184	0.2370	0.2511	0.2660	5.9%	3.03
125	0.9521	0.9951	1.0398	4.50%	1.76	185	0.2321	0.2460	0.2607	6.0%	3.06
126	0.9270	0.9691	1.0130	4.53%	1.78	186	0.2274	0.2411	0.2555	6.0%	3.08
127	0.9027	0.9439	0.9869	4.55%	1.80	187	0.2228	0.2362	0.2504	6.0%	3.10
128	0.8791	0.9195	0.9616	4.58%	1.82	188	0.2183	0.2315	0.2455	6.0%	3.13
129	0.8563	0.8958	0.9371	4.61%	1.84	189	0.2139	0.2269	0.2406	6.1%	3.15
130	0.8341	0.8729	0.9133	4.64%	1.86	190	0.2096	0.2224	0.2359	6.1%	3.18
131	0.8126	0.8506	0.8903	4.66%	1.88	191	0.2054	0.2180	0.2313	6.1%	3.20
132	0.7918	0.8290	0.8679	4.69%	1.90	192	0.2013	0.2137	0.2268	6.1%	3.22
133	0.7715	0.8080	0.8461	4.72%	1.92	193	0.1974	0.2095	0.2224	6.1%	3.25
134	0.7519	0.7877	0.8250	4.74%	1.94	194	0.1935	0.2054	0.2181	6.2%	3.27
135	0.7329	0.7679	0.8046	4.77%	1.96	195	0.1897	0.2014	0.2139	6.2%	3.30
136	0.7144	0.7488	0.7847	4.80%	1.98	196	0.1859	0.1975	0.2098	6.2%	3.32
137	0.6965	0.7301	0.7654	4.82%	2.00	197	0.1823	0.1937	0.2057	6.2%	3.35
138	0.6791	0.7121	0.7466	4.85%	2.02	198	0.1788	0.1900	0.2018	6.2%	3.37

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201	0.1687	0.1793	0.1906	6.3%	3.45	261	0.0597	0.0641	0.0688	7.4%	5.09
202	0.1654	0.1759	0.1870	6.3%	3.47	262	0.0588	0.0631	0.0678	7.4%	5.12
203	0.1623	0.1726	0.1836	6.3%	3.50	263	0.0579	0.0622	0.0668	7.4%	5.15
204	0.1592	0.1694	0.1801	6.4%	3.52	264	0.0570	0.0612	0.0658	7.5%	5.18
205	0.1562	0.1662	0.1768	6.4%	3.55	265	0.0561	0.0603	0.0648	7.5%	5.21
206	0.1533	0.1631	0.1735	6.4%	3.57	266	0.0552	0.0594	0.0638	7.5%	5.24
207	0.1504	0.1601	0.1704	6.4%	3.60	267	0.0544	0.0585	0.0629	7.5%	5.27
208	0.1476	0.1571	0.1672	6.4%	3.62	268	0.0536	0.0576	0.0620	7.5%	5.30
209	0.1448	0.1542	0.1642	6.5%	3.65	269	0.0528	0.0568	0.0610	7.5%	5.33
210	0.1422	0.1514	0.1612	6.5%	3.68	270	0.0520	0.0559	0.0602	7.6%	5.36
211	0.1395	0.1486	0.1583	6.5%	3.70	271	0.0512	0.0551	0.0593	7.6%	5.39
212	0.1370	0.1459	0.1554	6.5%	3.73	272	0.0505	0.0543	0.0584	7.6%	5.42
213	0.1345	0.1433	0.1527	6.5%	3.75	273	0.0497	0.0535	0.0576	7.6%	5.45
214	0.1320	0.1407	0.1499	6.6%	3.78	274	0.0490	0.0527	0.0567	7.6%	5.49
215	0.1296	0.1382	0.1473	6.6%	3.81	275	0.0483	0.0519	0.0559	7.6%	5.52
216	0.1273	0.1357	0.1446	6.6%	3.83	276	0.0476	0.0512	0.0551	7.6%	5.55
217	0.1250	0.1333	0.1421	6.6%	3.86	277	0.0469	0.0505	0.0543	7.7%	5.58
218	0.1227	0.1309	0.1396	6.6%	3.89	278	0.0462	0.0497	0.0535	7.7%	5.61
219	0.1205	0.1286	0.1371	6.7%	3.91	279	0.0455	0.0490	0.0528	7.7%	5.64
220	0.1184	0.1263	0.1347	6.7%	3.94	280	0.0448	0.0483	0.0520	7.7%	5.67
221	0.1163	0.1241	0.1324	6.7%	3.96	281	0.0442	0.0476	0.0513	7.7%	5.70
222	0.1142	0.1219	0.1301	6.7%	3.99	282	0.0436	0.0469	0.0506	7.7%	5.73
223	0.1122	0.1198	0.1278	6.7%	4.02	283	0.0429	0.0463	0.0499	7.8%	5.76
224	0.1102	0.1177	0.1256	6.8%	4.04	284	0.0423	0.0456	0.0492	7.8%	5.80
225	0.1083	0.1156	0.1235	6.8%	4.07	285	0.0417	0.0450	0.0485	7.8%	5.83
226	0.1064	0.1136	0.1214	6.8%	4.10	286	0.0411	0.0444	0.0478	7.8%	5.86
227	0.1046	0.1117	0.1193	6.8%	4.13	287	0.0406	0.0437	0.0472	7.8%	5.89
228	0.1027	0.1098	0.1173	6.8%	4.15	288	0.0400	0.0431	0.0465	7.8%	5.92
229	0.1010	0.1079	0.1153	6.8%	4.18	289	0.0394	0.0425	0.0459	7.8%	5.95
230	0.0992	0.1061	0.1133	6.9%	4.21	290	0.0389	0.0420	0.0452	7.9%	5.99
231	0.0975	0.1043	0.1114	6.9%	4.23	291	0.0384	0.0414	0.0446	7.9%	6.02
232	0.0959	0.1025	0.1096	6.9%	4.26	292	0.0378	0.0408	0.0440	7.9%	6.05
233	0.0942	0.1008	0.1077	6.9%	4.29	293	0.0373	0.0403	0.0434	7.9%	6.08
234	0.0926	0.0991	0.1060	6.9%	4.32	294	0.0368	0.0397	0.0429	7.9%	6.12
235	0.0911	0.0974	0.1042	7.0%	4.35	295	0.0363	0.0392	0.0423	7.9%	6.15
236	0.0895	0.0958	0.1025	7.0%	4.37	296	0.0358	0.0386	0.0417	7.9%	6.18
237	0.0880	0.0942	0.1008	7.0%	4.40	297	0.0353	0.0381	0.0412	8.0%	6.21
238	0.0866	0.0926	0.0991	7.0%	4.43	298	0.0348	0.0376	0.0406	8.0%	6.25
239	0.0851	0.0911	0.0975	7.0%	4.46	299	0.0344	0.0371	0.0401	8.0%	6.28
240	0.0837	0.0896	0.0959	7.0%	4.48	300	0.0339	0.0366	0.0396	8.0%	6.31
241	0.0823	0.0882	0.0944	7.1%	4.51						
242	0.0810	0.0867	0.0929	7.1%	4.54						
243	0.0796	0.0853	0.0914	7.1%	4.57						
244	0.0783	0.0839	0.0899	7.1%	4.60						
245	0.0771	0.0826	0.0885	7.1%	4.63						
246	0.0758	0.0812	0.0870	7.2%	4.65						
247	0.0746	0.0799	0.0857	7.2%	4.68						
248	0.0734	0.0787	0.0843	7.2%	4.71						
249	0.0722	0.0774	0.0830	7.2%	4.74						
250	0.0710	0.0762	0.0817	7.2%	4.77						
251	0.0699	0.0750	0.0804	7.2%	4.80						
252	0.0688	0.0738	0.0791	7.3%	4.83						
253	0.0677	0.0726	0.0779	7.3%	4.86						
254	0.0666	0.0715	0.0767	7.3%	4.89						
255	0.0656	0.0704	0.0755	7.3%	4.92						
256	0.0645	0.0693	0.0743	7.3%	4.94						
257	0.0635	0.0682	0.0732	7.3%	4.97						
258	0.0625	0.0671	0.0721	7.4%	5.00						
259	0.0616	0.0661	0.0710	7.4%	5.03						

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