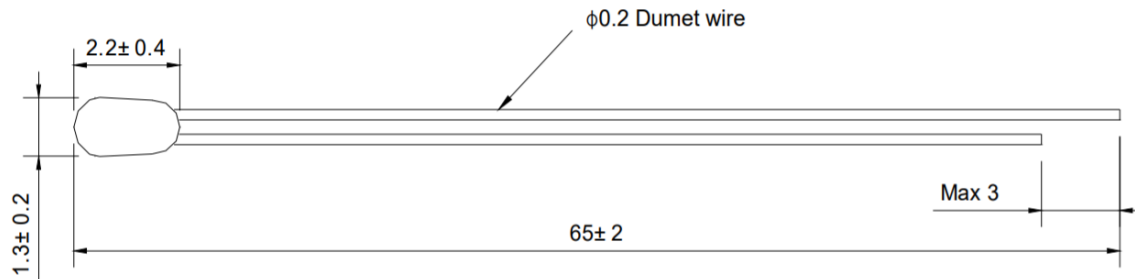


APPLICATION: TEMPERATURE MEASUREMENT, SENSING AND CONTROL IN REMOTE LOCATIONS FOR VARIOUS ENVIRONMENTAL CONDITIONS SUCH AS HVAC APPLICATIONS (TO MEASURE THE TEMPERATURE OF THE EVAPORATOR AND THE CONDITIONED INTERIOR).

Product Drawing



Electrical Specification

SI No	Description	Value	Unit
1	Rated Zero-Power Resistance, R_{100}	$10 \pm 1\%$	k Ω
2	B- Value (25/100) °C	$3977 \pm 1\%$	K
3	Dissipation Constant	0.7-1.2 (min, in air)	mW/°C
4	Thermal Time Constant	3.5-6.5 (max, in still air)	S
5.	Insulation Resistance at 500 VDC (between glass and lead wire)	10	M Ω

Reliability Specification:

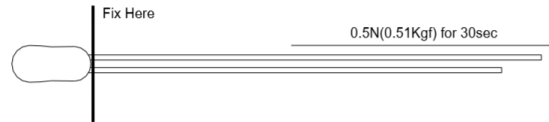
Operating Temperature Range: -40 to +200°C

Description	Test Conditions	Characteristics Drift
Dry Heat Test	Elements are placed in a oven of temp. at 200°C ± 5°C for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	ΔR after test are less than ± 3%. ΔB after test are less than ± 2%.
Cold Test	Elements are placed in an oil bath of temperature at -30°C ± 5°C for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	ΔR after test are less than ± 3%. ΔB after test are less than ± 2%.
Thermal Shock Test	-30°C(Oil bath,3 minute) -> RT(Air, under 1min) -> 90°C(Oil bath,3 minute) for 1000 cycle. After test the elements are stored in room temperature for one hour.	ΔR after test are less than ± 3%. ΔB after test are less than ± 2%.
Damp Heat Test	Elements are placed in a chamber of temp. at 60°C ± 2°C and 90~95%RH for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	ΔR after test are less than ± 3%. ΔB after test are less than ± 2%.

Mechanical Test

1. Terminal tensile strength test

Load tensile stress of 0.5N(0.51kgf) to axial direction slowly and keep it for 30±5 sec. after the test characteristics, appearance and shape shall not change.



2. Terminal bending test

Lead wire will be fixed at 3mm from its glass part end. Apply load of 5N to lead wire so that it makes 90 degree. Then put it back to original position. After two times of this action, characteristics, appearance of glass part shall not change.



RT CHART

T (°C)	Rmin (kΩ)	Rcent (kΩ)	Rmax (kΩ)	DR (%)	DT (°C)	T (°C)	Rmin (kΩ)	Rcent (kΩ)	Rmax (kΩ)	DR (%)	DT (°C)
-40	262.38	273.95	286	4.40%	0.76	85	1.036	1.07	1.105	3.30%	1.06
-35	198.24	206.4	214.87	4.10%	0.72	90	0.8861	0.9167	0.9482	3.40%	1.14
-30	150.3	156.05	162	3.80%	0.68	95	0.7609	0.7883	0.8167	3.60%	1.22
-25	114.4	118.45	122.63	3.50%	0.64	100	0.656	0.6806	0.7062	3.80%	1.31
-20	87.459	90.309	93.241	3.20%	0.6	105	0.5677	0.5899	0.6129	3.90%	1.39
-15	67.179	69.183	71.239	3.00%	0.56	110	0.4932	0.5132	0.5339	4.00%	1.48
-10	51.862	53.269	54.71	2.70%	0.52	115	0.4299	0.448	0.4667	4.20%	1.58
-5	40.249	41.236	42.242	2.40%	0.48	120	0.3761	0.3924	0.4094	4.30%	1.67
0	31.408	32.097	32.798	2.20%	0.44	125	0.3302	0.3449	0.3603	4.50%	1.77
5	24.647	25.126	25.612	1.90%	0.4	130	0.2908	0.3041	0.3181	4.60%	1.87
10	19.452	19.783	20.117	1.70%	0.35	135	0.2569	0.269	0.2817	4.70%	1.97
15	15.441	15.667	15.895	1.50%	0.31	140	0.2276	0.2387	0.2502	4.80%	2.07
20	12.328	12.48	12.633	1.20%	0.27	145	0.2023	0.2124	0.223	5.00%	2.18
25	9.9	10	10.1	1.00%	0.23	150	0.1804	0.1896	0.1992	5.10%	2.29
30	7.962	8.059	8.158	1.20%	0.29	155	0.1613	0.1697	0.1785	5.20%	2.4
35	6.44	6.533	6.626	1.40%	0.35	160	0.1446	0.1523	0.1604	5.30%	2.51
40	5.239	5.326	5.413	1.60%	0.41	165	0.13	0.137	0.1445	5.40%	2.63
45	4.286	4.366	4.446	1.80%	0.47	170	0.1172	0.1237	0.1305	5.50%	2.76
50	3.526	3.598	3.672	2.00%	0.54	175	0.1059	0.1119	0.1182	5.60%	2.89
55	2.916	2.982	3.048	2.20%	0.61	180	0.096	0.1015	0.1073	5.70%	3.02
60	2.425	2.483	2.543	2.40%	0.68	185	0.0872	0.0923	0.0977	5.80%	3.15
65	2.026	2.079	2.133	2.60%	0.75	190	0.0794	0.0842	0.0892	5.90%	3.29
70	1.701	1.749	1.797	2.80%	0.82	195	0.0726	0.0769	0.0816	6.00%	3.44
75	1.436	1.478	1.522	2.90%	0.9	200	0.0664	0.0705	0.0748	6.10%	3.59
80	1.217	1.255	1.294	3.10%	0.98						

Special Note

1. Product comply with RoHS directive of 2015/863/EU.

Soldering

1. Soldering Temperature: 320°C Max.
2. Soldering Duration : 6.0 Second Max.
3. Preheat Temperature : 160°C for 3.0 Sec.

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