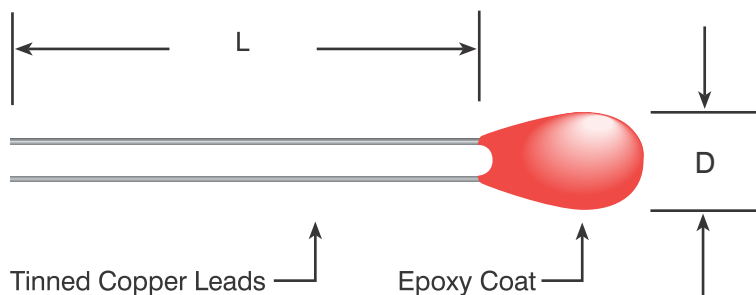


Sensor Scientific, Inc.

EPOXY-COATED CHIP THERMISTORS



FEATURES:

- LOW COST
- HIGH STABILITY
- INDUSTRY-STANDARD RESISTANCE VS. TEMPERATURE CURVES
- LOW THERMAL MASS

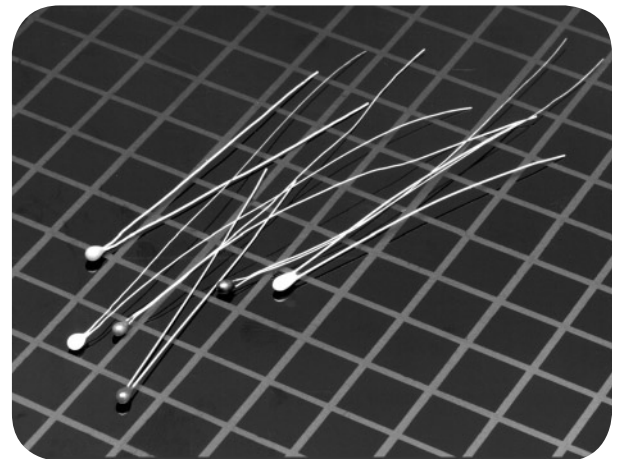
OPTIONS:

- CUSTOM TERMINATIONS AND LEADS
- NON-STANDARD TOLERANCES
- NON-STANDARD RESISTANCE VALUES
- NON-STANDARD CALIBRATION TEMPERATURES
- CUSTOM PROBE ASSEMBLY OPTIONS

SPECIFICATIONS

- MAXIMUM OPERATING TEMPERATURE: 150°C (100°C FOR RESISTANCE VALUES UNDER 1000 OHMS)
- DISSIPATION CONSTANT: 1.5 mW/°C TYP. IN STILL AIR
- TIME CONSTANT: 10 SEC. TYP. IN STILL AIR

Sensor Scientific Epoxy-Coated Chip Thermistors are ideally suited for applications where low cost is a primary consideration. Units are available in resistance values from 100 to 100k ohms @ 25°C. The available resistance vs. temperature curves are industry-standard. The resistance tolerance is usually specified at 25°C. Other calibration temperatures are available on a special order basis. Typical tolerances are ±1, 2, 5, & 10%. Epoxy-Coated Chip Thermistors are widely used in a variety of temperature measurement and compensation applications.



Resistance @ 25 Deg C ohms	Part Number	R. vs. Temp. Curve	Maximum Diameter (D) inches	Lead Diameter inches	Lead Length inches
100	W101A*	A	0.250	0.0126	1.5 min.
500	W501A*	A	0.125	0.0126	1.5 min.
1000	W102A*	A	0.095	0.0126	1.5 min.
1000	W102C*	C	0.150	0.0126	1.5 min.
2000	W202C*	C	0.095	0.0126	1.5 min.
2252	W222C*	C	0.095	0.0126	1.5 min.
3000	W302C*	C	0.095	0.0126	1.5 min.
4000	W402C*	C	0.095	0.0126	1.5 min.
5000	W502C*	C	0.095	0.0126	1.5 min.
6000	W602C*	C	0.095	0.0126	1.5 min.
10000	W103C*	C	0.095	0.0126	1.5 min.
10000	W103Y*	Y	0.095	0.0126	1.5 min.
20000	W203C*	C	0.095	0.008	2.0 min.
30000	W303D*	D	0.095	0.0126	1.5 min.
30000	W303E*	E	0.095	0.0126	1.5 min.
50000	W503D*	D	0.095	0.008	2.0 min.
100000	W104D*	D	0.095	0.008	2.0 min.

To specify desired resistance tolerances, substitute the required tolerance for "*" in the part number. For example, for a 5% tolerance W502C* part, the complete part number would be W502C5.

Call us toll-free at 800-524-1610 (in the US) — or check us out on the web at www.sensorsci.com

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 eMail: sales@sensorsci.com • web: www.sensorsci.com

Sensor Scientific, Inc.

Resistance Multiplier and Alpha Values for Standard and Interchangeable Wafers

Material Curve		A		B		C		D		E	
Available Resistance Range at 25°C in ohms		100 to 2,000		30 to 500		1,000 to 25,000		10,000 to 100,000		1,000 to 50,000	
Alpha at 25°C		-3.84%		-3.51%		-4.39%		-4.67%		-4.30%	
Temp °F	Temp °C	Multiplier	Alpha	Multiplier	Alpha	Multiplier	Alpha	Multiplier	Alpha	Multiplier	Alpha
-40.0	-40.0	21.30	-5.7	16.10	-5.2	33.61	-6.7	40.64	-6.9	29.48	-6.3
-31.0	-35.0	16.07	-5.6	12.48	-5.0	24.24	-6.4	28.89	-6.7	21.63	-6.1
-22.0	-30.0	12.23	-5.4	9.746	-4.9	17.68	-6.2	20.76	-6.5	16.02	-5.9
-13.0	-25.0	9.389	-5.2	7.671	-4.7	13.03	-6.0	15.08	-6.3	11.98	-5.7
-4.0	-20.0	7.267	-5.0	6.081	-4.6	9.701	-5.8	11.06	-6.1	9.033	-5.6
5.0	-15.0	5.670	-4.9	4.855	-4.4	7.291	-5.6	8.193	-5.9	6.869	-5.4
14.0	-10.0	4.457	-4.7	3.902	-4.3	5.530	-5.4	6.123	-5.7	5.266	-5.2
23.0	-5.0	3.530	-4.6	3.157	-4.2	4.232	-5.3	4.617	-5.6	4.068	-5.1
32.0	0.0	2.815	-4.5	2.569	-4.1	3.265	-5.1	3.510	-5.4	3.166	-4.9
41.0	5.0	2.260	-4.3	2.104	-3.9	2.539	-5.0	2.690	-5.2	2.481	-4.8
50.0	10.0	1.827	-4.2	1.733	-3.8	1.990	-4.8	2.078	-5.1	1.958	-4.7
59.0	15.0	1.485	-4.1	1.435	-3.7	1.571	-4.7	1.617	-4.9	1.556	-4.5
68.0	20.0	1.215	-4.0	1.195	-3.6	1.249	-4.5	1.267	-4.8	1.243	-4.4
77.0	25.0	1.000	-3.8	1.000	-3.5	1.000	-4.4	1.000	-4.7	1.000	-4.3
86.0	30.0	0.8275	-3.7	0.8411	-3.4	0.8056	-4.3	0.7943	-4.5	0.8089	-4.2
95.0	35.0	0.6884	-3.6	0.7108	-3.3	0.6530	-4.1	0.6349	-4.4	0.6580	-4.1
104.0	40.0	0.5757	-3.5	0.6035	-3.2	0.5325	-4.0	0.5106	-4.3	0.5382	-4.0
113.0	45.0	0.4838	-3.4	0.5147	-3.1	0.4367	-3.9	0.4130	-4.2	0.4425	-3.9
122.0	50.0	0.4085	-3.3	0.4408	-3.1	0.3601	-3.8	0.3360	-4.1	0.3656	-3.8
131.0	55.0	0.3466	-3.2	0.3791	-3.0	0.2985	-3.7	0.2748	-4.0	0.3036	-3.7
140.0	60.0	0.2953	-3.2	0.3273	-2.9	0.2487	-3.6	0.2259	-3.9	0.2533	-3.6
149.0	65.0	0.2527	-3.1	0.2837	-2.8	0.2082	-3.5	0.1867	-3.8	0.2122	-3.5
158.0	70.0	0.2172	-3.0	0.2469	-2.7	0.1752	-3.4	0.1550	-3.7	0.1786	-3.4
167.0	75.0	0.1874	-2.9	0.2156	-2.7	0.1480	-3.3	0.1293	-3.6	0.1510	-3.3
176.0	80.0	0.1623	-2.8	0.1889	-2.6	0.1256	-3.2	0.1084	-3.5	0.1281	-3.2
185.0	85.0	0.1411	-2.8	0.1660	-2.5	0.1070	-3.2	0.0912	-3.4	0.1092	-3.2
194.0	90.0	0.1231	-2.7	0.1465	-2.5	0.0916	-3.1	0.0771	-3.3	0.0934	-3.1
203.0	95.0	0.1078	-2.6	0.1296	-2.4	0.0787	-3.0	0.0654	-3.2	0.0801	-3.0
212.0	100.0	0.0947	-2.6	0.1150	-2.4	0.0678	-2.9	0.0558	-3.2	0.0690	-2.9
221.0	105.0	0.0834	-2.5	0.1024	-2.3	0.0587	-2.9	0.0477	-3.1	0.0597	-2.9
230.0	110.0	0.0738	-2.4	0.0914	-2.2	0.0510	-2.8	0.0409	-3.0	0.0517	-2.8
239.0	115.0	0.0654	-2.4	0.0818	-2.2	0.0444	-2.7	0.0353	-2.9	0.0450	-2.8
248.0	120.0	0.0582	-2.3	0.0734	-2.1	0.0388	-2.7	0.0305	-2.9	0.0393	-2.7
257.0	125.0	0.0519	-2.3	0.0660	-2.1	0.0341	-2.6	0.0264	-2.8	0.0344	-2.6
266.0	130.0	0.0464	-2.2	0.0596	-2.0	0.0300	-2.5	0.0230	-2.8	0.0302	-2.6
275.0	135.0	0.0416	-2.2	0.0538	-2.0	0.0264	-2.5	0.0201	-2.7	0.0266	-2.5
284.0	140.0	0.0374	-2.1	0.0488	-1.9	0.0234	-2.4	0.0176	-2.6	0.0235	-2.5
293.0	145.0	0.0337	-2.1	0.0443	-1.9	0.0207	-2.4	0.0154	-2.6	0.0208	-2.4
302.0	150.0	0.0304	-2.0	0.0403	-1.9	0.0185	-2.3	0.0136	-2.5	0.0184	-2.4

Material Curve		F		T		X		Y			
Available Resistance Range at 25°C in ohms		100,000 to 300,000		2,000 to 50,000		15 to 250		1,000 to 10,000			
Alpha at 25°C		-4.81%		-3.89%		-3.34%		-4.03%			
Temp °F	Temp °C	Multiplier	Alpha	Multiplier	Alpha	Multiplier	Alpha	Multiplier	Alpha		
-40.0	-40.0	43.76	-7.0	22.26	-5.8	14.52	-5.1	23.98	-5.9		
-31.0	-35.0	31.00	-6.8	16.70	-5.6	11.33	-4.9	17.93	-5.7		
-22.0	-30.0	22.19	-6.6	12.66	-5.5	8.908	-4.7	13.52	-5.6		
-13.0	-25.0	16.04	-6.4	9.675	-5.4	7.061	-4.6	10.29	-5.4		
-4.0	-20.0	11.71	-6.2	7.460	-5.1	5.640	-4.4	7.893	-5.2		
5.0	-15.0	8.628	-6.0	5.800	-5.0	4.538	-4.3	6.103	-5.1		
14.0	-10.0	6.413	-5.9	4.545	-4.8	3.677	-4.1	4.755	-4.9		
23.0	-5.0	4.807	-5.7	3.588	-4.7	2.999	-4.0	3.732	-4.8		
32.0	0.0	3.632	-5.5	2.853	-4.5	2.461	-3.9	2.949	-4.6		
41.0	5.0	2.766	-5.4	2.284	-4.4	2.033	-3.8	2.346	-4.5		
50.0	10.0	2.122	-5.2	1.841	-4.3	1.688	-3.7	1.879	-4.4		
59.0	15.0	1.640	-5.1	1.493	-4.1	1.410	-3.5	1.514	-4.3		
68.0	20.0	1.276	-5.0	1.218	-4.0	1.185	-3.4	1.227	-4.1		
77.0	25.0	1.000	-4.8	1.000	-3.9	1.000	-3.3	1.000	-4.0		
86.0	30.0	0.7885	-4.7	0.8253	-3.8	0.8484	-3.2	0.8196	-3.9		
95.0	35.0	0.6256	-4.6	0.6848	-3.7	0.7232	-3.1	0.6754	-3.8		
104.0	40.0	0.4993	-4.5	0.5712	-3.6	0.6194	-3.1	0.5594	-3.7		
113.0	45.0	0.4008	-4.3	0.4788	-3.5	0.5327	-3.0	0.4656	-3.6		
122.0	50.0	0.3236	-4.2	0.4032	-3.4	0.4602	-2.9	0.3893	-3.5		
131.0	55.0	0.2626	-4.1	0.3411	-3.3	0.3991	-2.8	0.3271	-3.4		
140.0	60.0	0.2142	-4.0	0.2899	-3.2	0.3475	-2.7	0.2760	-3.4		
149.0	65.0	0.1756	-3.9	0.2474	-3.1	0.3037	-2.7	0.2339	-3.3		
158.0	70.0	0.1447	-3.8	0.2120	-3.0	0.2664	-2.6	0.1990	-3.2		
167.0	75.0	0.1198	-3.7	0.1824	-3.0	0.2345	-2.5	0.1700	-3.1		
176.0	80.0	0.0996	-3.6	0.1575	-2.9	0.2071	-2.5	0.1458	-3.0		
185.0	85.0	0.0832	-3.6	0.1365	-2.8	0.1835	-2.4	0.1255	-3.0		
194.0	90.0	0.0697	-3.5	0.1187	-2.8	0.1631	-2.3	0.1084	-2.9		
203.0	95.0	0.0587	-3.4	0.1036	-2.7	0.1454	-2.3	0.0940	-2.8		
212.0	100.0	0.0496	-3.3	0.0907	-2.6	0.1300	-2.2	0.0817	-2.8		
221.0	105.0	0.0421	-3.2	0.0797	-2.6	0.1166	-2.2	0.0713	-2.7		
230.0	110.0	0.0359	-3.2	0.0702	-2.5	0.1048	-2.1	0.0624	-2.6		
239.0	115.0	0.0307	-3.1	0.0621	-2.4	0.0945	-2.1	0.0548	-2.6		
248.0	120.0	0.0263	-3.0	0.0550	-2.4	0.0854	-2.0	0.0482	-2.5		
257.0	125.0	0.0226	-3.0	0.0489	-2.3	0.0773	-2.0	0.0426	-2.5		
266.0	130.0	0.0196	-2.9	0.0436	-2.3	0.0702	-1.9	0.0377	-2.4		
275.0	135.0	0.0169	-2.8	0.0389	-2.2	0.0639	-1.9	0.0335	-2.4		
284.0	140.0	0.0147	-2.8	0.0349	-2.2	0.0583	-1.8	0.0298	-2.3		
293.0	145.0	0.0128	-2.7	0.0313	-2.1	0.0533	-1.8	0.0266	-2.3		
302.0	150.0	0.0112	-2.7	0.0282	-2.1	0.0488	-1.7	0.0238	-2.2		