

HIGH PRECISION THERMISTOR

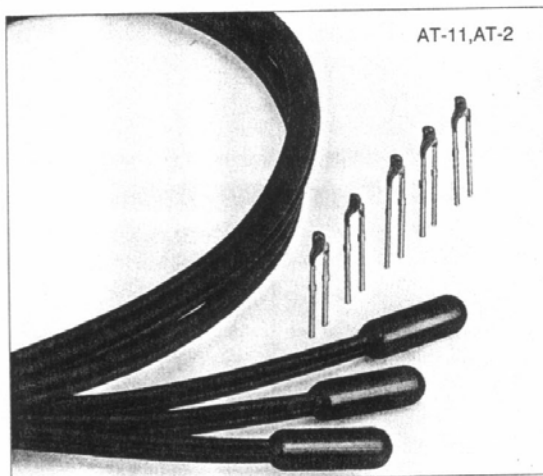
AT THERMISTOR

The AT thermistor is a high-precision thermal sensing device featuring extremely small B-value tolerance and resistance. When used as a temperature gauge, the AT thermistor requires no adjustment between the control circuit and the sensor. This insures temperature precision of $\pm 0.3^{\circ}\text{C}$. Temperature indicators and control instruments are now available for use with the thermistor.

Part number

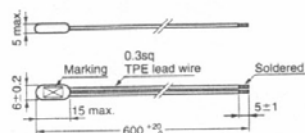
102 AT-2

Shape
High-precision AT thermistor
Rated zero-power
Resistance at 25°C 102 : 1(k Ω)

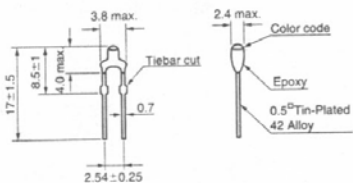


Dimensions

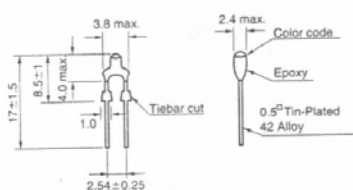
AT-11



AT-2

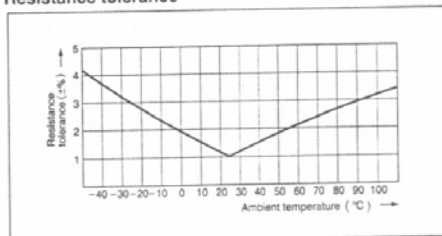


AT-3

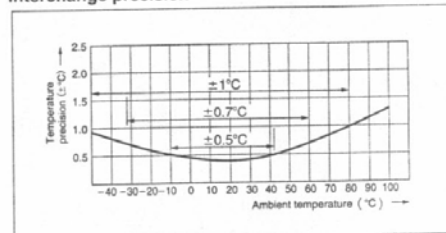


Unit(mm)

Resistance tolerance



Interchange precision



Specifications

Part No	Res ¹	B value ²	Dissipation factor (mW/°C)	Thermal time constant (s) ³	Rated power at 25°C (mW)	Operating temp. range(°C)	Color code
102AT-2	1.0k Ω \pm 1%	3100K \pm 1%	2	15	10	-50~90	Black
202AT-2	2.0k Ω \pm 1%	3182K \pm 1%	2	15	10	-50~90	Red
502AT-2	5.0k Ω \pm 1%	3324K \pm 1%	2	15	10	-50~110	Yellow
103AT-2	10.0k Ω \pm 1%	3435K \pm 1%	2	15	10	-50~110	White
203AT-2	20.0k Ω \pm 1%	4013K \pm 1%	2	15	10	-50~110	None
503AT-2	50.0k Ω \pm 3%	4060K \pm 1%	2	15	10	-50~110	None
104AT-2	100.0k Ω \pm 1%	4665K \pm 1%	2	15	10	-50~110	None
103AT-3	10.0k Ω \pm 1%	3435K \pm 1%	2	15	10	-50~110	White
102AT-11	1.0k Ω \pm 1%	3100K \pm 1%	3	75	15	-50~90	None
202AT-11	2.0k Ω \pm 1%	3182K \pm 1%	3	75	15	-50~90	None
502AT-11	5.0k Ω \pm 1%	3324K \pm 1%	3	75	15	-50~105	None
103AT-11	10.0k Ω \pm 1%	3435K \pm 1%	3	75	15	-50~105	None

¹ Res: Rated zero-power resistance value at 25°C.

² B value: determined by rated zero-power resistance at 25°C and 85°C.

³ Time when thermistor temperature reaches 63.2% of the temperature difference. The value is measured in the air.

Resistance-Temperature

Temperature (°C)	Type								Temperature (°C)	Type							
	102AT	202AT	502AT	103AT	203AT	503AT	104AT	102AT		202AT	502AT	103AT	203AT	503AT	104AT		
-50	24.46	55.66	154.6	329.5	1253	3168	11473	35	0.7229	1.424	3.508	6.940	13.06	32.48	60.94		
-45	18.68	42.17	116.5	247.7	890.5	2257	7781	40	0.6189	1.211	2.961	5.827	10.65	26.43	48.10		
-40	14.43	32.34	88.91	188.5	642.0	1632	5366	45	0.5316	1.033	2.509	4.911	8.716	21.59	38.13		
-35	11.23	24.96	68.19	144.1	465.8	1186	3728	50	0.4587	0.8854	2.137	4.160	7.181	17.75	30.44		
-30	8.834	19.48	52.87	111.3	342.5	872.8	2629	55	0.3967	0.7620	1.826	3.536	5.941	14.64	24.42		
-25	6.998	15.29	41.21	86.43	253.6	646.3	1864	60	0.3446	0.6587	1.567	3.020	4.943	12.15	19.72		
-20	5.594	12.11	32.44	67.77	190.0	484.3	1340	65	0.3000	0.5713	1.350	2.588	4.127	10.13	15.99		
-15	4.501	9.655	25.66	53.41	143.2	364.6	969.0	70	0.2622	0.4975	1.168	2.228	3.464	8.482	13.05		
-10	3.651	7.763	20.48	42.47	109.1	277.5	709.5	75	0.2285	0.4343	1.014	1.924	2.916	7.129	10.68		
-5	2.979	6.277	16.43	33.90	83.75	212.3	523.3	80	0.1999	0.3807	0.8835	1.668	2.468	6.022	8.796		
0	2.449	5.114	13.29	27.28	64.88	164.0	390.3	85	0.1751	0.3346	0.7722	1.451	2.096	5.105	7.271		
5	2.024	4.188	10.80	22.05	50.53	127.5	292.5	90	0.1536	0.2949	0.6771	1.266	1.788	4.345	6.041		
10	1.684	3.454	8.840	17.96	39.71	99.99	221.5	95			0.5961	1.108	1.530	3.712	5.037		
15	1.408	2.862	7.267	14.69	31.36	78.77	168.6	100			0.5265	0.9731	1.315	3.185	4.220		
20	1.184	2.387	6.013	12.09	24.96	62.56	129.5	105			0.4654	0.8572	1.134	2.741	3.546		
25	1.000	2.000	5.000	10.00	20.00	50.00	100.0	110			0.4128	0.7576	0.9807	2.369	2.994		
30	0.8486	1.684	4.179	8.313	16.12	40.20	77.81										

Unit(k Ω)