

Termocouples and Thermistors

Order code	Manufacturer code	Description
61-0530	104AT-2	100K NTC PRECISION THERMISTOR (RC)

Termocouples and Thermistors	Page 1 of 3
The enclosed information is believed to be correct, Information may change without notice due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 20/02/2007

HIGH PRECISION THERMISTOR

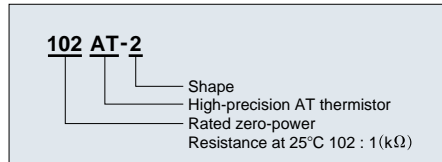
AT THERMISTOR

The AT thermistor is a high-precision thermal sensing device featuring extremely small B-value tolerance and resistance.

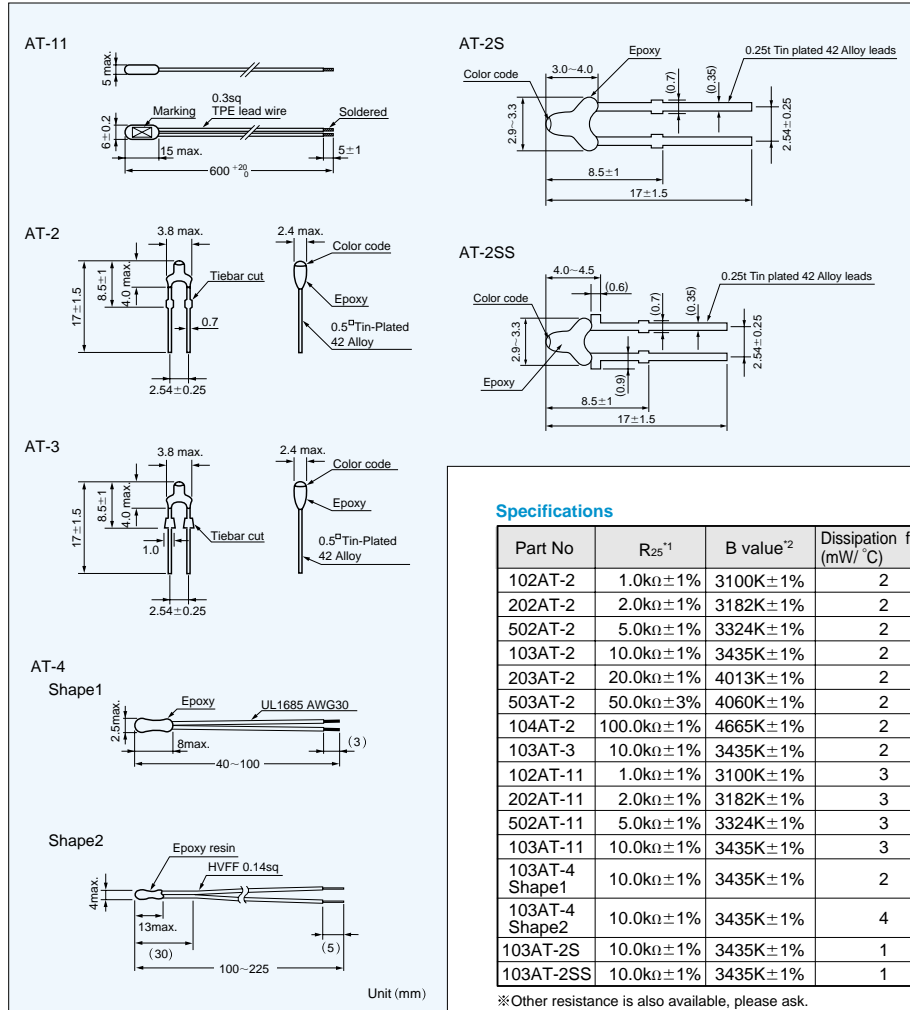
When used as a temperature gauge, the AT thermistor requires no adjustment between the control circuit and the sensor.

This insures temperature precision of $\pm 0.3^{\circ}\text{C}$. Temperature indicators and control instruments are now available for use with the thermistor.

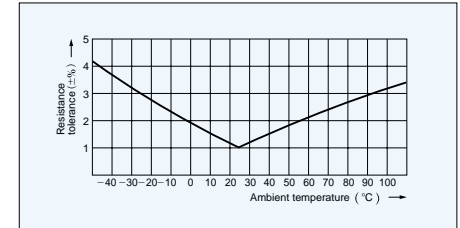
Part number



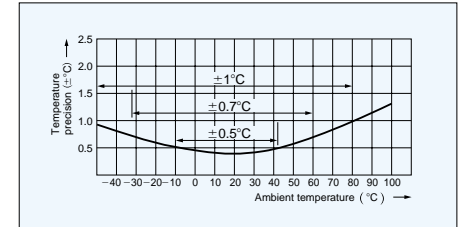
Dimensions



Resistance tolerance



Interchange precision



Specifications

Part No	R ₂₅ 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
103AT-4 Shape1	10.0k Ω \pm 1%	3435K \pm 1%	2	10	10	-30~90	None
103AT-4 Shape2	10.0k Ω \pm 1%	3435K \pm 1%	4	35	20	-30~90	None
103AT-2S	10.0k Ω \pm 1%	3435K \pm 1%	1	15	5	-50~110	white
103AT-2SS	10.0k Ω \pm 1%	3435K \pm 1%	1	15	5	-50~110	white

*Other resistance is also available, please ask.

¹ R₂₅: Rated zero-power resistance value at 25°C.

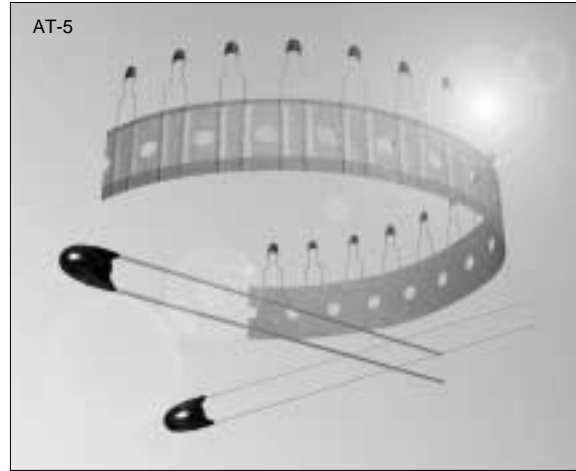
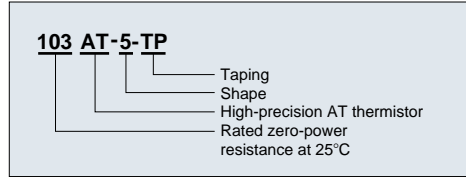
² B value: determined by rated zero-power resistance at 25°C and 85°C.

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

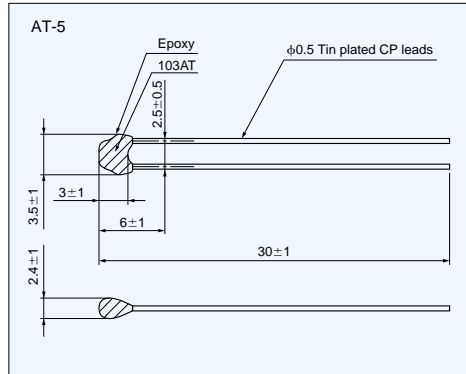
AT-5 THERMISTOR

AT-5 thermistor is available in taping.

Part number



Dimensions



Specifications

Part No	R ₂₅ ※1	B value ※2	Dissipation factor (mW/°C)	Thermal time constant (s) ※3	Rated power at 25°C (mW)	Operating temp. range(°C)
103AT-5	10.0kΩ±1%	3435K±1%	2.5	15	10	-50~110

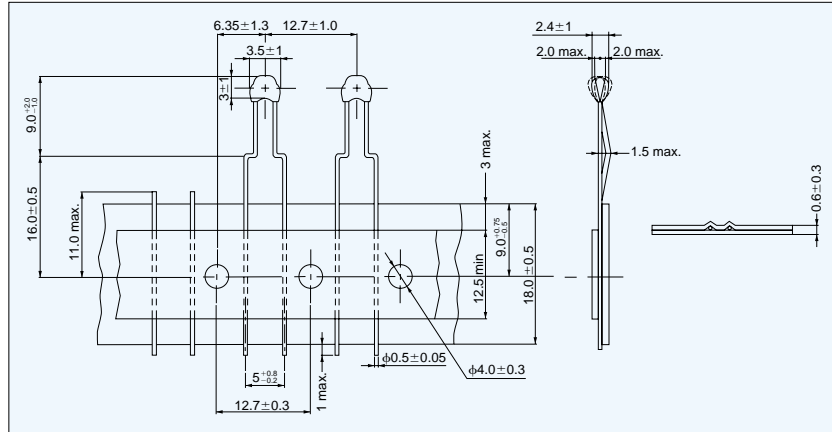
※Other resistance is also available, please ask.

※1 R₂₅: 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.

Taping



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(kΩ)