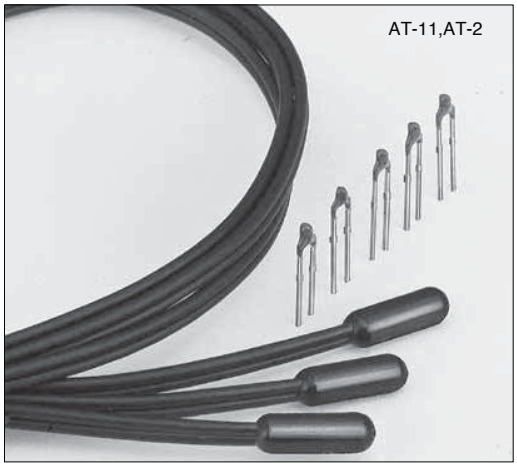
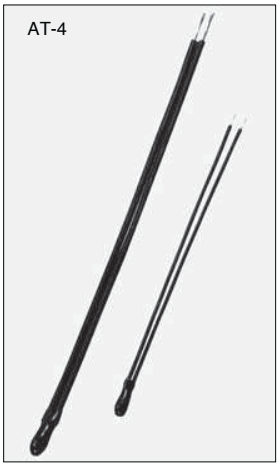
HIGH PRECISION THERMISTOR

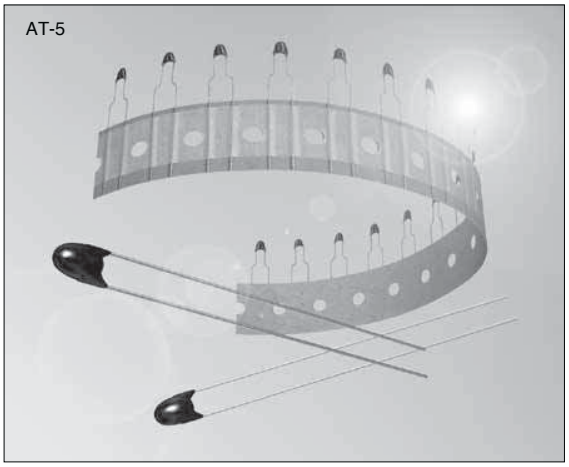
AT THERMISTOR

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.

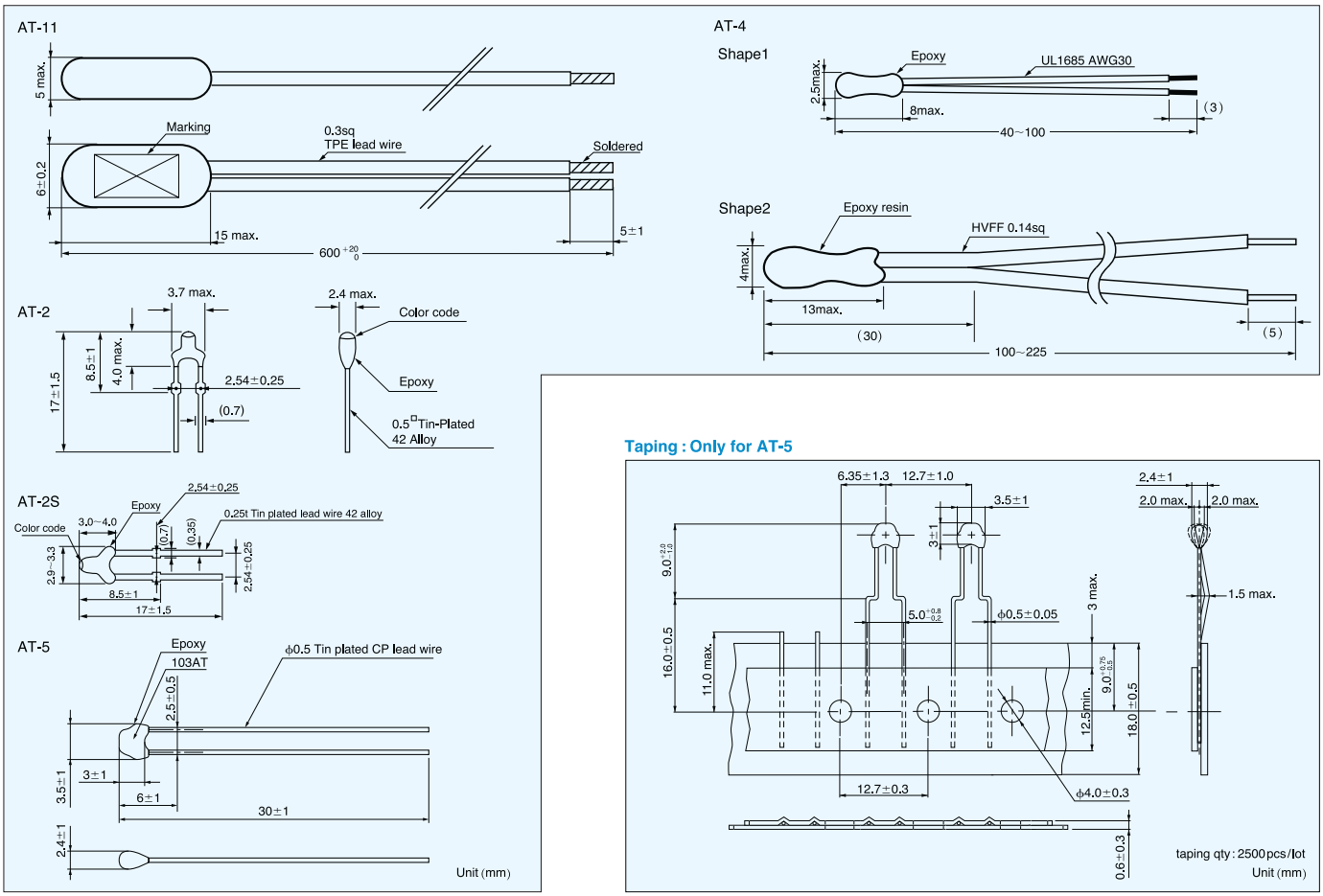
This insures temperature precision of ±0.3°C. Temperature indicators and control instruments are now available for use with the thermistor.





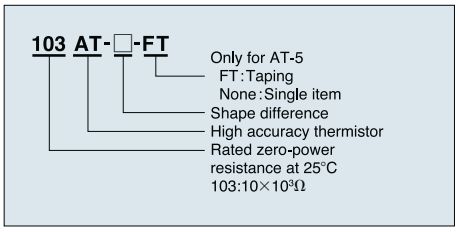


Dimensions

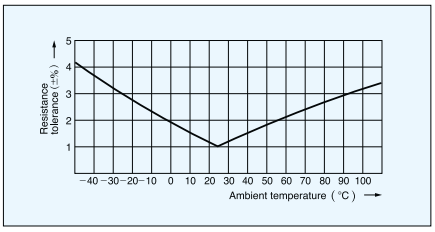


Taping : Only for AT-5

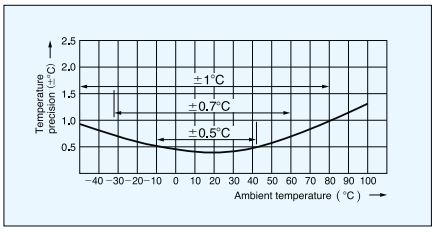
Part number



Resistance tolerance



Interchange precision



Acquisition Standard

For AT-2 type : UL1434, CSA-C22.2, No.0 Authorized.

Specifications

Part No	R_{25}*1	B value*2	Dissipation factor (mW/°C) Approx.	Thermal time constant (s)*3 Approx.	Rated maximum power dissipation (at 25°C)(mW)	Category temp. range(°C)	Color code
102AT-2	1.0kΩ±1%	3100K±1%	2	15	10	−50～+90	Black
202AT-2	2.0kΩ±1%	3182K±1%					Red
502AT-2	5.0kΩ±1%	3324K±1%				−50～+110	Yellow
103AT-2	10.0kΩ±1%	3435K±1%					White
203AT-2	20.0kΩ±1%	4013K±1%					None
104AT-2	100.0kΩ±1%	4665K±1%					
102AT-11	1.0kΩ±1%	3100K±1%	3	75	13	−50～+90	
202AT-11	2.0kΩ±1%	3182K±1%					
502AT-11	5.0kΩ±1%	3324K±1%				−50～+105	
103AT-11	10.0kΩ±1%	3435K±1%					
103AT-4 Shape1	10.0kΩ±1%	3435K±1%	2	10	10	−50～+90	
103AT-4 Shape2	10.0kΩ±1%	3435K±1%	4	35	20		
103AT-2S	10.0kΩ±1%	3435K±1%	1	15	5	−50～+110	White
103AT-5	10.0kΩ±1%	3435K±1%	2.5		12.5		None

※Other resistance is also available, please ask.

*1 R_{25} : 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(kΩ)