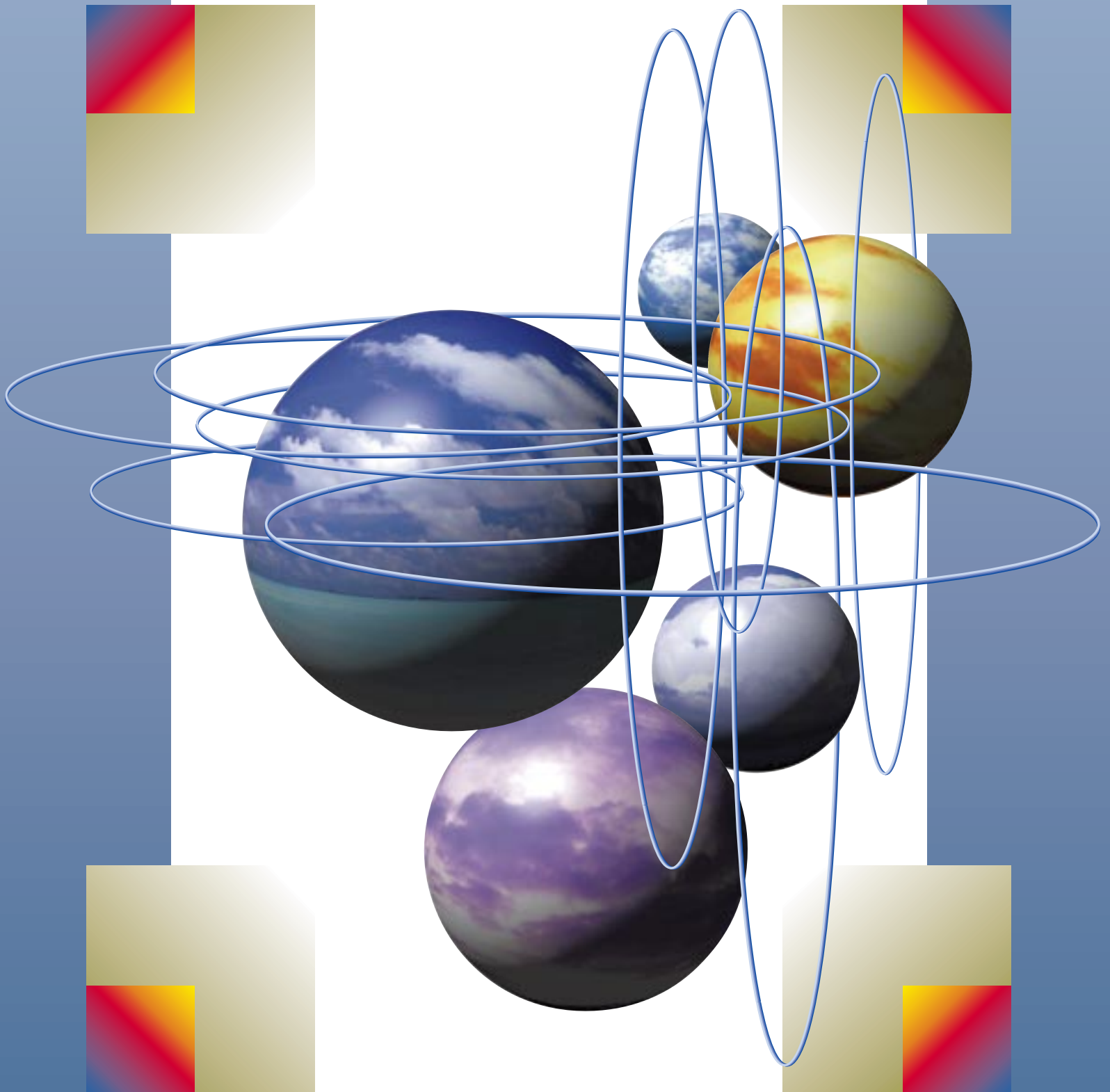
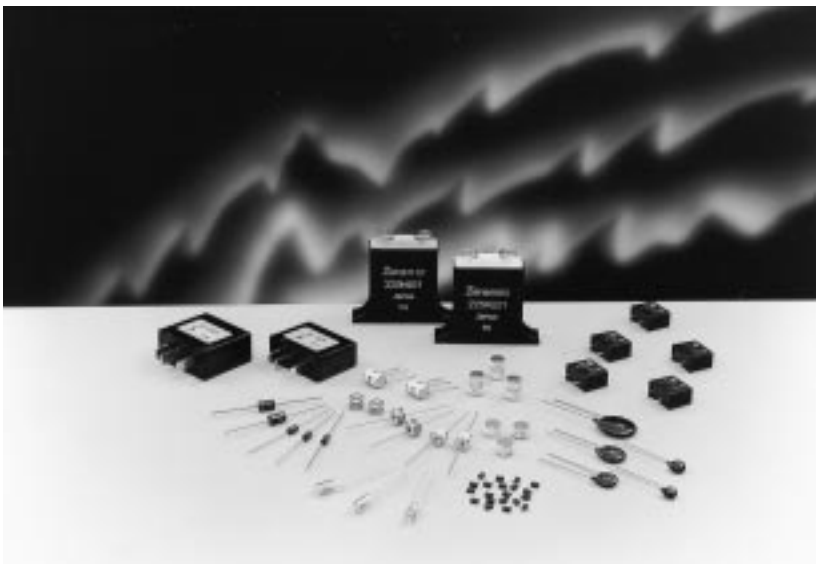
SEMITEC®

Ishizuka Electronics Corporation

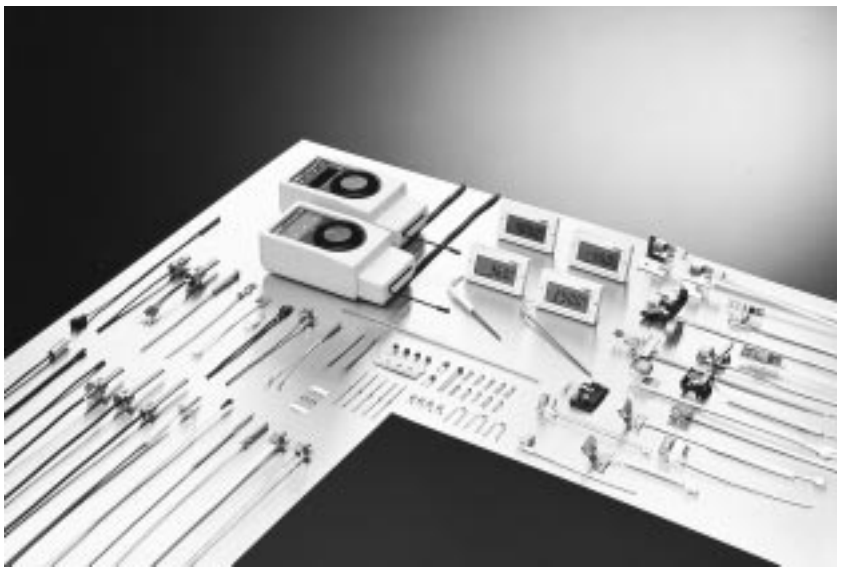
PRODUCT CATALOG



CAT. No.129A



SURGE ABSORBERS



SENSORS AND MODULES

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- SMD SERIES
- HIGH HEAT-RESISTANCE SERIES
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THERMISTOR

"Thermistor" is the generic name given to thermally sensitive resistors.
Negative temperature coefficient thermistor is generally called as thermistor. Thermistor is a semiconducting ceramic resistor produced by sintering the materials at high temperature,and mades from metal oxide as its main component.
Depending on the manufacturing method and the structure, there are many shapes and characteristics of thermistors, which is utilized for various purpose such as temperature measurement, temperature compensation and etc.
The thermistor resistance values, other than those especially noted, are classified at a standard temperature of 25°C
B constant is value calculated from the resistance values at 25°C and 85°C.

Resistance -Temperature Characteristics

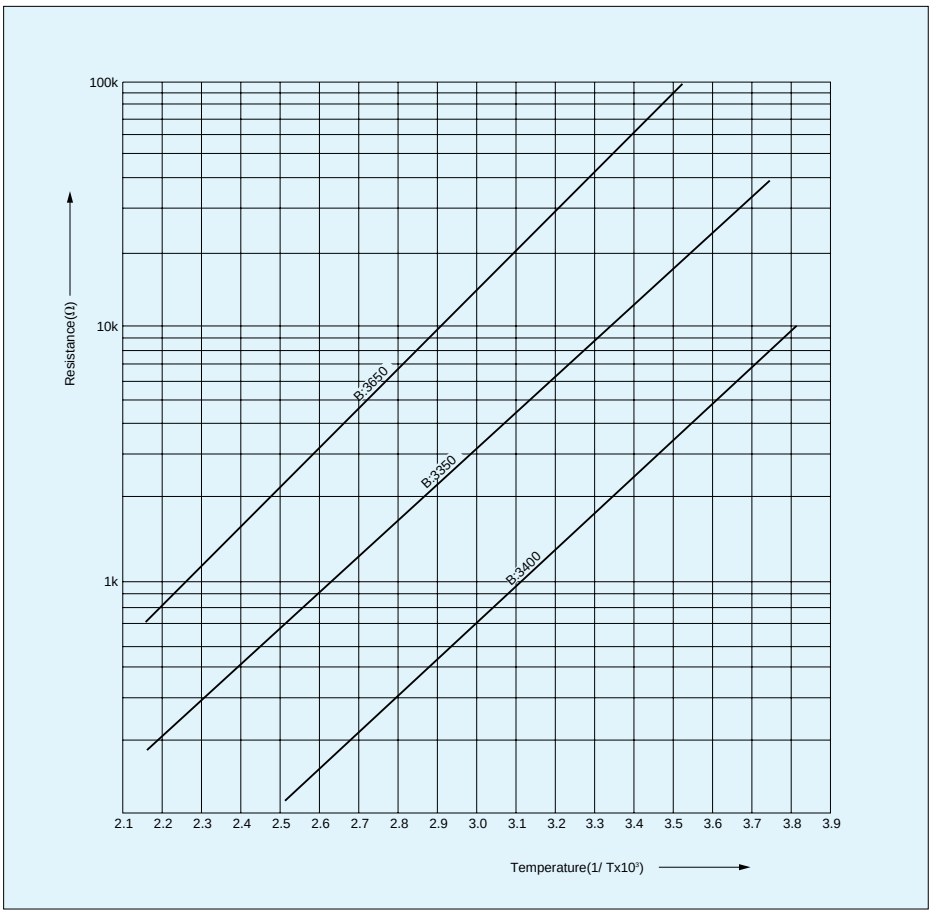
The resistance of a temperature is solely a function of its absolute temperature. Since electrical power being dissipated within a temperature might heat above its ambient temperature and thereby reduce its resistance, it is necessary to test for resistance with temperature. The resistance so measured is called RT, which means the resistance at essentially zero-power.
The mathematical expression which relates the resistance and the absolute temperature of a thermistor is as follows:

$$R_a = R_b \exp\left[B\left(\frac{1}{T_1} - \frac{1}{T_2}\right)\right]$$

Where: R_a is the resistance at absolute temperature T_1
R_b is the resistance at absolute temperature T_2
B is a constant which depends on the material of the thermistor

Unless otherwise specified,all values of B are determined from measurements made at 25°C and 85°C.
The temperature coefficient of resistance α is expressed in the following equation:

$$\alpha = -\frac{B}{T^2} \times 100\ (\%/°C)$$



Dissipation factor

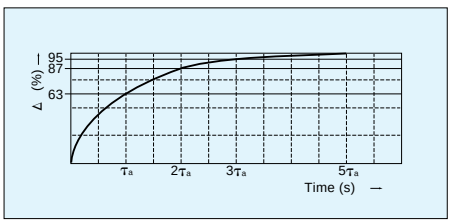
Dissipation factor (δ) is power in milliwatts required to raise thermistor temperature 1°C. Measured with thermistor suspended by its leads in a specified environment.

$$\delta = \frac{P}{\Delta t}\ (mW/°C)$$

P :Power(mW)
Δt:Raise temperature(°C)

Thermal time constant

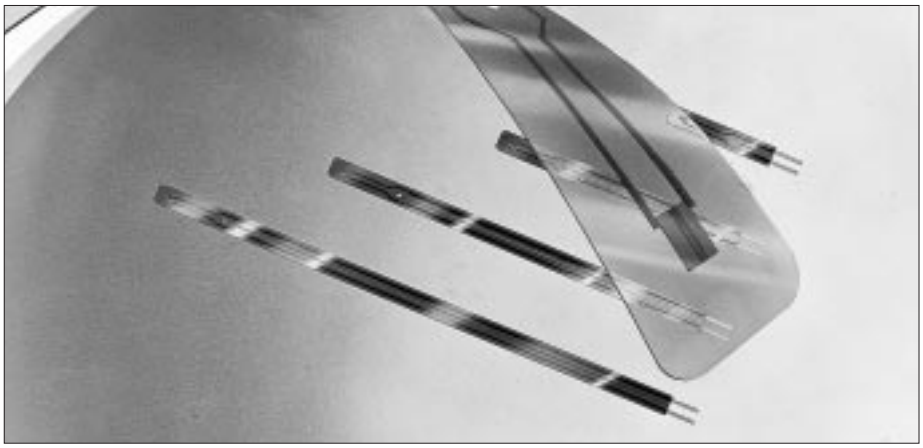
Thermal time constant (τ_a) is the time required by a thermistor to change 63% of the difference between its initial and final temperature. Measured with thermistor suspended by its leads in specified environment.



ULTIMATE THINNESS, JT THERMISTOR
500μm only

JT THERMISTOR

The JT thermistor is a new accurate thin NTC thermistor that offer electrical characteristics identical to those of the AT, a high precision themistor,The JT, IT, HT, ET, and AT all share identical characteristics and are interchangeable, thus selection of a thermistor can be made solely on the basis of required configuration, with no concern over change in design.

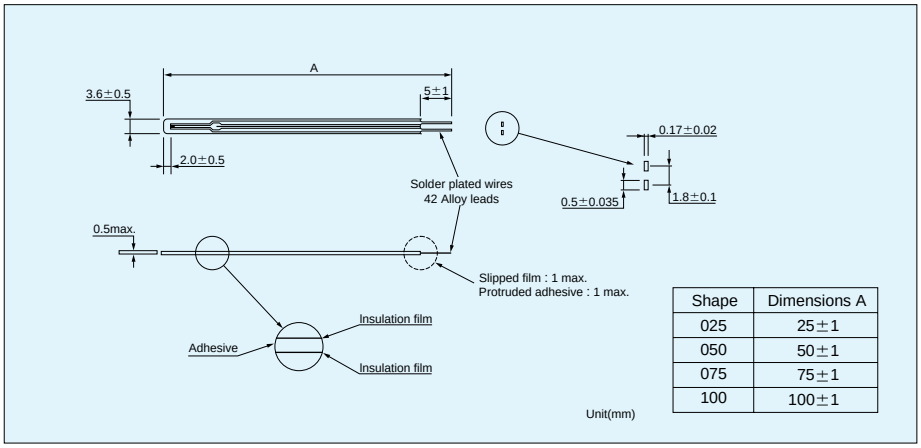


Part number

103 JT-025 A

- Insulation film
  - A : Polyester film×Polyester film
  - Nil: Polyester film×Polyimide film
- Shape
- JT thermistor
- Rated zero-power resistance at 25°C 103 : 10kΩ

Dimensions



Shape	Dimensions A
025	25±1
050	50±1
075	75±1
100	100±1

Unit(mm)

Resistance-Temperature

Temperature (°C)	Type	
	103JT	104JT
−50	367.7	9584
−40	204.7	4572
−30	118.5	2282
−20	71.02	1191
−10	43.67	647.2
0	27.70	365.0
10	18.07	212.5
20	12.11	127.7
30	8.301	78.88
40	5.811	50.03
50	4.147	32.51
60	3.011	21.61
70	2.224	14.66
80	1.668	10.13
90	1.267	7.135
100		5.111
110		3.720
120		2.746
125		2.371

Unit(kΩ)

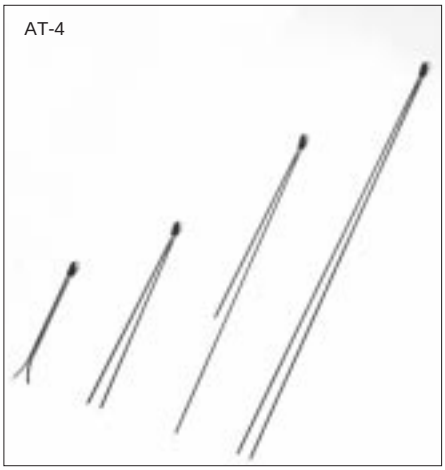
Specifications

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)
103JT-□□□	10kΩ±1%	3435K±1%	0.7	5	3.5	−50～90
103JT-□□□A	10kΩ±1%	3435K±1%	0.7	5	3.5	−50～90
104JT-□□□	100kΩ±1%	4390K±1%	0.7	5	3.5	−50～125

*1 R_{25} : Rated zero-power resistance value at 25°C, ±2% and 3% are also available.
*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.

AT THERMISTOR

The AT thermistor is a high-precision thermal sensing device featuring an 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 a temperature precision of ±0.3℃.
Temperature indicators and control instruments are now available for use with the thermistor.

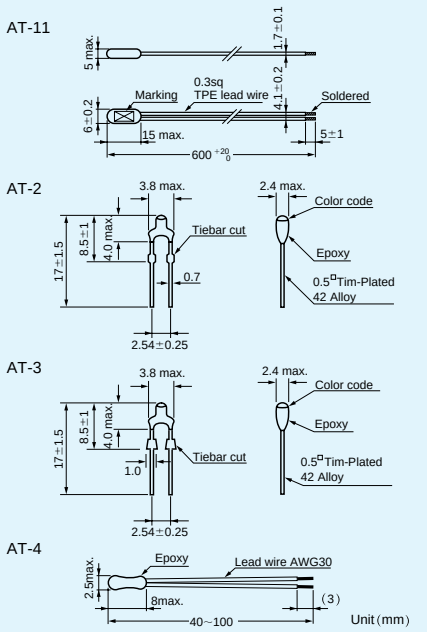


Part number

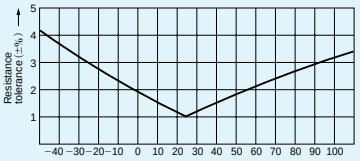
102 AT-2

- Shape
- High-precision AT thermistor
- Rated zero-power Resistance at 25℃ 102 : 1(kΩ)

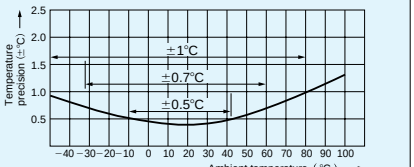
Dimensions



Resistance tolerance



Interchange precision



Specifications

Part No	R_{25}*1	B value*2	Dissipation factor (mW/ ℃)	Thermal time constant (s)*3	Rated power at 25℃ (mW)	Operating temp. range(℃)	Color code
102AT-2	1.0kΩ±1%	3100K±1%	2	15	10	−50~90	Black
202AT-2	2.0kΩ±1%	3182K±1%	2	15	10	−50~90	Red
502AT-2	5.0kΩ±1%	3324K±1%	2	15	10	−50~110	Yellow
103AT-2	10.0kΩ±1%	3435K±1%	2	15	10	−50~110	White
203AT-2	20.0kΩ±1%	4013K±1%	2	15	10	−50~110	None
503AT-2	50.0kΩ±3%	4060K±1%	2	15	10	−50~110	None
103AT-3	10.0kΩ±1%	3435K±1%	2	15	10	−50~110	White
103AT-4	10.0kΩ±1%	3435K±1%	2	10	10	−30~90	None
102AT-11	1.0kΩ±1%	3100K±1%	3	75	15	−50~90	None
202AT-11	2.0kΩ±1%	3182K±1%	3	75	15	−50~90	None
502AT-11	5.0kΩ±1%	3324K±1%	3	75	15	−50~105	None
103AT-11	10.0kΩ±1%	3435K±1%	3	75	15	−50~105	None

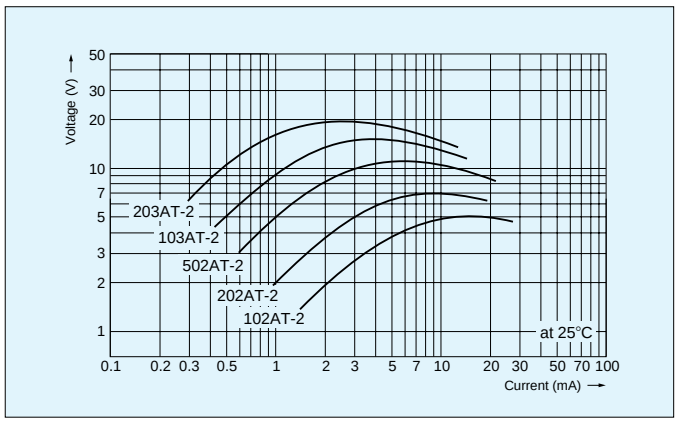
*1 R_{25} : Rated zero-power resistance value at 25℃.
*2 B value : determined by rated zero-power resistance at 25℃ and 85℃.
*3 Time when thermistor temperature reaches 63.2% of the temperature difference. The value is measured in the air.

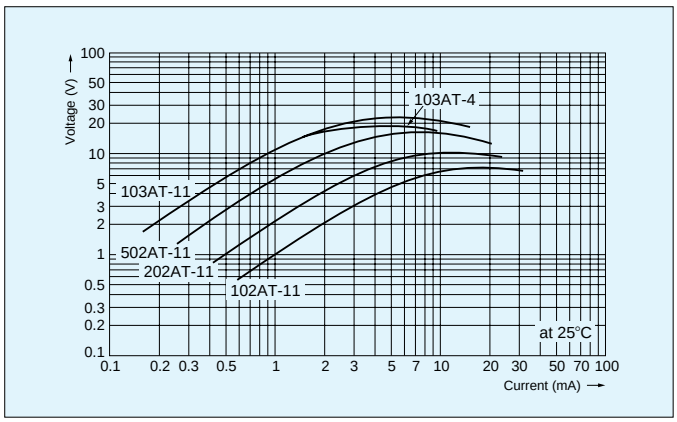
Resistance -Temperature

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

Unit(kΩ)

Voltage - Current Characteristics

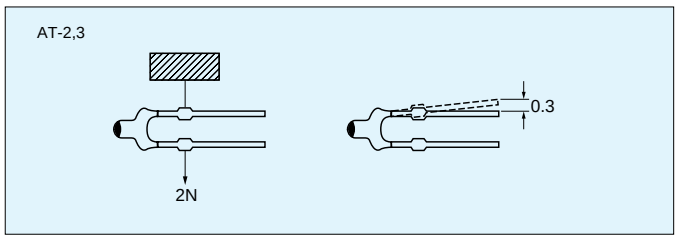




Notes

- To bend the lead wires, secure the lead wires at least 3mm away from the base of the epoxy coat by a cutting pliers and etc. and then bend the lead wire side, but not the epoxy coat side.

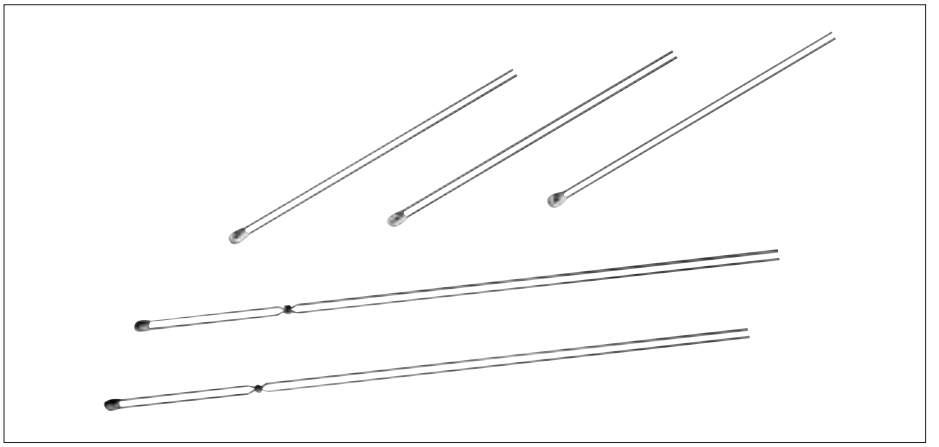
- Eliminate any event and/or circumstance where more than 2N pressure is applied to the lead wires in the direction shown by the arrow or where the lead is spread wide more than ±0.3mm from the original position.



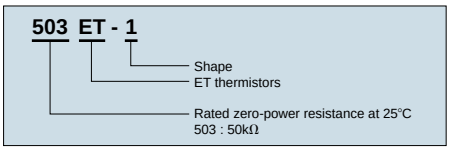
- The soldering time (the duration of the time) should be less than 7 seconds when a soldering iron with 50W power at 340°C is applied to the portion of the lead wire at least 5mm away from the thermistor body. (at the bottom of the epoxy resin)

ET THERMISTOR

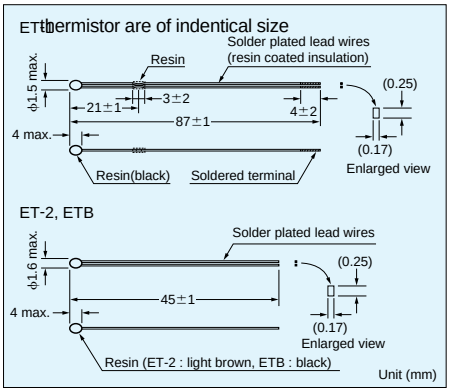
The ET thermistor is a smaller version of the AT thermistor. Its fast response time and high reliability makes it particularly suitable for use in medical equipment and thermometers. Manufactured by a fully automated production line, all ET in turn making automatic assembly of sensors possible.



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)
402ET-1(2)	4.0kΩ±3%	3100K±1%	0.7	3.2(3.4)	3.5	−40～ 90
103ET-1(2)	10.0kΩ±3%	3250K±1%	0.7	3.2(3.4)	3.5	−40～ 90
303ET-1(2)	30.0kΩ±3%	3760K±1%	0.7	3.2(3.4)	3.5	−40～100
403ET-1(2)	40.0kΩ±3%	3525K±1%	0.7	3.2(3.4)	3.5	−40～100
413ET-1(2)	41.0kΩ±3%	3435K±1%	0.7	3.2(3.4)	3.5	−40～100
503ET-1(2)	50.0kΩ±3%	4055K±1%	0.7	3.2(3.4)	3.5	−40～100
593ET-1(2)	59.0kΩ±3%	3617K±1%	0.7	3.2(3.4)	3.5	−40～100
833ET-1(2)	83.0kΩ±3%	4013K±1%	0.7	3.2(3.4)	3.5	−40～100
104ET-1(2)	100.0kΩ±3%	4132K±1%	0.7	3.2(3.4)	3.5	−40～ 90
224ET-1(2)	226.0kΩ±3%	4021K±1%	0.7	3.2(3.4)	3.5	−40～100
234ET-1(2)	232.0kΩ±3%	4274K±1%	0.7	3.2(3.4)	3.5	−40～100
103ETB	10.0kΩ±2%	3435K±1%	0.7	3.4	3.5	−40～ 90

*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											
	402ET	103ET	303ET	403ET	413ET	503ET	593ET	833ET	104ET	224ET	234ET	103ETB
−40	57.71	170.9	810.7	833.3	772.8	1602	1318	2664	3325	7005	9046	204.7
−30	35.34	102.2	445.1	481.1	456.5	855.0	754.3	1421	1769	3784	4680	118.5
−20	22.38	63.07	253.7	287.5	277.9	474.4	445.8	788.5	977.5	2116	2515	71.02
−10	14.60	40.08	149.8	177.2	174.1	272.7	271.7	453.0	559.0	1225	1401	43.67
0	9.797	26.16	91.30	112.4	111.7	161.9	170.1	269.3	329.8	730.1	808.2	27.70
10	6.737	17.51	57.31	73.00	73.63	99.13	109.4	164.8	200.5	447.8	480.2	18.07
20	4.736	11.99	37.00	48.61	49.57	62.38	72.10	103.6	125.3	282.1	293.7	12.11
30	3.394	8.387	24.47	33.08	34.08	40.24	48.55	66.91	80.27	182.1	184.4	8.301
40	2.476	5.988	16.56	22.96	23.89	26.58	33.41	44.18	52.62	120.3	118.6	5.811
50	1.835	4.353	11.45	16.26	17.06	17.93	23.44	29.80	35.23	81.07	78.00	4.147
60	1.378	3.217	8.070	11.70	12.38	12.33	16.73	20.51	24.00	55.75	52.39	3.011
70	1.049	2.414	5.791	8.569	9.135	8.588	12.15	14.37	16.59	39.01	35.87	2.224
80	0.7997	1.836	4.222	6.367	6.838	6.064	8.951	10.24	11.64	27.78	24.99	1.668
90	0.6145	1.416	3.125	4.797	5.190	4.338	6.697	7.419	8.287	20.10	17.72	1.267
100			2.346	3.662	3.990	3.142	5.077	5.459		14.75	12.75	

Unit (kΩ)

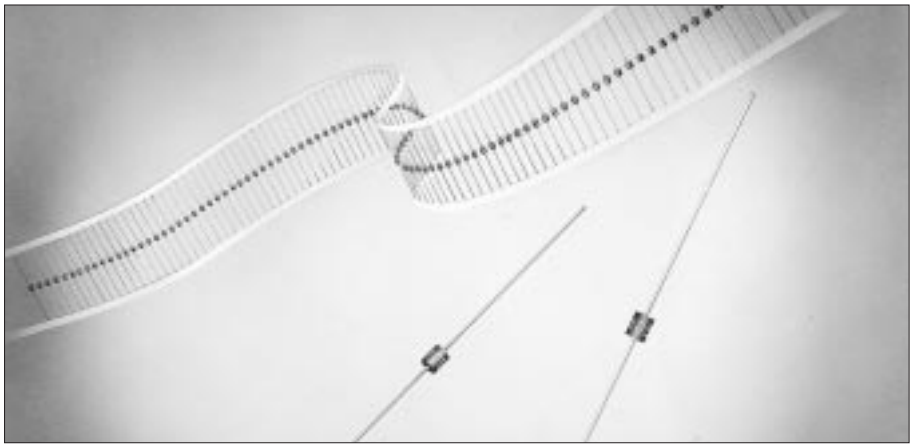
Specifications for clinical thermo-meter

Temperature (−C)	Type			
	503ET	833ET	224ET	234ET
R_{30}	40.22	67.04	182.4	184.5
R_{37}	30.00	50.00	136.0	135.0
R_{45}	21.75	36.25	98.56	95.87
$B_{30/45}$(K)	3953	3953	3958	4209

Unit (kΩ)

IT THERMISTOR

Our newly developed IT thermistors are axial leaded diode type packaged in high-density resin mold and featured strong against various operating environments.
We offer IT thermistor with ±2% tolerance for a resistance value of 25°C and ±1% for B value.
IT thermistors are the most appropriate device for accurate temperature control below 100°C.

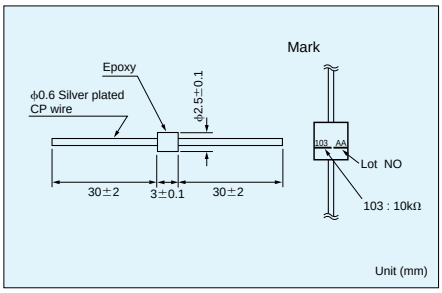


Part number

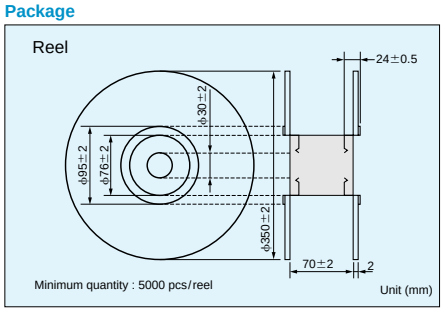
103 IT

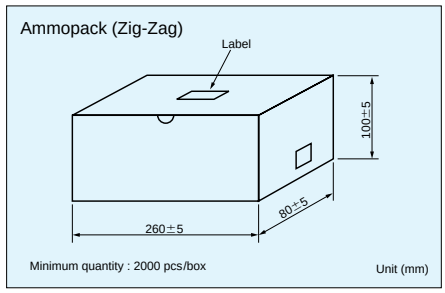
- IT thermistor
- Rated zero-power resistance at 25°C 103 : 10kΩ

Dimensions

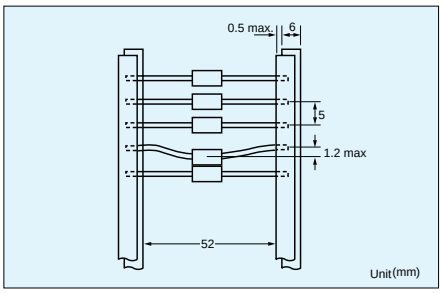


Package





Taping



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)
302IT	3.0kΩ±2%	3860K±1%	3.6	13.5	18.0	−50～125
502IT	5.0kΩ±2%	3860K±1%	3.6	13.5	18.0	−50～125
103IT	10.0kΩ±2%	3435K±1%	3.6	13.5	18.0	−50～100
203IT	20.0kΩ±2%	3760K±1%	3.6	13.5	18.0	−50～125
303IT	30.0kΩ±2%	3760K±1%	3.6	13.5	18.0	−50～125
503IT	50.0kΩ±2%	4055K±1%	3.6	13.5	18.0	−50～125
104IT	100.0kΩ±2%	4390K±1%	3.6	13.5	18.0	−50～125

★1 R_{25} : Rated zero-power resistance value at 25°C, ±1% and 3% are also available.
★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.

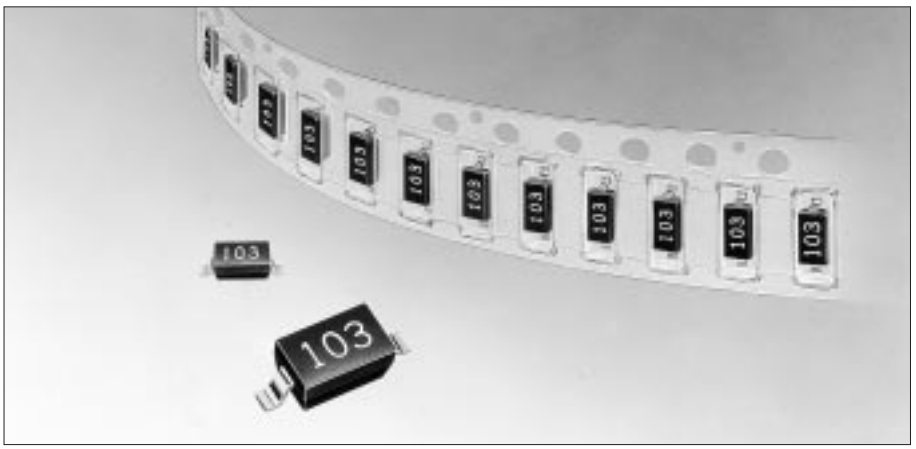
Resistance-Temperature

Temperature (°C)	Type							Temperature (°C)	Type						
	302IT	502IT	103IT	203IT	303IT	503IT	104IT		302IT	502IT	103IT	203IT	303IT	503IT	104IT
−50	182.1	303.4	367.7	1026	1539	3135	9584	50	1.109	1.849	4.147	7.632	11.45	17.93	32.51
−40	93.35	155.6	204.7	540.5	810.8	1602	4572	60	0.7744	1.291	3.011	5.380	8.070	12.33	21.61
−30	49.85	83.09	118.5	296.7	445.1	855.0	2282	70	0.5513	0.9189	2.224	3.861	5.792	8.588	14.66
−20	27.75	46.25	71.02	169.2	253.8	474.4	1191	80	0.4000	0.6667	1.668	2.815	4.223	6.064	10.13
−10	16.02	26.70	43.67	99.85	149.8	272.7	647.2	90	0.2951	0.4918	1.267	2.083	3.125	4.338	7.135
0	9.541	15.90	27.70	60.87	91.31	161.9	365.0	100	0.2210	0.3683	0.9753	1.564	2.346	3.142	5.111
10	5.876	9.793	18.07	38.21	57.32	99.13	212.5	110	0.1680	0.2800		1.190	1.785	2.302	3.720
20	3.728	6.214	12.11	24.66	36.99	62.38	127.7	120	0.1295	0.2158		0.9159	1.374	1.705	2.746
30	2.431	4.051	8.301	16.31	24.47	40.24	78.88	125	0.1142	0.1903		0.8067	1.210	1.472	2.371
40	1.623	2.705	5.811	11.04	16.56	26.58	50.03								

Unit (kΩ)

HT THERMISTOR

HT thermistors are an entirely new type of thermistor for surface mounting (by reflow soldering) and were acquired from breakthrough advancements in technology. Our HT thermistors are adapted metal electrodes packaged in a resin mold, unlike conventional chip themistors, and can offer ±2% tolerance for a resistance value at 25°C.
HT series (SMD Thermistor) is not only compact-surface mounting type but also highly accurate as well as highly reliable.

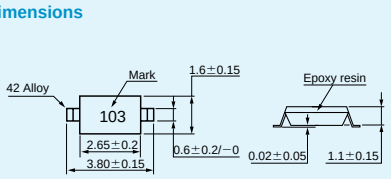


Part number

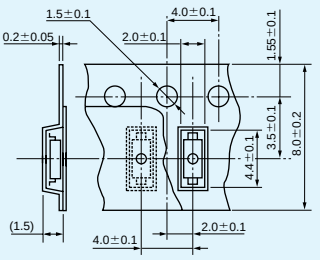
103 HT□-□□-TP
- TP: Taping HTF only
- □□: Tolerance of R_{25} 1P : ±1% 2P : ±2%
- HT□: Shape
- 103: Rated zero-power resistance at 25°C 103 : 10kΩ

HT

Dimensions

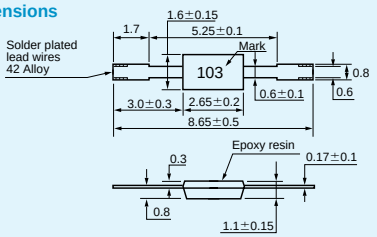


Taping

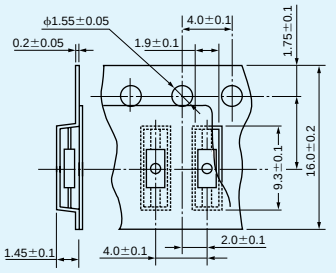


HTF

Dimensions

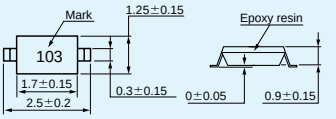


Taping

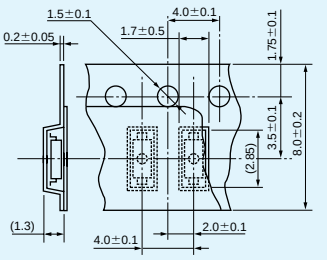


HTS

Dimensions



Taping



Minimum quantity:3000pcs/reel Unit (mm)

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)
302HT(F)	3.0kΩ±2%	3860K±1%	1.0	8.0	5.0	−50～125
502HT(F)	5.0kΩ±2%	3860K±1%	1.0	8.0	5.0	−50～125
103HT(F)	10.0kΩ±2%	3435K±1%	1.0	8.0	5.0	−50～100
203HT(F)	20.0kΩ±2%	3760K±1%	1.0	8.0	5.0	−50～125
303HT(F)	30.0kΩ±2%	3760K±1%	1.0	8.0	5.0	−50～125
503HT(F)	50.0kΩ±2%	4055K±1%	1.0	8.0	5.0	−50～125
104HT(F)	100.0kΩ±2%	4390K±1%	1.0	8.0	5.0	−50～125
103HTS	10.0kΩ±2%	3435K±1%	1.0	6.0	5.0	−50～100
503HTS	50.0kΩ±2%	4055K±1%	1.0	6.0	5.0	−50～125
104HTS	100.0kΩ±2%	4390K±1%	1.0	6.0	5.0	−50～125

★1 R_{25} : Rated zero-power resistance value at 25°C, ±1% and 3% are also available.
★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.

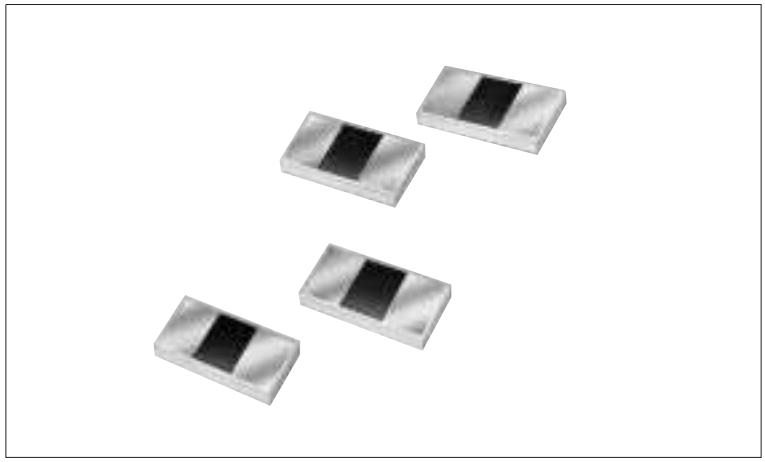
Resistance-Temperature

Temperature (°C)	Type							Temperature (°C)	Type						
	302HT	502HT	103HT	203HT	303HT	503HT	104HT		302HT	502HT	103HT	203HT	303HT	503HT	104HT
−50	182.1	303.4	367.7	1026	1539	3135	9584	50	1.109	1.849	4.147	7.632	11.45	17.93	32.51
−40	93.35	155.6	204.7	540.5	810.8	1602	4572	60	0.7744	1.291	3.011	5.380	8.070	12.33	21.61
−30	49.85	83.09	118.5	296.7	445.1	855.0	2282	70	0.5513	0.9189	2.224	3.861	5.792	8.588	14.66
−20	27.75	46.25	71.02	169.2	253.8	474.4	1191	80	0.4000	0.6667	1.668	2.815	4.223	6.064	10.13
−10	16.02	26.70	43.67	99.85	149.8	272.7	647.2	90	0.2951	0.4918	1.267	2.083	3.125	4.338	7.135
0	9.541	15.90	27.70	60.87	91.31	161.9	365.0	100	0.2210	0.3683	0.9753	1.564	2.346	3.142	5.111
10	5.876	9.793	18.07	38.21	57.32	99.13	212.5	110	0.1680	0.2800		1.190	1.785	2.302	3.720
20	3.728	6.214	12.11	24.66	36.99	62.38	127.7	120	0.1295	0.2158		0.9159	1.374	1.705	2.746
30	2.431	4.051	8.301	16.31	24.47	40.24	78.88	125	0.1142	0.1903		0.8067	1.210	1.472	2.371
40	1.623	2.705	5.811	11.04	16.56	26.58	50.03								

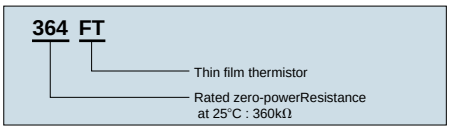
Unit (kΩ)

FT THERMISTOR

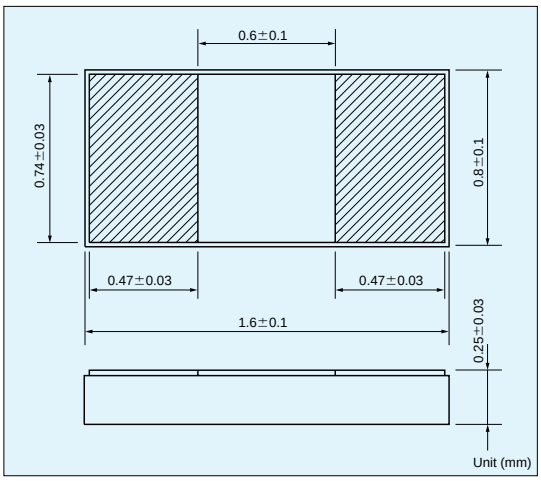
The FT thermistors, the highly reliable thermistors, are characterised by their fast response time, which was made possible by the miniaturzation of the thermistor dimensions. FT thermistors are also heat-resistant type. FT thermistors are the most excellent products of today's chip thermistors manufacturing.



Part number



Dimensions



Connect the FTs to the electrodes using conductive epoxy resins. The FTs cannot be soldered onto the electrodes.

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)
364FT	360.0kΩ±5%	3370K±3%	0.4	3.5	2	−20~250

*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

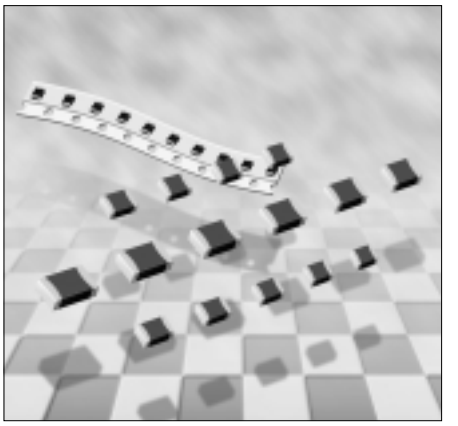
Temperature (°C)	Part No. 364FT	Temparature (°C)	Part No. 364FT	Temperature (°C)	Part No. 364FT	Temperature (°C)	Part No. 364FT
−20	2416.0	50	151.5	120	22.83	190	5.849
−15	1903.0	55	129.2	125	20.38	195	5.385
−10	1512.0	60	110.8	130	18.24	200	4.967
−5	1209.0	65	95.21	135	16.40	205	4.587
0	974.3	70	82.18	140	14.78	210	4.244
5	787.5	75	71.24	145	13.35	215	3.928
10	641.4	80	62.00	150	12.09	220	3.641
15	526.1	85	54.08	155	10.97	225	3.381
20	434.4	90	47.37	160	9.979	230	3.144
25	360.0	95	41.60	165	9.084	235	2.928
30	299.7	100	36.67	170	8.287	240	2.731
35	250.9	105	32.42	175	7.576	245	2.548
40	211.3	110	28.75	180	6.939	250	2.381
45	178.5	115	25.58	185	6.365		

Unit (kΩ)

New

SMD type chip

Chip thermistors are specially processed, highly reliable thermistors.
They can be face-bonded to act as thermal compensators for ICs and they are manufactured in sizes down to 1 square mm, they can also be used to detect temperature with relatively small time constants.



Part number

103 KT 2125 - □□

- 1P:±1%,2P:±2%,3P:±3%
- Dimension(EIAJ) 2125 : Fig1 1005:Fig3 1608 : Fig2
- Chip thermistor
- Rated zero-power resistance at 25°C 103:10kΩ

Precautions

- Do not expose the thermistors to high soldering heat for more than specified time. (260°C for not longer than 10s is recommended)

Dimensions

Fig1 2125(EIA : 0805) type

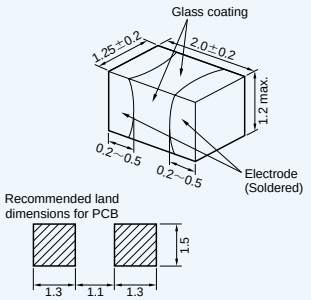


Fig2 1608(EIA : 0603) type

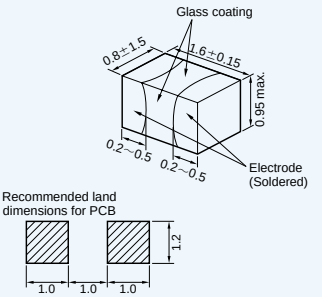
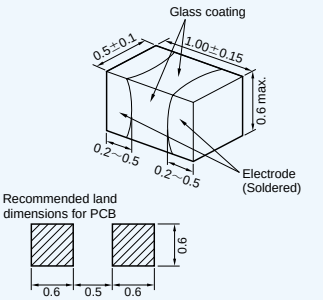
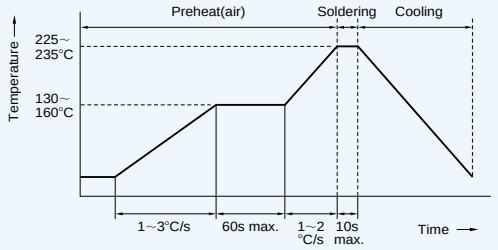


Fig3 1005(EIA : 0402) type

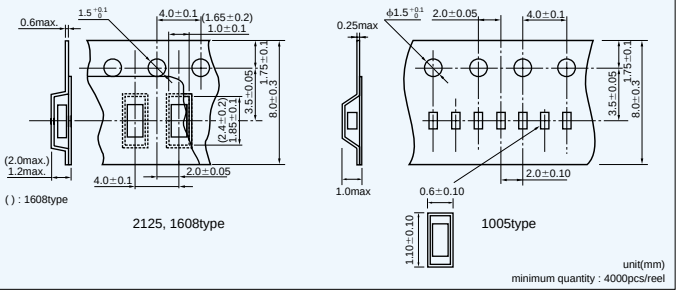


Unit(mm)

Reflow soldering profile



Taping

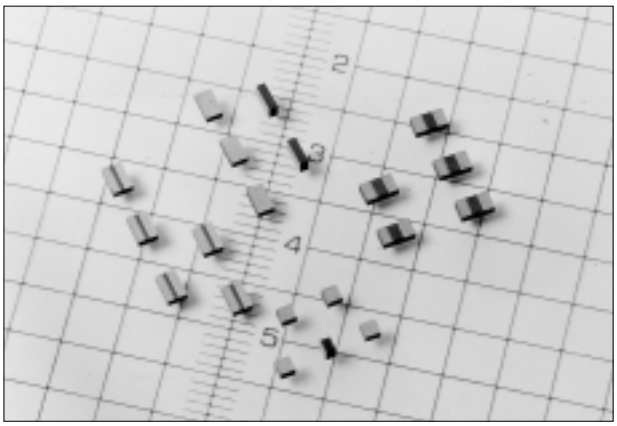


Specifications

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)
103KT2125	10kΩ	3435K±1%	1.0	7.5	5.0	−40~125
103KT1608	10kΩ	3435K±1%	0.9	5.0	4.5	−40~125
103KT1005	10kΩ	3435K±1%	0.7	2.2	3.5	−40~125
503KT1608	50kΩ	4055K±1%	0.9	5.0	4.5	−40~125
104KT1608	100kΩ	4390K±1%	0.9	5.0	4.5	−40~125

*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.

Chip THERMISTOR



Part number

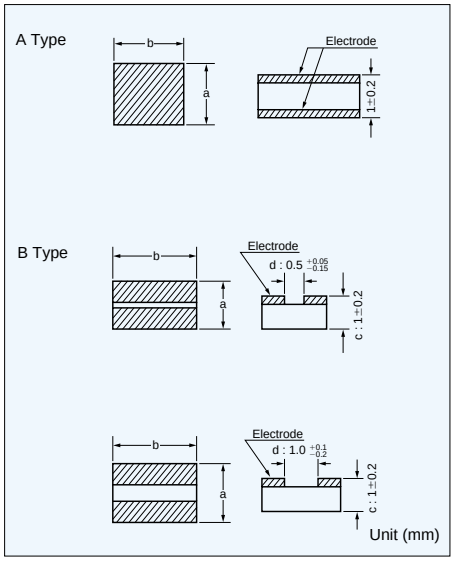
1K C 5-2040

- Dimension a×b (2.0mm×4.0mm)
- Dimension d (0.5mm)
- Chip thermistor
- Rated zero-power resistance at 25°C 10K:10kΩ

Precautions

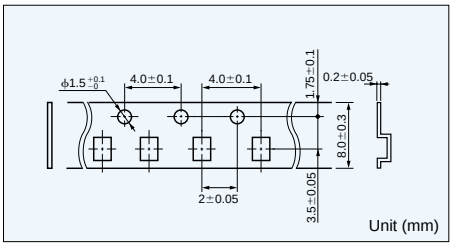
- The thermistors are not moisture, so store them in a dry place.
- Do not expose the thermistors to high soldering heat for more than specified time.(220°C for not longer than 5 sec. is recommended)

Dimensions



Taping

Some types can be taped in the following shape :



Minimum quantity: 3000pcs/reel

Specifications

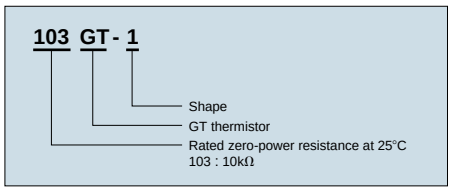
A Type			B Type(d=0.5)			B Type(d=1.0)		
Part No	R_{25}*1	B value*2	Part No	R_{25}*1	B value*2	Part No	R_{25}*1	B value*2
500C0-1717	0.5kΩ±10%	3250K±5%	500C5-2039	0.5kΩ±10%	3250K±5%	–	–	–
1KC0-1717	1.0kΩ±10%	3400K±5%	1KC5-2040	1.0kΩ±10%	3400K±5%	1KC10-3239	1.0kΩ±10%	3250K±5%
2KC0-1212	2.0kΩ±10%		2KC5-2020	2.0kΩ±10%		2KC10-3220	2.0kΩ±10%	
5KC0-1111	5.0kΩ±10%	3500K±5%	5KC5-2012	5.0kΩ±10%	3500K±5%	5KC10-3224	5.0kΩ±10%	3500K±5%
10KC0-1717	10.0kΩ±10%	3850K±5%	10KC5-2038	10.0kΩ±10%	3850K±5%	10KC10-3212	10.0kΩ±10%	
20KC0-1212	20.0kΩ±10%		20KC5-2019	20.0kΩ±10%		20KC10-3238	20.0kΩ±10%	3850K±5%

★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.
Operating temp. range: −30~110°C

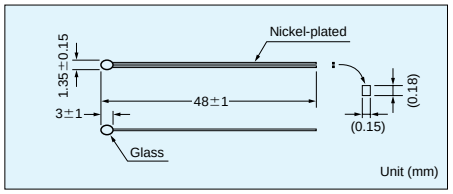
GT THERMISTOR

GT thermistor is combined both superior feature of BT thermistor and ET thermistor as fast response time, high reliability, wide category temperature range, high moisture proof, high accuracy and reasonable price.
GT thermistor is made up of a high quality thermistor element and the lead wire is connected to the thermistor element by alloyed technology, and glass coating for the thermistor element.

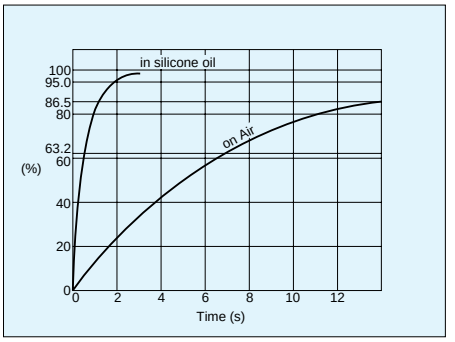
Part number

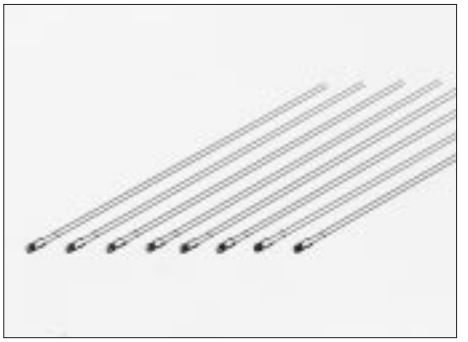


Dimensions



Time constant





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)
102GT-1	1.0kΩ±3%	3305K±2%	0.6	7(0.6)	3	−50～200
202GT-1	2.0kΩ±3%	3838K±2%	0.6	7(0.6)	3	−50～300
502GT-1	5.0kΩ±3%	3964K±2%	0.6	7(0.6)	3	−50～300
103GT-1	10.0kΩ±3%	4126K±2%	0.6	7(0.6)	3	−50～300
203GT-1	20.0kΩ±3%	4282K±2%	0.6	7(0.6)	3	−50～300
503GT-1	50.0kΩ±3%	4288K±2%	0.6	7(0.6)	3	−50～300
104GT-1	100.0kΩ±3%	4267K±2%	0.6	7(0.6)	3	−50～300
204GT-1	200.0kΩ±3%	4338K±2%	0.6	7(0.6)	3	−50～300
504GT-1	500.0kΩ±3%	4562K±2%	0.6	7(0.6)	3	−50～300
105GT-1	1000.0kΩ±3%	4608K±2%	0.6	7(0.6)	3	−50～300

*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. (silicone oil)

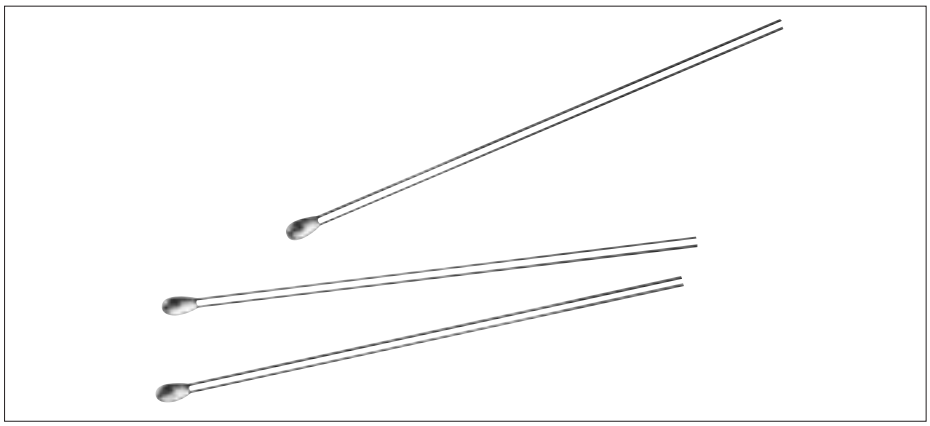
Resistance-Temperature

Temperature (°C)	Type									
	102GT	202GT	502GT	103GT	203GT	503GT	104GT	204GT	504GT	105GT
−50	32.57	111.3	342.1	825.1	1901	4613	8743			
−40	18.48	61.34	175.4	405.3	909.0	2199	4218	8810		
−30	10.84	33.69	92.54	206.6	453.2	1100	2132	4436	12091	
−20	6.594	18.79	50.44	109.9	236.6	576.2	1127	2329	6268	
−10	4.144	10.82	28.49	60.72	128.3	315.1	620.0	1272	3372	6920
0	2.675	6.424	16.66	34.82	72.32	178.8	353.7	720.3	1880	3833
10	1.773	3.939	10.06	20.66	42.24	104.9	208.6	421.8	1083	2190
20	1.203	2.489	6.264	12.64	25.47	63.52	126.8	254.6	642.3	1289
30	0.8354	1.618	4.019	7.968	15.82	39.62	79.36	158.2	391.9	780.9
40	0.5918	1.080	2.651	5.164	10.10	25.37	50.96	100.8	245.4	485.2
50	0.4273	0.7390	1.792	3.436	6.620	16.64	33.49	65.85	157.5	309.0
60	0.3141	0.5170	1.239	2.341	4.444	11.16	22.51	43.99	103.3	201.2
70	0.2347	0.3695	0.8753	1.631	3.050	7.645	15.44	29.98	69.20	133.6
80	0.1782	0.2693	0.6304	1.159	2.138	5.338	10.80	20.82	47.23	90.53
90	0.1373	0.1998	0.4624	0.8391	1.527	3.795	7.686	14.71	32.84	62.49
100	0.1072	0.1507	0.3450	0.6181	1.111	2.742	5.556	10.57	23.22	43.90
110	0.08483	0.1154	0.2614	0.4626	0.8209	2.014	4.082	7.720	16.68	31.34
120	0.06787	0.08973	0.2010	0.3514	0.6160	1.501	3.043	5.720	12.15	22.69
130	0.05488	0.07068	0.1566	0.2706	0.4686	1.133	2.298	4.296	8.976	16.65
140	0.04483	0.05638	0.1236	0.2111	0.3613	0.8662	1.758	3.269	6.719	12.39
150	0.03697	0.04550	0.09865	0.1666	0.2820	0.6704	1.360	2.516	5.091	9.330
160	0.03077	0.03715	0.07967	0.1330	0.2226	0.5247	1.064	1.958	3.903	7.107
170	0.02584	0.03065	0.06501	0.1073	0.1777	0.4149	0.8414	1.539	3.024	5.472
180	0.02189	0.02556	0.05358	0.08741	0.1432	0.3314	0.6714	1.222	2.367	4.255
190	0.01869	0.02151	0.04457	0.07186	0.1166	0.2673	0.5408	0.9796	1.871	3.339
200	0.01610	0.01826	0.03741	0.05960	0.09573	0.2174	0.4393	0.7919	1.492	2.644
210			0.03167	0.04986	0.07929	0.1784	0.3597	0.6455	1.200	2.113
220			0.02703	0.04204	0.06620	0.1475	0.2969	0.5303	0.9726	1.702
230			0.02324	0.03573	0.05570	0.1230	0.2468	0.4389	0.7946	1.382
240			0.02014	0.03059	0.04722	0.1032	0.2065	0.3658	0.6539	1.131
250			0.01759	0.02640	0.04030		0.1740	0.3068	0.5418	0.9323
260							0.1475	0.2591	0.4519	0.7735
270							0.1258	0.2201	0.3793	0.6459
280							0.1079	0.1881	0.3203	0.5424
290							0.09305	0.1616	0.2720	0.4583
300							0.08065	0.1396	0.2323	0.3894

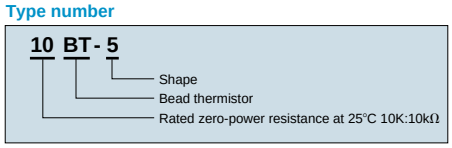
Unit (kΩ)

BT THERMISTOR

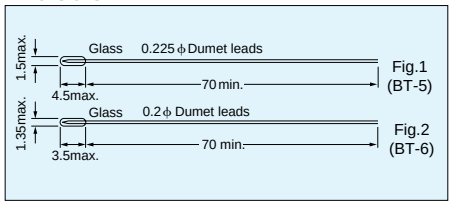
The BT thermistor is a small themal sensing device providing high reliability, stable characteristics and a wide operating range of−50°C to 300°C.
It is used in various applications including medical apparatus, industrial equipment and home electric appliances.



Type number



Dimensions



Specifications

Type	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)
1BT-5	1.000kΩ±10%	3,250K±3%	0.5	4~12	2.5	−50~150
2BT-5	2.000kΩ±10%	3,420K±3%	0.5	4~12	2.5	−50~300
5BT-5(6)	5.000kΩ±10%	3,450K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
9BT-5(6)	9.000kΩ±10%	3,470K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~150
10BT-5(6)	10.00kΩ±10%	3,250K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
20BT-5(6)	20.00kΩ±10%	3,330K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
30BT-5(6)	30.00kΩ±10%	3,450K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
40BT-5(6)	40.00kΩ±10%	3,550K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
100BT-5(6)	100.0kΩ±10%	3,750K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
400BT-5(6)	400.0kΩ±10%	4,050K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
500BT-5(6)	500.0kΩ±10%	3,760K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300
1.3MBT-5(6)	1300kΩ±10%	4,380K±3%	0.5(0.4)	4~12(3~8)	2.5(2)	−50~300

⋆1 R_{25} : Rated zero-power resistance value at 25°C, ±5% are also availabie.
⋆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

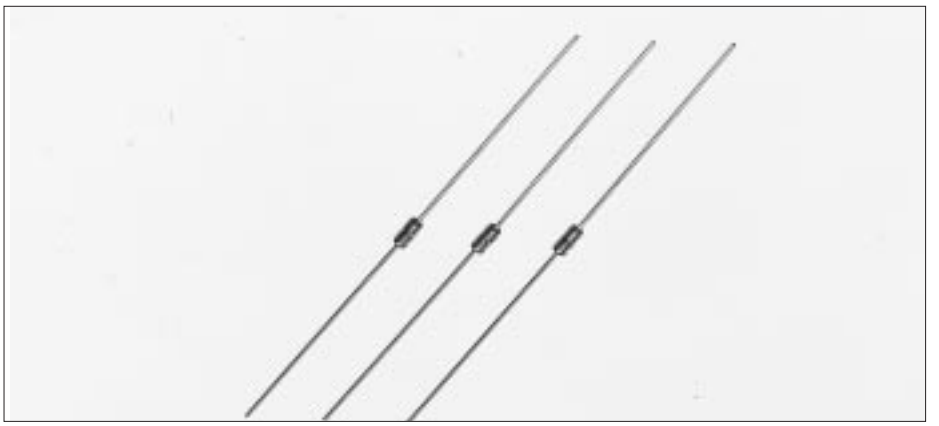
Resistance-Temperature

Temparature (°C)	Type											
	1BT	2BT	5BT	9BT	10BT	20BT	30BT	40BT	100BT	400BT	500BT	1.3MBT
−50	29.87	70.71		344.8	284.8	686.7			4860			
−40	17.33	40.02		190.3	163.4	383.1			2599	11043		
−30	10.35	23.28		109.1	97.62	222.6			1439	6198		
−20	6.374	13.96	35.44	64.81	60.41	134.2		306.8	827.4	3573		
−10	4.038	8.640	21.84	39.70	38.63	83.61		184.7	491.1	2109		8066
0	2.629	5.513	13.87	25.15	25.45	53.75	83.80	115.0	301.4	1274	1486	4598
10	1.755	3.610	9.057	16.36	17.22	35.53	54.46	73.88	190.1	788.4	945.3	2718
20	1.200	2.421	6.060	10.92	11.92	24.09	36.37	48.77	123.1	498.7	614.7	1652
25	1.000	2.000	5.000	9.000	10.00	20.00	30.00	40.00	100.0	400.0	500.0	1300
30	0.8380	1.661	4.148	7.456	8.434	16.70	24.88	33.00	81.71	322.4	408.9	1029
40	0.5973	1.163	2.898	5.200	6.084	11.81	17.39	22.82	55.39	212.8	277.7	656.0
50	0.4338	0.8311	2.065	3.698	4.456	8.511	12.40	16.10	38.31	143.3	192.1	427.8
60	0.3205	0.6043	1.497	2.677	3.303	6.248	8.990	11.57	27.00	98.24	135.3	284.5
70	0.2407	0.4468	1.104	1.970	2.460	4.658	6.629	8.457	19.38	68.52	96.90	193.0
80	0.1834	0.3357	0.8267	1.473	1.850	3.522	4.962	6.279	14.14	48.50	70.47	133.0
90	0.1417	0.2559	0.6280	1.117	1.405	2.698	3.767	4.730	10.48	34.91	52.00	92.76
100	0.1110	0.1978	0.4836	0.8581	1.078	2.093	2.897	3.611	7.866	25.47	38.90	65.53
110	0.08789	0.1547	0.3771	0.6685	0.8355	1.640	2.255	2.792	5.968	18.83	29.49	46.91
120		0.1224	0.2975	0.5264	0.6540	1.296	1.774	2.182	4.580	14.10	22.63	34.03
130		0.09789	0.2373	0.4191	0.5171	1.027	1.410	1.727	3.551	10.68	17.55	25.02
140		0.07908	0.1913	0.3369	0.4126	0.8190	1.130	1.378	2.782	8.180	13.76	18.59
150		0.06450	0.1556	0.2735	0.3321	0.6581	0.9113	1.107	2.201	6.332	10.90	13.99
160			0.1278		0.2696	0.5327	0.7374	0.8943	1.757	4.957	8.717	10.63
170			0.1058		0.2207	0.4345	0.5997	0.7252	1.416	3.915	7.034	8.163
180			0.08836		0.1818	0.3567	0.4909	0.5915	1.150	3.120	5.722	6.336
190			0.07432		0.1508	0.2947	0.4048	0.4859	0.9418	2.508	4.692	4.965
200			0.06295		0.1258	0.2451	0.3360	0.4018	0.7770	2.032	3.876	3.926
210					0.1056	0.2052	0.2808	0.3344	0.6458	1.658	3.225	3.131
220							0.2360	0.2802	0.5403	1.363	2.702	2.517
230							0.1995	0.2361	0.4551	1.127	2.277	2.039
240							0.1695	0.2000	0.3855	0.9390	1.930	1.663
250							0.1447	0.1704	0.3286	0.7864	1.644	1.366
260							0.1243	0.1458	0.2816	0.6626	1.407	1.129
270							0.1072	0.1255	0.2426	0.5613	1.209	0.9398
280							0.09283	0.1084	0.2100	0.4780	1.041	0.7871
290							0.08078	0.09408	0.1826	0.4091	0.8995	0.6628
300							0.07060	0.08200	0.1595	0.3518	0.7810	0.5612

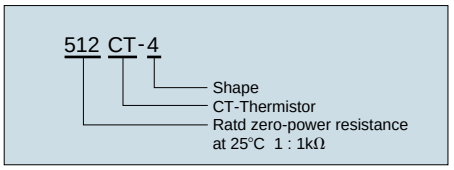
Unit(kΩ)

CT THERMISTOR

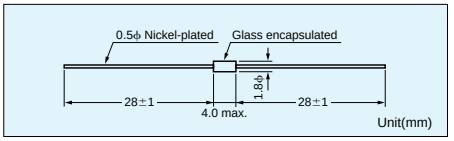
The CT thermistor is a thermal sensor in a DO35 package. Similar to the BT thermistor, it is highly reliable and offers a wide operating range of −50°C to 250°C. It is primarily used in home electric appliances and features a competitive price due to a fully automated production method.



Part number



Dimensions



To allow automatic insertion, this product can be taped.

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)
252CT-4	2.5kΩ±5%	3670K±2%	2.1	10~20	10.5	−50~250
512CT-4	5.1kΩ±5%	3200K±2%	2.1	10~20	10.5	−50~200
562CT-4	5.6kΩ±5%	3200K±2%	2.1	10~20	10.5	−50~200
912CT-4	9.1kΩ±5%	3270K±2%	2.1	10~20	10.5	−50~250
103CT-4	10.0kΩ±5%	3270K±2%	2.1	10~20	10.5	−50~250
113CT-4	11.0kΩ±5%	3270K±2%	2.1	10~20	10.5	−50~250
203CT-4	20.0kΩ±5%	3410K±2%	2.1	10~20	10.5	−50~250
473CT-4	47.0kΩ±5%	3610K±2%	2.1	10~20	10.5	−50~250
513CT-4	51.0kΩ±5%	3610K±2%	2.1	10~20	10.5	−50~250
563CT-4	56.0kΩ±5%	3610K±2%	2.1	10~20	10.5	−50~250
104CT-4	100.0kΩ±5%	3450K±2%	2.1	10~20	10.5	−50~250
204CT-4	200.0kΩ±5%	3500K±2%	2.1	10~20	10.5	−50~250

*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

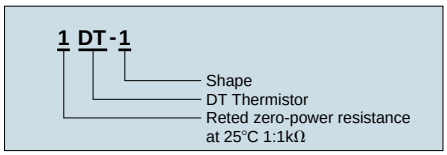
Temperature (°C)	Type											
	252CT	512CT	562CT	912CT	103CT	113CT	203CT	473CT	513CT	563CT	104CT	204CT
−50	120.2	137.9	151.4									
−40	65.60	81.02	88.96									
−30	36.48	48.93	53.73	94.62	104.0	114.4						
−20	20.91	30.56	33.55	58.02	63.76	70.13						
−10	12.32	19.65	21.58	36.67	40.29	44.32	81.00					
0	7.516	12.96	14.23	23.82	26.18	28.79	52.63	127.1	138.0	151.5	272.2	553.6
10	4.738	8.779	9.639	15.92	17.49	19.24	35.15	84.16	91.32	100.3	179.4	362.5
20	3.074	6.080	6.676	10.91	11.99	13.18	24.01	56.86	61.70	67.75	120.9	242.5
30	2.045	4.296	4.717	7.626	8.381	9.219	16.74	39.01	42.33	46.47	83.11	165.7
40	1.393	3.095	3.398	5.441	5.980	6.578	11.88	27.07	29.37	32.25	58.23	115.3
50	0.9698	2.267	2.489	3.952	4.342	4.777	8.570	19.05	20.67	22.70	41.52	81.91
60	0.6895	1.687	1.852	2.918	3.206	3.527	6.239	13.58	14.74	16.18	30.14	59.14
70	0.4993	1.270	1.394	2.184	2.400	2.640	4.581	9.807	10.64	11.68	22.19	43.36
80	0.3680	0.9650	1.060	1.656	1.820	2.002	3.401	7.187	7.798	8.559	16.57	32.28
90	0.2757	0.7402	0.8128	1.269	1.394	1.534	2.553	5.327	5.781	6.348	12.52	24.33
100	0.2098	0.5735	0.6298	0.9787	1.076	1.183	1.937	3.997	4.337	4.762	9.586	18.57
110	0.1620	0.4493	0.4933	0.7605	0.8357	0.9193	1.489	3.040	3.298	3.622	7.434	14.36
120	0.1267	0.3559	0.3908	0.5952	0.6540	0.7194	1.156	2.337	2.535	2.784	5.827	11.24
130	0.1003	0.2847	0.3126	0.4702	0.5168	0.5684	0.9075	1.815	1.969	2.162	4.619	8.900
140	0.08028	0.2298	0.2524	0.3750	0.4121	0.4533	0.7191	1.425	1.546	1.698	3.694	7.108
150	0.06494	0.1870	0.2053	0.3016	0.3314	0.3646	0.5752	1.129	1.226	1.346	2.982	5.732
160	0.05302	0.1534	0.1684	0.2444	0.2686	0.2955	0.4638	0.9031	0.9799	1.076	2.428	4.666
170	0.04369	0.1267	0.1391	0.1996	0.2193	0.2413	0.3771	0.7280	0.7899	0.8674	1.992	3.829
180	0.03630	0.1055	0.1158	0.1643	0.1805	0.1986	0.3091	0.5919	0.6422	0.7052	1.647	3.168
190	0.03039	0.08833	0.09699	0.1362	0.1496	0.1646	0.2552	0.4849	0.5261	0.5777	1.371	2.641
200	0.02562	0.07445	0.08175	0.1136	0.1249	0.1374	0.2122	0.4000	0.4341	0.4766	1.149	2.216
210				0.09541	0.1049	0.1153	0.1777	0.3324	0.3607	0.3961	0.9697	1.871
220				0.08063	0.08860	0.09746	0.1497	0.2780	0.3016	0.3312	0.8235	1.591
230				0.06853	0.07531	0.08284	0.1269	0.2339	0.2538	0.2787	0.7033	1.360
240				0.05857	0.06436	0.07080	0.1082	0.1979	0.2147	0.2358	0.6038	1.169
250				0.05031	0.05529	0.06082	0.09271	0.1683	0.1827	0.2006	0.5208	1.010

Unit(kΩ)

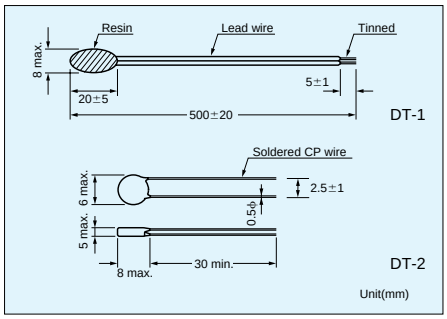
DT THERMISTOR

The DT thermistor used for room temperature controls, is applied in accordance with several operating conditions as opposed to actually compensating temperature. This high quality, stable thermistors can be employed for temperature control sensing between −50°C and 100°C.

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)
1DT-1(2)	1.0kΩ±5%	3230K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
2DT-1(2)	2.0kΩ±5%	3230K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
5DT-1(2)	5.0kΩ±5%	3330K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
10DT-1(2)	10.0kΩ±5%	3330K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
20DT-1(2)	20.0kΩ±5%	3280K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
30DT-1(2)	30.0kΩ±5%	3280K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
50DT-1(2)	50.0kΩ±5%	4870K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)
100DT-1(2)	100.0kΩ±5%	4870K±3%	8.5(5.0)	60(25)	42(25)	−50~100(110)

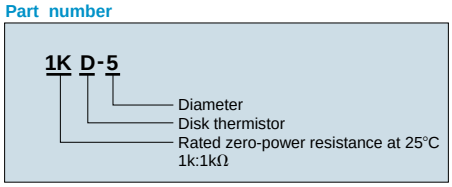
*1 R_{25} : Rated zero-power resistance value at 25°C.
*2 B value : determined by rated zero-power resistance at 25°C and 85°C.
*3 Time when thermistor temperature reaches 63.2% of the temperature difference. The value is measured in the air.

TEMPERATURE COMPENSATION

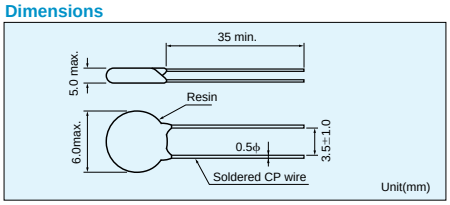
D THERMISTOR

The D thermistor, based on resistance changes, is used in transistor, coil and other such temperature compensating circuits found in TV's, radio, etc.

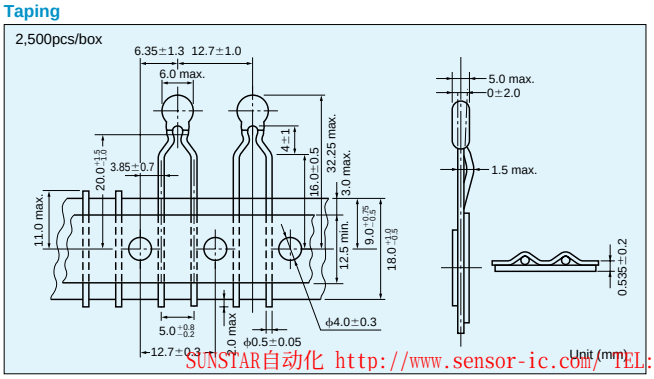
Part number



Dimensions



Taping



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)
50D-5	50.0Ω±15%	3250K±5%	3.5	13	297	−40~+110
80D-5	80.0Ω±15%	3300K±5%	3.5	13	297	−40~+110
100D-5	100.0Ω±15%	3300K±5%	3.5	13	297	−40~+110
200D-5	200.0Ω±15%	3400K±5%	3.5	13	297	−40~+110
250D-5	250.0Ω±15%	3450K±5%	3.5	13	297	−40~+110
300D-5	300.0Ω±15%	3500K±5%	3.5	13	297	−40~+110
360D-5	360.0Ω±15%	3550K±5%	3.5	13	297	−40~+110
500D-5	500.0Ω±15%	3650K±5%	3.5	13	297	−40~+110
800D-5	800.0Ω±15%	3850K±5%	3.5	13	297	−40~+110
1KD-5	1.0kΩ±15%	3950K±5%	3.5	13	297	−40~+110
1.5KD-5	1.5kΩ±15%	3950K±5%	3.5	13	297	−40~+110
2KD-5	2.0kΩ±15%	4000K±5%	3.5	13	297	−40~+110
5KD-5	5.0kΩ±15%	4100K±5%	3.5	13	297	−40~+110
8KD-5	8.0kΩ±15%	4200K±5%	3.5	13	297	−40~+110
10KD-5	10.0kΩ±15%	4200K±5%	3.5	13	297	−40~+110
15KD-5	15.0kΩ±15%	4250K±5%	3.5	13	297	−40~+110
20KD-5	20.0kΩ±15%	4300K±5%	3.5	13	297	−40~+110
25KD-5	25.0kΩ±15%	4300K±5%	3.5	13	297	−40~+110
50KD-5	50.0kΩ±15%	4650K±5%	3.5	13	297	−40~+110
100KD-5	100.0kΩ±15%	4850K±5%	3.5	13	297	−40~+110

*1 R_{25} : Rated zero-power resistance value at 25°C, ±10% are also available.
*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.

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