THERMISTOR SPECIFICATIONS

1) SCOPE

This specifications define rating, dimensions, insulation, climatic sequence and mechanical characteristics for AT type thermistor.

2) PART NO. : **103AT-2**

3) RATING

3-1) Rated zero-power resistance. R_{25} : 10 kΩ ± 1 % (at 25 ℃)

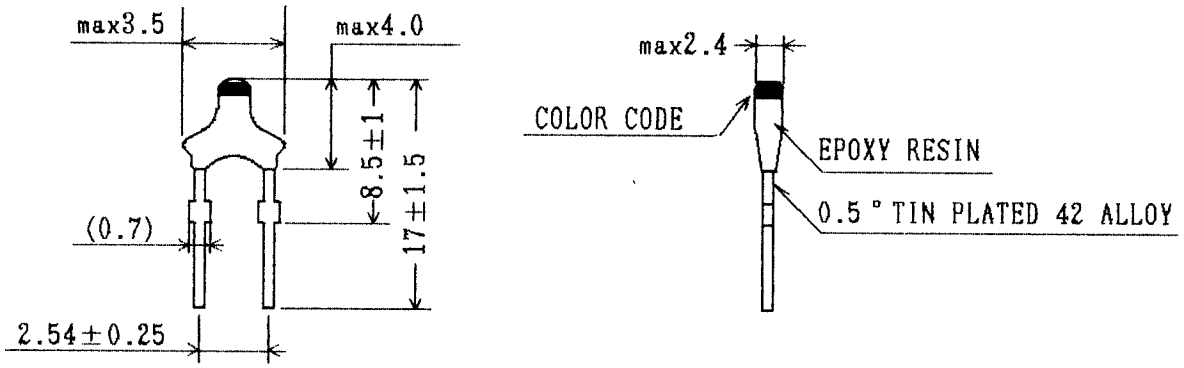
3-2) B value. $B_{25/85}$: 3,435 K ± 1 %

* The B value is calculated using the zero-power resistance values measured at 25℃ and 85℃.

3-3) Dissipation factor.	: Approx. 2	mW/℃	(in air)
3-4) Thermal time constant.	: Approx. 15	s	(in air)
3-5) Maximum power rating.	: 10	mW	(at 25℃)
3-6) Category temperature range (= Operating temperature range)	: −50 ～ 110	℃	

4) DIMENSIONS

UNIT:[mm]



COLOR CODE : White (This indicates 103AT-2 thermistor.)

Spec.NO.: STANDARD-01	Note		REVISION	
Date: NOV.13,1992			A	
Approved 92.11.13 会田	Checked 92.11.13 石川	Drawn K.KUMADA	B	
			C	

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5) INSULATION

5-1) Insulation resistance

Insulation resistance of the test samples shall be over 100 MΩ when it is measured at DC 500V between coated area and lead wires.

6) CLIMATIC TEST

6-1) Dry heat

After the test samples were exposed in air at 110 ℃ for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ± 1% of the initial value.

6-2) Damp heat

After the test samples were exposed in the humidity of 95% at 40℃ for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ± 1% of the initial value.

6-3) Cold

After the test samples were exposed in air at −55℃ for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ±1% of the initial value.

6-4) Humidity load

After DC 1mA current was applied to the test samples in the temperature of 40℃ and the humidity of 95% for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ± 1% of the initial value.

6-5) Change of temperature

One cycle of the change of temperature shall be carried out in the order of the following conditions.

- Room ambient temperature. (Initial value)
- At −30℃, for 30 minutes.
- Room ambient temperature, for 3 minutes.
- At + 90℃, for 30 minutes.
- Room ambient temperature. for 3 minutes.

After 100 cycles of change of temperature, the change ratio of the rated zero-power resistance shall be within ±1% of the initial value.

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6-6) High temperature load

After DC 1mA current was applied to the test samples in the temperature of 110℃ for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ± 1% of the initial value.

7) MECHANICAL CHARACTERISTICS

7-1) Robustness of terminations

Ua: Tensile

After 2 kgf loading weight for 10 seconds was applied to the wire terminations, there shall be no visible damage.

7-2) Free fall

After one time natural fall to a maple board from 1 m high, there shall be no visible damage.

7-3) Resistance to soldering heat

After lead wire of the test samples were dipped one time within 8.5 mm from end of lead wire in solder bath at 260℃ ± 10℃ for 10 ± 0.5 seconds, the change ratio of the rated zero-power resistance shall be within ± 1% of the initial value.

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