THERMISTOR SPECIFICATIONS

1) SCOPE

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

2) PART NO. : 203AT-2

3) RATING

3-1) Rated zero-power resistance. R_{25} : 20 kΩ ± 1 % (at 25 ℃)

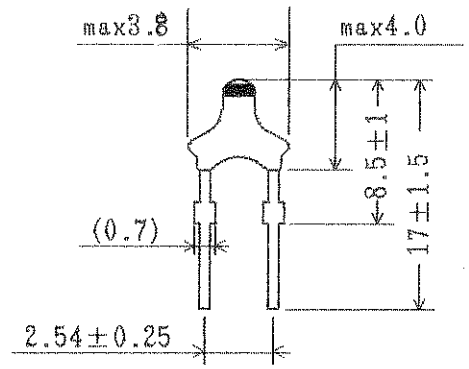
3-2) B value. $B_{25/85}$: 4,013 K ± 1 %

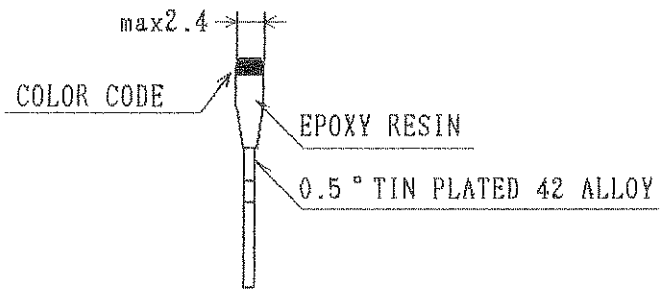
* The B value is calculated using the zero-power resistance values measured at 25℃ and 85℃.

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 : Nil

Spec.NO.: STANDARD-01	Note		REVISION	
Date: NOV.13,1992			A	
Approved 92.11.13	Checked 92.11.13	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 SEQUENCE

6-1) Dry heat

After the test samples were exposed in air at 90 ℃ 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 70℃ 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 70℃ 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. (Inital value)
- At −30℃, for 30 minites.
- Room ambiant temperature, for 3 minites.
- At + 90℃, for 30 minites.
- Room ambiant temperature. for 3 minites.

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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7) MECHANICAL CHARACTERISTICS

7-1) Robustness of terminations

Ua: Tensile

After 0.2 kgf loading weight for 3 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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