




THERMISTOR SPECIFICATIONS

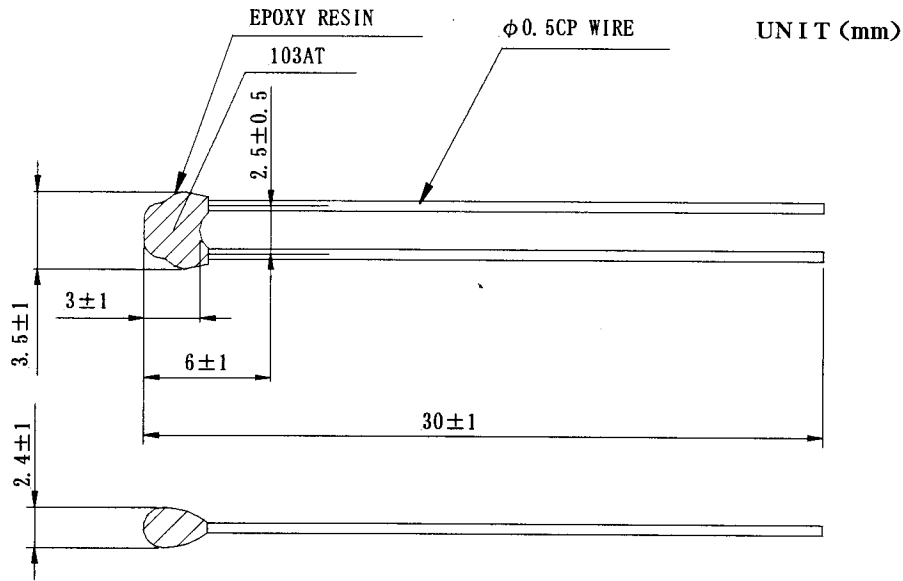
1. Scope
This specification defines rating, dimensions, electrical properties, mechanical properties and climatic properties for "AT" type thermistor.

2. Part No. **103AT-5**
3. Rating
 - 3.1 Rated zero-power resistance R_{25} 10.0 k Ω \pm 1% (at 25°C)
 - 3.2 Rated B-value $B_{25/85}$ 3 435 K \pm 1%
(The Rated B-value is calculated from the zero-power resistance values measured at 25°C and 85°C.)
 - 3.3 Dissipation factor Approx. 2.5mW/°C (in still air at 25°C)
(Measured at our lab, according to JIS C 2570 13.7/ IEC 60539)
 - 3.4 Thermal time constant Approx. 15 sec. (in still air)
(The time required for thermistor temperature to reach 63.2% of the differences between the initial temperature and ambient temperature when thermal equilibrium is plunged to the state of zero power. Measured according to JIS C 2570 13.8)
 - 3.5 Maximum power 12.5mW (in still air at 25°C)
(Including self-heat of approx. 5°C)

4. Operating temperature ranges -50°C~110°C

Spec.No : S01-0302	Note	REVISION		
Date : Dec. 6, 2001		A		
Approved 	Checked 	Drawn 	B	
			C	

5. Dimensions

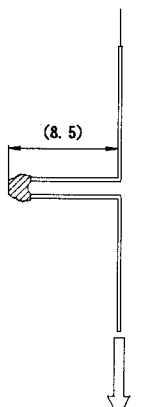


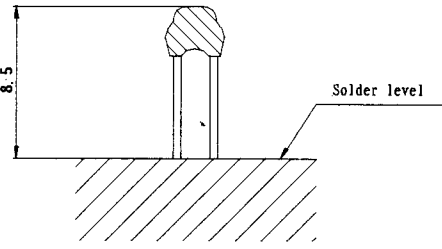
6. Electric properties

	Item	Test Conditions	Criteria
6.1	Voltage proof	AC 1 000V 1 min. or AC 1 200V 1 sec.	Cut-off current : 1mA
6.2	Insulation	DC 500V	Over100MΩ

All electric property tests are carried out between the top of the epoxy coat area and lead-wire

7. Mechanical properties

	Item	Test Conditions	Criteria
7.1	Robustness of Terminations	2N load for 3 sec. as per below:  2N (3 sec.)	Variation of resistance at 25°C and Rated B-value after test shall be within ±1% of those of the initial values. No visible damage

	Item	Test Conditions	Criteria
7.2	Free fall	From 1 meter high to the maple or the like board	Variation of resistance at 25°C and Rated B-value after test shall be within ±1% of those of the initial values.
7.3	Resistance to soldering heat	<p>The lead-wires below more than 8.5mm from the top of the epoxy coating part shall be dipped in the soldering bath at 260°C ± 10°C for 5 ± 1 sec.</p>  <p>In case of a soldering iron, the 350°C ± 5°C of the iron shall be applied to the point of the lead-wire below more than 8.5mm from the top of the epoxy coating part less than 2 sec.</p>	
7.4	Solderability	After applying the flux JIS C2570 specified, the lead-wires are to be dipped in the soldering bath at 235°C ± 5°C for 2 ± 0.5 sec.	The soldered area shall be covered with the solder more than 90%.

8. Climatic properties

	Item	Test Conditions	Criteria
8-1	Dry Heat	At 110°C ± 3°C for 1 000 hrs. and then in room temperature for 1 hour.	Variation of resistance at 25°C and Rated B-value after test shall be within ±1% of those of the initial values.
8-2	Humidity	at 40°C ± 3°C, 90 to 95%RH for 1 000 hrs and then in room temperature for 1 hour	
8-3	High temperature load	at 110°C ± 3°C with the DC 1mA load for 1 000 hrs. and then in room temperature for 1 hour.	
8-4	Humidity load	at 40°C ± 3°C, 90 to 95%RH with the DC 1mA load for 1 000 hrs and then in room temperature for 1 hour.	
8-5	Temperature Cycling	<p>100 times in the following order and conditions and then in room temperature for 1 hour</p> <p>"Room temperature (Initial value)"</p> <p>"-30°C ± 3°C for 5 min"</p> <p>"Room temperature for 3 min".</p> <p>"90°C ± 3°C for 5 min."</p> <p>"Room temperature for 3 min".</p>	

9. Specified Brominated Flame Retardants

No prohibited materials, PBBE (Poly Bromo Phenyl Ethers) contained in.

10. Ozone-Depleting Substances

No prohibited materials, ODS (Class I, Class II) contained in.

Spec. NO.	S01-0302
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