SPECIFICATIONS

Part No. : 103AT-4B-40294

Spec. No. : S04-0294

CHECKED BY	SUBMITTED BY

SEMITEC Ishizuka Electronics Corporation

様式 QA124-4

SPECIFICATIONS	Customer's Part No. ;	Approved	Checked	Drawn
Application ; Battery pack	Part No. ; 103AT-4B-40294	Mar.31.'05 J.Suzuki	Mar.31.'05 K.Idigai	Mar.31.'05 Y.Ohtsuka

1. Scope
This specification defines ratings, dimensions, electrical properties, mechanical properties and climatic properties for this thermistor.

2. Part No.

103AT-4B-40294

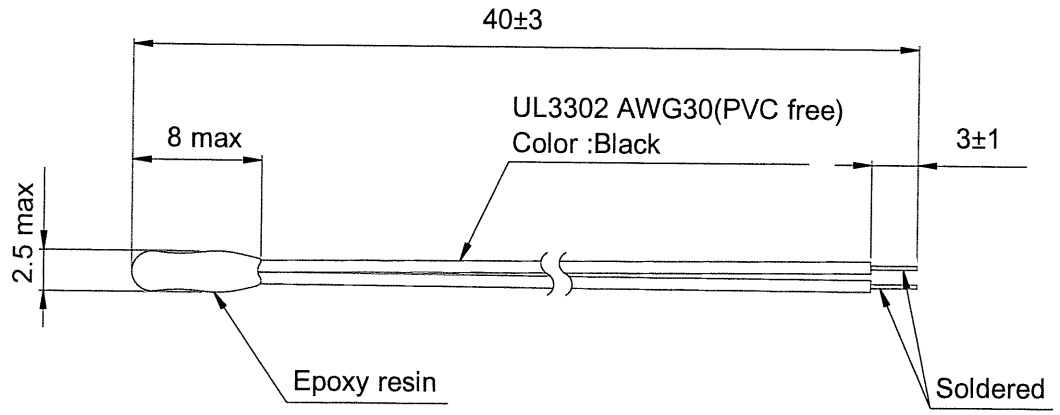
3. Ratings

Items	Ratings	Remarks
3.1 Rated zero-power resistance R_{25}	10.0kΩ	Zero-power resistance is measured at 25℃
3.2 Tolerance of rated zero-power resistance R_{25}	±1%	
3.3 Rated B-value $B_{25/85}$	3 435K	B-value is calculated with the zero-power resistance values measured at 25℃ and 85℃
3.4 Tolerance of rated B-value $B_{25/85}$	±1%	
3.5 Dissipation factor	Approx.2 mW/℃	In still air at 25℃
3.6 Thermal time constant	Approx.10 s	In still air
3.7 Rated power	10 mW	Measured in still air at 25℃, permissible self-heat of approx. 5 ℃

4. Operating temperature range −30℃～90℃

5. Dimensions

Unit (mm)



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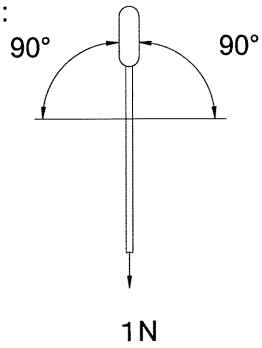
6. Electrical properties

Items	Test conditions	Criteria
6.1 Voltage proof	AC 100V 1s	Less than 1mA
6.2 Insulation resistance	DC 100V	Minimum 100MΩ

Test voltage shall be applied between the top of the epoxy coated area and terminals of lead-wire.

7. Mechanical properties

Items	Test conditions	Criteria
7.1 Robustness of terminations (Tensile to horizontal direction)	Hold the epoxy resin so that the lead-wire shall be in a horizontal position. After 5N loading weight was applied to the lead-wire horizontal for 1minute. 	The change ratio of R_{25} and $B_{25/85}$ shall be within ±1% of the initial value.
7.2 Robustness of terminations (Bending)	Hold the epoxy resin with applying 1N loading weight of tensile force to the lead wire vertically. Two consecutive bends shall be applied to the thermistor body as follows; ① Bend it to 90°and then return to the original position. ② Bend it same as ① in the opposite direction. Bending: 	
7.3 Free fall	Three times of free-fall to a maple board from 1m high.	
7.4 Resistance to soldering heat	Terminals of lead-wire shall be immersed into a soldering bath at 260℃±5℃ for 10s±1s.	
7.5 Solderability	Using flux specified in JIS C2570, lead-wires of a test sample shall be immersed one time into a soldering bath at 245℃±5℃ for 2s±0.5s.	The area soldered newly shall be more than 90%.

8. Climatic properties

Items	Test conditions	Criteria
8.1 Cold	At −30℃±2℃ for 1 000hours.	After stored at room temperature and humidity for 1hour, the change ratio of R_{25} and $B_{25/85}$ shall be within ±2% of the initial value. (Room temperature and humidity:25℃ ±10℃,25%−75% RH)
8.2 Dry heat	At 90℃±2℃ for 1 000hours.	
8.3 Damp heat	At 40℃±2℃,90%−95%RH for 1 000hours.	
8.4 Humidity load	At 40℃±2℃,90%−95%RH with the DC 1mA for 1 000hours.	
8.5 Rapid change of temperature	One cycle of rapid change of temperature shall be proceeded in order of the following conditions. ・At −20℃±2℃ for 5minutes. ・At room temperature for 1minute. ・At 70℃±2℃ for 5minutes. ・At room temperature for 1minute. 100cycles of rapid change of temperature are applied to a test sample.	

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Revision records

Revision No.	Date	Revised by	Revision item	Former specification	New specification
A					
B					
C					
D					
E					
F					
G					
H					
I					
J					