

THERMISTOR SPECIFICATIONS

1. Scope

This specification defines rating, dimensions, electrical properties, mechanical properties and climatic properties for the following part.

2. Part No. **103AP-2**

3. Rating

3.1 Rated zero-power resistance R25 10.0 k ohm +/-0.5% (at 25 deg C)

3.2 Rated B-value B25/85 3 435 K +/- 0.5%
(The Rated B-value is calculated from the zero-power resistance values measured at 25 deg C and 85 deg C.)

3.3 Dissipation factor Approx. 1.0mW/deg C (in still air at 25 deg C)
(Measured according to JIS C 2570 13.7)

3.4 Thermal time constant Approx. 15.0 s (in still air)
(A constant that represents the time required for the temperature of a thermistor to change by 63.2% of the difference between the original temperature and the ambient temperature when the load current of the thermistor is abruptly changed from non-zero-power state to zero-power state. Measured according to JIS C 2570 13.8)

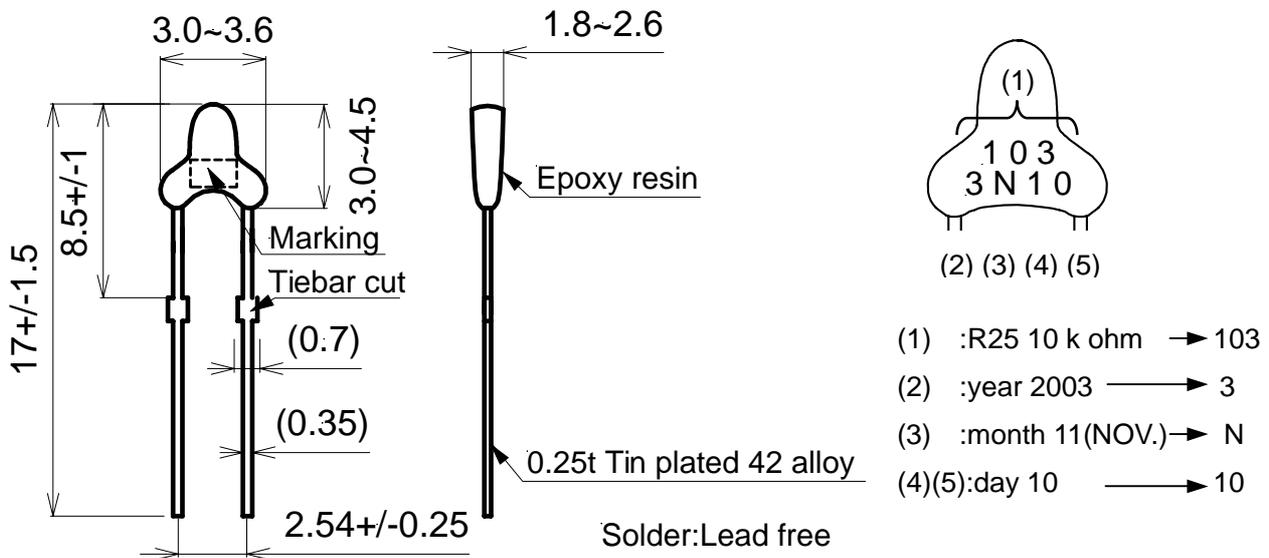
3.5 Maximum power 5.0mW (in still air at 25 deg C)
(Including self-heat of approx. 5 deg C)

4. Operating temperature ranges -60 deg C ~ +150 deg C

Spec.No : S03-0239		Note	Revision	
Date : NOV. 10, 2003			A	
Approved	Checked	Drawn	B	
H.ISHIDA	M.FUKUMOTO	M.MIYAKE	C	

5. Dimensions

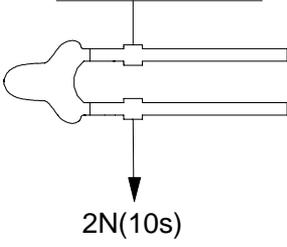
Unit: mm



6. Electric properties

	Item	Test Conditions	Criteria
6.1	Voltage proof	AC 1 200V x 1 s (Cut-off current: 1mA)	No visible damage
6.2	Insulation	Measured at DC 500V between the coated area and lead-wires.	Over 100M ohm

7. Mechanical properties

	Item	Test Conditions	Criteria
7.1	Robustness of Terminations	2N load for 10s as shown below: 	Variation of Rated zero-power resistance at 25 deg C and Rated B-value after test shall be within +/-0.5% of those of the initial values. No visible damage except the bend of the lead wire due to the 2N load.
7.2	Free fall	From 1 meter high to the maple or the like board.	Variation of Rated zero-power resistance at 25 deg C and Rated B-value after test shall be within +/-0.5% of those of the initial values.
7.3	Resistance to soldering heat	The lead-wires to be dipped into the soldering bath at 260 deg C+/-5 deg C for 10s+/-1s. In case of a soldering iron, the 350 deg C+/-5 deg C of the iron shall be applied to the area of the lead-wires below the tiebar-cut for 3s+/-0.5s.	
7.4	Solderability	After applying the flux specified in JIS C2570 , the lead-wires are to be dipped in the soldering bath at 245 deg C+/-5 deg C for 2s+/-1s.	Soldered area, more than 90%

Spec. NO.	S03-0239
-----------	----------

8. Climatic properties

	Item	Test Conditions	Criteria
8.1	Dry Heat	At 150 deg C+/-3 deg C for 1 000 hours and then stored at room temperature and humidity for 1 hour.	Variation of Rated zero-power resistance at 25 deg C and Rated B-value after test shall be within +/-0.5% of those of the initial values.
8.2	Cold	At -60 deg C+/-3 deg C for 1 000 hours and then stored at room temperature and humidity for 1 hour.	Variation of Rated zero-power resistance at 25 deg C and Rated B-value after test shall be within +/-0.5% of those of the initial values.
8.3	Damp Heat	At 40 deg C+/-3 deg C, 90%RH~95%RH for 1 000 hours and then stored at room temperature and humidity for 1 hour.	
8.4	Damp load	At 40 deg C+/-3 deg C, 90%RH~95%RH with the DC 1mA load for 1 000 hours and then stored at room temperature and humidity for 1 hour.	
8.5	Temperature Cycling	100 times in the following order and conditions and then stored at room temperature and humidity for 1 hour "Room temperature (Initial value)" "-60 deg C+/-3 deg C for 30min". "Room temperature for 3min". " 150 deg C+/-3 deg C for 30min". "Room temperature for 3min".	