

# SPECIFICATIONS

Part No. : EC2F103A2-40113

Spec. No. : S07-D010

CHECKED BY	SUBMITTED BY

**SEMITEC**<sup>®</sup> *Ishizuka Electronics Corporation*

様式 QA124-4

<b>SPECIFICATIONS</b>	Customer's Part No. ; _____	Approved	Checked	Drawn
	Application ; _____	Part No. ; EC2F103A2-40113	Nov. 19. '07 Y. Suzuki	Nov. 19. 2007 J. Kogure

1. Scope

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

2. Part No.

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3. Ratings

Items	Ratings	Remarks
3.1 Rated zero-power resistance R25	10k Ω	Zero-power resistance at 25°C
3.2 Tolerance of rated zero-power resistance R25	±1%	
3.3 Rated B-value B25/85	3435K	B-value is calculated with the zero-power resistance values at 25°C and 85°C
3.4 Tolerance of rated B-value B25/85	±1%	
3.5 Dissipation factor	Approx.3 mW/°C	In still air at 25°C
3.6 Thermal time constant	Approx.80seconds.	In still air
3.7 Rated power	15 mW	In still air at 25°C,Including self-heat of approx. 5°C

4. Operating temperature range      -40°C~110°C

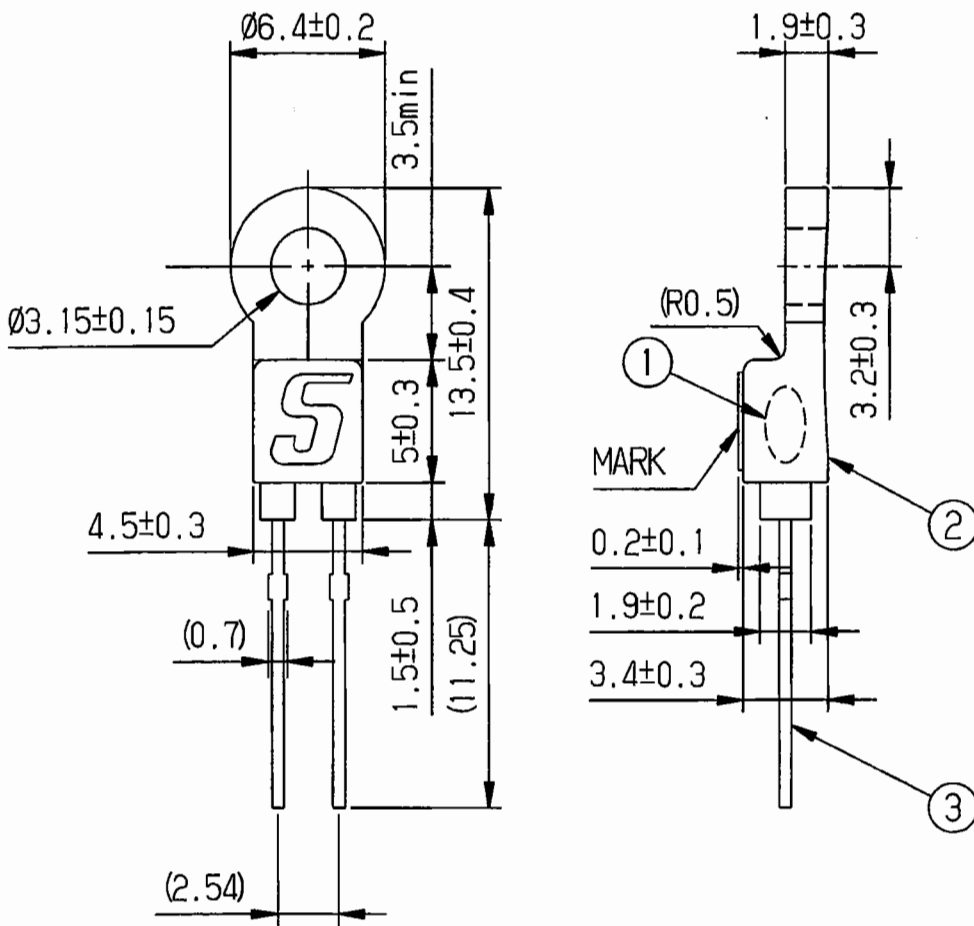


Company ; _____	Note ; _____	Date	Nov 17 ,2007
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5. Dimensions

Unit (mm)



No.	Materials	Description
①	Thermistor	103AT-2
②	Resin	UL94HB Color:Black
③	Lead wire	0.5 <sup>□</sup> Tin Plated 42Alloy



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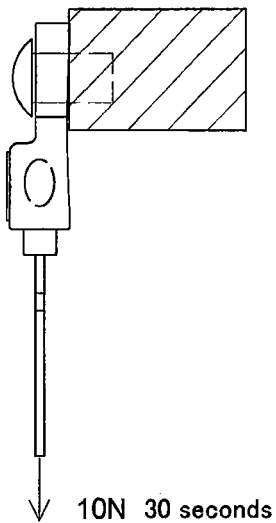
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6. Electrical properties

Items	Test conditions	Criteria
6.1 Voltage proof	AC 2000V 1 minute or AC 2400V for 1 second.	Less than 1mA
6.2 Insulation resistance	DC 500V	Minimum 100MΩ

Test voltage shall be applied between the resin and terminals of lead wires.

7. Mechanical properties

Items	Test conditions	Criteria
7.1 Robustness of terminations (Tensile to horizontal direction)	<p>Hold the thermistor so that the lead-wire shall be in a vertical position. After 10N loading weight was applied to the lead-wire vertical for 30 seconds.</p> 	The change ratio of $R_{25}$ and $B_{25/85}$ shall be within $\pm 1\%$ of the initial value.
7.2 Free fall	Three times of free-fall to a maple board from 1m high.	
7.3 Resistance to soldering heat	Lead wires shall be immersed into a soldering bath at $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for $10\text{seconds} \pm 0.5\text{seconds}$ within $5\text{mm} \pm 1\text{mm}$ from end of lead wire.	



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8. Climatic properties

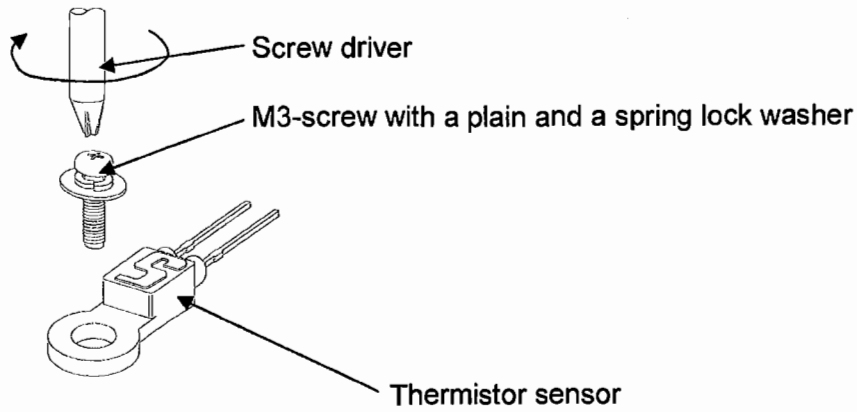
Items	Test conditions	Criteria
8.1 Cold	At $-40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 1 000hours.	After stored at room temperature and humidity for 1hour, the change ratio of $R_{25}$ and $B_{25/85}$ shall be within $\pm 1\%$ of the initial value.
8.2 Dry heat	At $110^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 1 000hours.	
8.3 Damp heat	At $40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , 90%RH-95%RH for 1 000hours.	
8.4 Damp heat (Under loading)	At $40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , 90%RH-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 room temperature. (Initial status) -At $-30^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 30minutes. -At room temperature for 3minutes. -At $90^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 30minutes. -At room temperature for 3minutes. 100cycles of rapid change of temperature are applied to a test sample.	

Notes

-Room temperature and humidity:  $25^{\circ}\text{C}\pm 10^{\circ}\text{C}$ , 25%RH-75%RH

9. Instruction of tightening up a screw

When a thermistor sensor is fixed with a screw, torque of approx.  $0.686\text{N}\cdot\text{m}$  (approx.  $7\text{kgf}\cdot\text{cm}$ ) is recommended. If it is fixed with out of the torque above, please confirm condition by yourself.



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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					
K					
L					



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