

No.	Item	Rating Value	Method of Examination						
1	Operating Temperature	-30 to +85°C	The temperature range with maximum voltage applied to the POSISTOR®.						
2	Storage Temperature	-40 to +125°C	The temperature range with zero voltage.						
3	Resistance Value (at 25°C)	Satisfies ratings	Resistance value is measured by applying voltage under 1.0Vdc (by a direct current of less than 10mA) at 25°C. But it must be measured after maximum voltage is applied for 180 seconds and then is left for 2 hours at 25°C.						
4	Withstanding Voltage	No problem	We apply AC voltage 120% that of the maximum voltage to POSISTOR® by raising voltage gradually for 180±5 seconds at 25°C. (A protective resistor is to be connected in series, and the inrush current through POSISTOR® must be limited below maximum rated value.)						
5	Protective Threshold Current	Satisfies ratings (Trip Current, Hold Current)	Maximum current is measured in this examination. Voltage is applied to POSISTOR® for 3 minutes step by step on still air based on "Protective Threshold Current Test Conditions" shown in next page. Stable current is measured at each step.						
6	Tensile Strength of Lead Wire Terminal	No damage	The load is gradually applied to each terminal of POSISTOR® until the force of the following table in the axial direction with fixing POSISTOR®'s body itself and this load is kept for 10 seconds. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Lead Diameter</th> <th>Force</th> </tr> </thead> <tbody> <tr> <td>ø0.60mm max.</td> <td>4.90N</td> </tr> <tr> <td>ø0.65mm min.</td> <td>9.80N</td> </tr> </tbody> </table>	Lead Diameter	Force	ø0.60mm max.	4.90N	ø0.65mm min.	9.80N
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7	Bending Strength of Lead Wire Terminal	Lead wire does not come off	POSISTOR® is held so that it is perpendicular to the lead wire with the following lead hanging in the axial direction of the lead wire. The lead wire is slowly bent to 90° and returned. Then it is slowly bent in the opposite direction and returned to original state. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Lead Diameter</th> <th>Force</th> </tr> </thead> <tbody> <tr> <td>ø0.60mm max.</td> <td>2.45N</td> </tr> <tr> <td>ø0.65mm min.</td> <td>4.90N</td> </tr> </tbody> </table>	Lead Diameter	Force	ø0.60mm max.	2.45N	ø0.65mm min.	4.90N
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8	Solderability	Solder is applied around the lead wire covering 3/4 or more of the circumference without gap in the axial direction.	The Lead wire of POSISTOR® is soaked in an Isopropyl Alcohol (JIS K 8839) solution (about 25wt%) of colophony (JIS K 5902) for 5-10 sec. Each lead wire is soaked in molten solder (JIS Z 3282 H60A) at 235±5°C from the bottom to a point of 2.0-2.5mm for 2±0.5 seconds.						
9	Terminal Durability of Soldering	$\Delta R/R_{25} \leq \pm 15\%$	The lead wire of POSISTOR® is soaked in molten solder (JIS Z 3282 H60A) at 350±10°C from the bottom to a point of 2.0-2.5mm for 3.5±0.5 seconds. After the device is left at room temperature (25°C) for 24±4 hours, the resistance is then measured.						
10	Humidity Test	$\Delta R/R_{25} \leq \pm 20\%$	POSISTOR® is set in an environmental chamber at 60±2°C and 90-95% humidity for 500±4 hours. After the device is left at room temperature (25°C) for one hour, the resistance measurement is then performed.						
11	Load Test at High Temperature	$\Delta R/R_{25} \leq \pm 20\%$	POSISTOR® is set in an environmental chamber at 85±3°C with maximum voltage applied for 500±4 hours. After the device is left at room temperature (25°C) for one hour, the resistance measurement is performed. (A protective resistor is to be connected in series and the inrush current through POSISTOR® must be limited below maximum rated value.)						
12	Load Cycle Test at Room Temperature	$\Delta R/R_{25} \leq \pm 20\%$	POSISTOR® is set at room temperature (25±2°C) with maximum voltage applied for 1 minute and then is left without voltage applied for 5 minutes. This cycle is repeated for 100 cycles, and after the device is left at room temperature (25°C) for one hour, the resistance measurement is performed. (A protective resistor is to be connected in series and the inrush current through POSISTOR® must be limited below maximum rated value.)						

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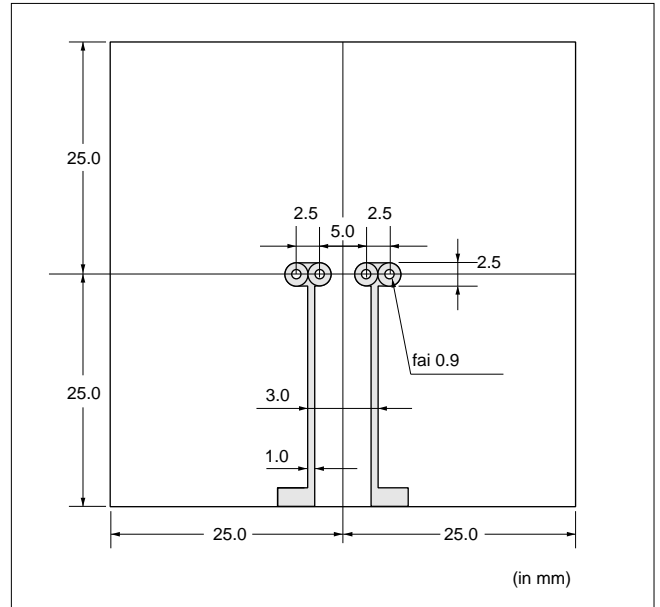
## Protective Threshold Current Test Conditions

### 1. Substrate

Materials: Phenol

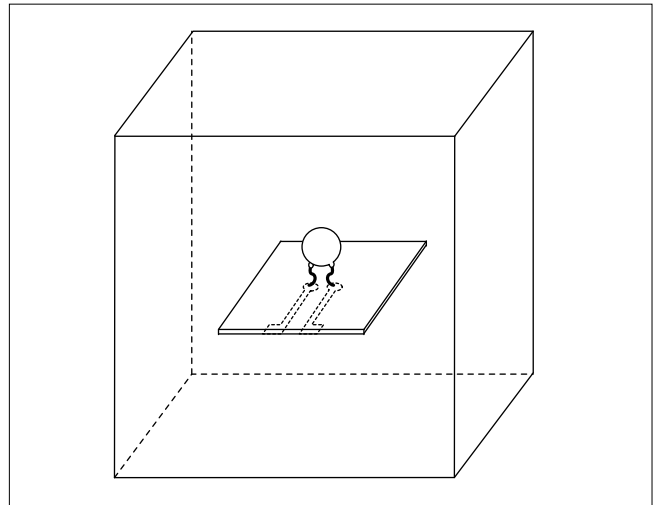
Size: 50x50x1.6mm

Land Pattern: Cu land without through hole



### 2. Measurement condition

Solder POSISTOR<sup>®</sup> on the substrate, then put a 150mm<sup>3</sup> cover surrounding POSISTOR<sup>®</sup> to prevent airflow.



### 3. Measurement circuit

