Please confirm the parameters according to the following questions.
The best selection is the product that matches three parameters.

### Confirmation Items

- **What is the potential maximum voltage applied to POSISTOR®?**
- **How much current flows in the circuit at normal conditions?**
- **How much current flows in the circuit at abnormal conditions?**

### Example

- **Line Voltage 140V**
- **Usual Current 200mA**
- **Abnormal Current 580mA**

### Selection Standards

- **Line voltage** ≤ Maximum voltage of POSISTOR®
- **Usual current** ≤ Hold current of POSISTOR®
- **Abnormal current** ≥ Trip current of POSISTOR®

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. Voltage (V)</th>
<th>Hold Current at +60°C (mA)</th>
<th>Trip Current at -10°C (mA)</th>
<th>Max. Current (A)</th>
<th>Resistance (at 25°C) (ohm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTGL18AR4R7M6B72B0</td>
<td>125</td>
<td>360</td>
<td>900</td>
<td>1.7</td>
<td>4.7 ±20%</td>
</tr>
<tr>
<td>PTGL18AR3R3M6B72B0</td>
<td>125</td>
<td>420</td>
<td>1050</td>
<td>2.0</td>
<td>3.3 ±20%</td>
</tr>
<tr>
<td>PTGL07AR330M6A51B0</td>
<td>140</td>
<td>100</td>
<td>230</td>
<td>0.5</td>
<td>33 ±20%</td>
</tr>
<tr>
<td>PTGL09AR220M6C61B0</td>
<td>140</td>
<td>140</td>
<td>330</td>
<td>1.0</td>
<td>22 ±20%</td>
</tr>
<tr>
<td>PTGL10AR150M6C61B0</td>
<td>140</td>
<td>170</td>
<td>400</td>
<td>1.0</td>
<td>15 ±20%</td>
</tr>
<tr>
<td>PTGL12AR100M6C01B0</td>
<td>140</td>
<td>220</td>
<td>510</td>
<td>1.0</td>
<td>10 ±20%</td>
</tr>
<tr>
<td>PTGL13AR6R8M6C01B0</td>
<td>140</td>
<td>290</td>
<td>670</td>
<td>1.0</td>
<td>6.8 ±20%</td>
</tr>
<tr>
<td>PTGL16AR5R6M6C01B0</td>
<td>140</td>
<td>340</td>
<td>780</td>
<td>2.0</td>
<td>5.6 ±20%</td>
</tr>
</tbody>
</table>

PTGL12AR100M6C01B0 is the best selection in this case.
1. Protective Threshold Current

The maximum current value is called the "Protective Threshold Current" for Voltage vs. Current characteristics (static).

When smaller than the protective threshold current flows in POSISTOR®, it reaches its stability (as shown in figure on right) at the intersection (A) of the load curve (a) and voltage-current characteristics of POSISTOR® (c). And POSISTOR® works as a normal fixed resistor.

However, when larger than protective threshold current flows, it stabilizes at the intersection (B) with the load curve (b).

2. Protective Threshold Current Range

Protective threshold current varies depending on the ambient temperature, resistance value, temperature characteristics and shape. (see Figure on right) The maximum value of trip current and the minimum value of the hold current are in the range of ambient temperature -10 to +60°C.

That is, when a current is smaller than the hold current, POSISTOR® works only as a fixed resistor. When larger than the trip current flows, however, POSISTOR® protects the circuit from overload.

3. Operating Time

A period starting from the voltage input to the moment current itself sharply attenuates is called "Operating Time." Conventionally, operation time (t₀) is determined to be the period until inrush current (I₀) decreases to a level one half the original inrush current (I₀/2).