SG73P Endured Pulse Power Flat Chip Resistors

Coating color: Black (1E, 1EW) Green (1J, 2A, 2B, 2E, 2E1)

Features
- Superior to 8K73 series chip resistors in pulse withstanding voltage and high power.
- Resistance tolerance is available from ±0.5%
- Suitable for both reflow and flow soldering.
- Products with lead free termination meet EU-RoHS requirements.
- EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Tested.

Applications
- E.U.
- Circuits to catch inductive lighting surge.

Reference Standards
IEC 60115-8
JIS C 5201-8
EIAJ RC-2134C

Contact our sales representatives before you use our products for applications including automotives, medical equipment and aerospace equipment.
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

 rated voltage of POWER RATING/Resistance value or Max. working voltage, whichever is lower.
• If you use at the rated power, please keep the condition that the terminal of the resistor is below the rated terminal part temperature. Please refer to the derating curves based on the terminal temperature of right side on the next page.
• If any questions arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature" in your usage condition, please give priority to the "Rated Terminal Part Temperature".
For more details, please refer to "Introduction of the derating curves based on the terminal part temperature" on the beginning of our catalog.

![Construction Diagram]

Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>L (mm)</th>
<th>W (mm)</th>
<th>D (mm)</th>
<th>t (mm)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1E</td>
<td>0.5±0.05</td>
<td>0.15±0.1</td>
<td>0.25±0.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1EW</td>
<td>1.0±0.05</td>
<td>0.3±0.1</td>
<td>0.5±0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1J</td>
<td>1.6±0.2</td>
<td>0.8±0.1</td>
<td>0.3±0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2A</td>
<td>2.0±0.2</td>
<td>1.25±0.1</td>
<td>0.3±0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2B</td>
<td>3.2±0.2</td>
<td>2.6±0.2</td>
<td>0.4±0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2E1</td>
<td>5.0±0.3</td>
<td>0.6±0.1</td>
<td>1.25±0.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Rating</th>
<th>T</th>
<th>TD</th>
<th>J</th>
<th>Nominal Resistance</th>
<th>Resistance Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A</td>
<td>±1%</td>
<td>1S</td>
<td>4</td>
<td>1%</td>
<td>200V</td>
<td>±0.5%</td>
</tr>
<tr>
<td>2B</td>
<td>±1%</td>
<td>1S</td>
<td>4</td>
<td>1%</td>
<td>200V</td>
<td>±0.5%</td>
</tr>
<tr>
<td>2E1</td>
<td>±1%</td>
<td>1S</td>
<td>4</td>
<td>1%</td>
<td>200V</td>
<td>±0.5%</td>
</tr>
</tbody>
</table>

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Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

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**Test Items**
- High temperature exposure: 1000h, 1000℃
- Moisture resistance: 90%~95%RH, 1000h
- Temperature rise: Rated terminal part temperature ±2℃
- One-Pulse Limiting Electric Power: 1000W (5s)

**Performance Requirements**
- ΔR± (% ± 0.1Ω)
- 25℃
- -55℃ to +125℃
- 10s±1s
- 10s±1s
- 100 cycles
- 100 cycles
- 1000h
- 1000h
- +155℃, 1000h

**Test Methods**
- 1.5h ON/0.5h OFF cycle
- 1.5h ON/0.5h OFF cycle
- Rated voltage × 2.5 for 5s (1EW: 0.25W, 2A: 0.4W, 0.5W, 2B: 0.75W, 2E: 0.75W, 2E1: 1W Rated voltage × 2 for 5s)
- Characteristic [A] (Heat shock resistance)
- Characteristic [A] (Heat shock resistance)
- Characteristic [A] (Heat shock resistance)
- 40℃±2℃, 90%~95%RH, 1000h
- 70℃±2℃ or rated terminal part temperature ±2℃ 1000h

**Precautions for Use**
- The substrate of chip resistors is alumina. Cracks may occur at the connection of solder (solder fillet portion) due to the difference of the coefficient of thermal expansion from a mounting board when heat stress like heat cycle, etc. are repeatedly given to them. Care should be taken to the occurrence of the cracks when the change in ambient temperature or ON/OFF of load is repeated. The occurrence of the crack by heat stress may be influenced by the size of a pad, solder volume, heat radiation of mounting board etc., so please pay careful attention to designing when a big change in ambient temperature and conditions for use like ON/OFF of load can be assumed.