Surge arrester

2-electrode arrester

Series/Type: EM4000XS
Ordering code: B88069X4251****
Date: 2019-07-19
Version: 04
Surge arrester

2-electrode arrester

EM4000XS

Features

- Very small size
- Very fast response time
- Stable performance over life
- Very low capacitance
- High insulation resistance
- RoHS-compatible

Applications

- Consumer electronics
- Tuner
- Air condition
- Power supply

Electrical specifications

<table>
<thead>
<tr>
<th>DC spark-over voltage</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>3200 V</td>
<td></td>
</tr>
<tr>
<td>Max.</td>
<td>4800 V</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impulse spark-over voltage</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at 100 V/µs</td>
<td>&lt; 5100 V</td>
<td></td>
</tr>
<tr>
<td>at 1 kV/µs</td>
<td>&lt; 5300 V</td>
<td></td>
</tr>
<tr>
<td>at 5 kV/µs</td>
<td>&lt; 5700 V</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service life</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 operations</td>
<td>1 A</td>
<td></td>
</tr>
<tr>
<td>300 operations</td>
<td>100 A</td>
<td></td>
</tr>
<tr>
<td>10 operations</td>
<td>2 kA</td>
<td></td>
</tr>
</tbody>
</table>

| Insulation resistance at 100 V<sub>DC</sub> | > 1 GΩ |
| Capacitance at 1 MHz | < 1 pF |
| Arc voltage at 1 A | ~ 35 V |
| Glow to arc transition current | < 0.1 A |
| Glow voltage at 0.1 A | ~ 170 V |
| AC withstand voltage (1 min) | 1800 V |
| Weight | ~ 0.7 g |
| Operation temperature | −40 ... +125 °C |

Recommended storage

- temperature: +5 ... +35 °C
- humidity: 45 ... 80 %
- period: ≤ 2 years

Climatic category (IEC 60068-1) | 40/125/21

Marking, red positive

EM4000 YY O

EPCOS

Continued on next page
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Certifications

UL 1449 (E319264)

1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
3) Test conditions in acc. with MIL-STD-202G at 25 ±5 °C, relative humidity of ≤ 55 % and atmospheric pressure 860 ... 1100mbar.

Terms and current waveforms in accordance with: ITU-T Rec. K. 12; IEC 61643-21; 61643-311.

Dimensional drawing in mm

Ordering codes and packing advices

B88069X4251S102 = 100 pcs. on 5 taped stripes  B88069X4251T502 = 500 pcs. on tape & reel
Soldering parameter

Wave soldering

Cautions and warnings

- Do not operate surge arresters in power supply networks, whose maximum operating voltage exceeds the minimum spark-over voltage of the surge arresters.
- Electromagnetic fields and ionizing radiation may affect the electrical characteristics of the arrester. The impact of such effects (inductive and capacitive field distortion from adjacent components) must be avoided by appropriate circuit design measures.
- Surge arresters may become hot in the event of longer periods of current stress (burn risk). In the event of overload the connectors may fail or the component may be destroyed.
- If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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