Surge arrester

2-electrode arrester

Series/Type: EN230XSMD
Ordering code: B88069X9851T702
Date: 2019-07-22
Version: 02
Features

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

Applications

- Modem
- XDSL-splitter
- Consumer electronic
- Tuner

### Electrical specifications

**DC spark-over voltage**

<table>
<thead>
<tr>
<th>Tolerance</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>±20%</td>
<td>184</td>
<td>276</td>
</tr>
</tbody>
</table>

**Impulse spark-over voltage**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kV/µs</td>
<td>&lt; 500</td>
<td>&lt; 400</td>
</tr>
</tbody>
</table>

**Service life**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Current</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 operations</td>
<td>5 A</td>
<td>5 V</td>
</tr>
<tr>
<td>1 operation</td>
<td>20 A</td>
<td>5 kA</td>
</tr>
<tr>
<td>10 operations</td>
<td>5 A</td>
<td>5 kA</td>
</tr>
<tr>
<td>1 operation</td>
<td>1.5 A</td>
<td>100 kA</td>
</tr>
<tr>
<td>300 operations</td>
<td>100 A</td>
<td>100 kA</td>
</tr>
</tbody>
</table>

**DC hold-over voltage**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>135 V DC / 1300 Ω</td>
<td>&lt; 150 ms</td>
</tr>
</tbody>
</table>

**Insulation resistance at 100 V DC**

> 1 GΩ

**Capacitance at 1 MHz**

< 1 pF

**Arc voltage at 1 A**

~ 15 V

**Glow to arc transition current**

< 0.5 A

**Glow voltage**

~ 140 V

**Weight**

~ 0.5 g

**Operation and storage temperature**

-40 °C ... +125 °C

**Climatic category (IEC 60068-1)**

40/125/21

**Marking, blue positive**

EN 230 YY O

**Certification**

UL 497B (E163070)
1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
Terms in accordance with ITU-T Rec. K.12 and IEC 61643-311.

**Dimensional drawing in mm**

![Dimensional drawing](image)

- Pad outline acc. to IPC-7351 (productivity level A; density level A)
- Tin-plated

**Ordering codes and packing advices**

*B88069X9851T702 = 700 pcs. on SMD-tape & reel*

![Ordering codes and packing advices](image)

SMD-tape according to IEC 60266-3

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PPD AB PD / PPD AB PM

Version: 02 / 2019-07-22

Please read Cautions and warnings and Important notes at the end of this document.
Soldering parameter

Reflow soldering

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Surface mounted components (SMD) may exhibit a temporary increase in the DC spark-over voltage after the solder reflow process. The components will recover within 24 hours. There is no quality defect nor change in protection levels during the temporary change in DC spark-over voltage.

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.
- 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.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.
- The shown SMD pad dimensions represent a safe way to mount the arrester and are a recommendation of the manufacturer. During the reflow process it must be assured that no solder material reduces the insulation distance between the pads below the arrester.
- SMD surge arresters should be soldered within 24 month after shipment.

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