Switching spark gaps,
Switching Spark Gaps

Series/Type: SSG3X1

The following products presented in this data sheet are being withdrawn.

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Substitute Product</th>
<th>Date of Withdrawal</th>
<th>Deadline Last Orders</th>
<th>Last Shipments</th>
</tr>
</thead>
<tbody>
<tr>
<td>B88069X0260T502</td>
<td></td>
<td>2020-01-17</td>
<td>2020-04-24</td>
<td>2020-07-24</td>
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</tbody>
</table>

Please contact your nearest TDK sales office if you need support in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.tdk-electronics.tdk.com/sales.
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The following applies to all products named in this publication:

1. Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. The warnings, cautions and product-specific notes must be observed.

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## Features

- Extremely Long Life Time
- Stable Performance over Life
- Insensitive Performance against Variations in Temperature
- Very Low Switching Losses
- Very Short Breakdown Time
- High Reliability by Robust Design
- RoHS Compliance

* Footnotes see page 2

### Applications

- Ignition of HID Lamps for Video Projection

## Nominal Breakdown Voltage

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Breakdown Voltage ( V_N )</td>
<td>3000 V</td>
</tr>
</tbody>
</table>

### Initial Values

1. Static breakdown voltage \( V_S \) \(^{1)}\)

   - First ignition value \( V_{S,FTE} \) after 24 hours in darkness
   - Following ignition values \( V_{S,FIV} \)

   \[ V_{S,FTE} \leq 3900 \text{ V} \]
   \[ V_{S,FIV} = 2550 \text{ V} \ldots 3540 \text{ V} \]

### Electrical Life Time

1. Breakdown voltage \( V_B \)

   - First ignition value \( V_{B,FTE} \) after 24 hours in darkness
   - Following ignition values \( V_{B,FIV} \)

   \[ V_{B,FTE} \leq 4200 \text{ V} \]
   \[ V_{B,FIV} = 2400 \text{ V} \ldots 3600 \text{ V} \]

### Switching Operations

- at 0 ... +100 °C

   \[ 1,000,000 \text{ Ignitions} \]

### Test Circuit Parameters

- Open circuit voltage \( V_0 \)

   \[ 4200 \text{ V} \]

- Loading resistance \( R \)

   \[ 4000 \text{ kΩ} \]

- Discharge capacitance \( C \)

   \[ 1.5 \text{ nF} \]

- Inductance \( L \)

   \[ 7.5 \text{ µH} \]

- Discharge peak current \( I_p \)

   \[ 50 \text{ A} \]

### General Technical Data

- Insulation resistance at 100 V

   \[ > 100 \text{ MΩ} \]

- Early ignition values below 2400 V

   \[ \leq 1 \% \]

- Breakdown time

   \[ \leq 50 \text{ ns} \]

- Maximum switching frequency

   \[ 400 \text{ Hz} \]

- Weight

   \[ \sim 2 \text{ g} \]

### Marking, red

**EPCOS 3000 YY O**

- 3000 - Nominal voltage
- YY - Year of production
- O - Non radioactive

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**Switching Spark Gap**

**Ordering code:** B88069X0260xxxx \(^{3)}\)

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**Issue 06, 22.02.2005**
Switching Spark Gap

Ordering code: B88069X0260xxxx

1) At delivery AQL 0.65 level II, DIN ISO 2859
2) Page 2, Fig. 1 and 2
3) Page 2, Fig. 3 and 4

Fig. 1: QC- test circuit (100% outgoing inspection)

Fig. 2: Explanation of measurands

Fig. 3: QC- test circuit (sampling inspection at 25 °C)

Fig. 4: Explanation of measurands

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