Switching spark gap

SSG without lead wires

Series/Type: FS08HF1BSMD
Ordering code: B88069X7391T602
Version/Date: Issue 03 / 2008-11-05
### 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
- Excellent SMD handling
- RoHS compatible

### Applications

- Ignition of HID lamps

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### Electrical specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Initial values</th>
<th>Electrical life time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal breakdown voltage $V_{n}$</td>
<td>800 V</td>
<td></td>
</tr>
<tr>
<td>Static breakdown voltage $V_s$</td>
<td>950 V</td>
<td>$\leq 1000 \text{ V}$</td>
</tr>
<tr>
<td>$V_{s, fte}$ after 24 hours in darkness</td>
<td>704 ... 896 V</td>
<td>$\leq 60 \text{ ms}$</td>
</tr>
<tr>
<td>First ignition value $V_{s, fte}$</td>
<td></td>
<td>680 ... 920 V</td>
</tr>
<tr>
<td>Following ignition values $V_{s, fiv}$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Switching operations

- at $-40 \degree C$: 40 000 Ignitions
- at $+25; 125; 150 \degree C$: 200 000 Ignitions

#### Test circuit parameters

- Open circuit voltage $V_o$: 1000 V
- Loading resistance $R$: 68 kΩ
- Discharge capacitance $C$: 100 nF
- Inductance $L$: 0.4 μH
- Discharge peak current $I_p$: 650 A

#### General technical data

- Insulation resistance at 100 V: $> 100 \text{ MΩ}$
- Early ignition values below 704 V: $\leq 1 \%$
- Breakdown time: $\leq 50 \text{ ns}$
- Maximum switching frequency: 200 Hz
- Maximum loading current: 50 mA
- Weight: $\approx 2 \text{ g}$
- Storage at +170 °C: 300 h
Marking, green positive

<table>
<thead>
<tr>
<th>EPCOS 800 WWY O</th>
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</thead>
<tbody>
<tr>
<td>800 - Nominal voltage</td>
</tr>
<tr>
<td>WW - Calendar week of production</td>
</tr>
<tr>
<td>Y - Year of production</td>
</tr>
<tr>
<td>O - Non radioactive</td>
</tr>
</tbody>
</table>

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

Figures

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

![Fig. 1](image)

DUT device under test
ICU ignition control unit (sensitivity 10 ... 30 μA)
Discharge current 10 ... 20 mA

**Fig. 2:** Explanation of measurands

![Fig. 2](image)

dV_S/dt ~ dV_N/dt

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

![Fig. 3](image)

**Fig. 4:** Explanation of measurands

![Fig. 4](image)

Range of V_B,FIV
Early ignition

4) Please read Cautions and warnings and Important notes at the end of this document.

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Cautions and warnings

- Switching spark gaps may be used only within their specified values.
- Damaged switching spark gaps must not be re-used.
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