



## Switching spark gap

SSG with lead wires

**Series/Type:** FS1.8X-1  
**Ordering code:** B88069X6721xxxx <sup>a)</sup>  
Version/Date: Issue 01 / 2007-04-18

| Features  | Applications   |
|---|--|
| <ul style="list-style-type: none"> <li>▪ Extremely long life time</li> <li>▪ Stable performance over life</li> <li>▪ Insensitive performance against variations in temperature</li> <li>▪ Very low switching losses</li> <li>▪ Very short breakdown time</li> <li>▪ High reliability by robust design</li> <li>▪ RoHS compatible</li> </ul> | <ul style="list-style-type: none"> <li>▪ Ignition circuits</li> <li>▪ High voltage switch</li> </ul> |

**Electrical specifications**

|  |  |            |
|--|--|------------|
| Nominal breakdown voltage $V_N$                              | 1850   | V          |
| Initial values <sup>2)</sup>                                 |  |            |
| Static breakdown voltage $V_S$ <sup>1)</sup>                 |  |            |
| First ignition value $V_{S, FTE}$ after 24 hours in darkness | $\leq 2400$  | V          |
| Following ignition values $V_{S, FIV}$                       | 1440 ... 2160  | V          |
| Electrical life time <sup>3)</sup>                           |  |            |
| Breakdown voltage $V_B$                                      |  |            |
| First ignition value $V_{B, FTE}$ after 24 hours in darkness | $\leq 2700$  | V          |
| Following ignition values $V_{B, FIV}$                       | 1350 ... 2250  | V          |
| Switching operations<br>at 0° C ... 100 °C                   | 200 000  | Ignitions  |
| Test circuit parameters                                      |  |            |
| Open circuit voltage $V_0$                                   | 2700   | V          |
| Loading resistance R   | 34   | k $\Omega$ |
| Discharge capacitance C                                      | 800  | nF         |
| Inductance L   | 15.5   | $\mu$ H    |
| General technical data                                       |  |            |
| Insulation resistance at 100 V                               | $> 100$  | M $\Omega$ |
| Early ignition values between 1000 ... 1440 V                | $\leq 1$   | %          |
| Breakdown time   | $\leq 50$  | ns         |
| Maximum switching frequency                                  | 100  | Hz         |
| Maximum loading current                                      | 50   | mA         |
| Weight   | $\sim 2$   | g          |
| Marking, blue positive                                       | <b>EPCOS 1800 YY O</b><br>1800 - Nominal voltage<br>YY - Year of production<br>O - Non radioactive |            |

<sup>a)</sup> xxxx = S102 (100 pcs on 5 taped stripes)  
= T502 (500 pcs on tape and reel)

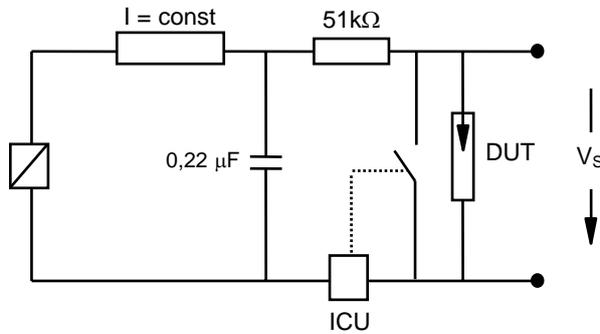
<sup>1)</sup> At delivery AQL 0,65 level II, DIN ISO 2859

<sup>2)</sup> Page 2, Fig. 1 and 2

<sup>3)</sup> Page 2, Fig. 3 and 4

Figures

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



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

Fig. 2: Explanation of measurands

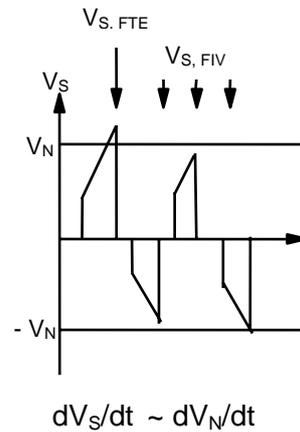


Fig. 3: QC- test circuit (sampling inspection at 25 °C)

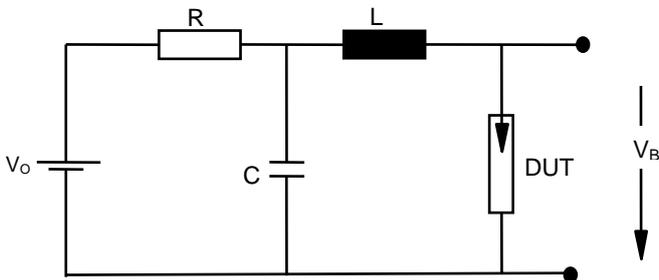
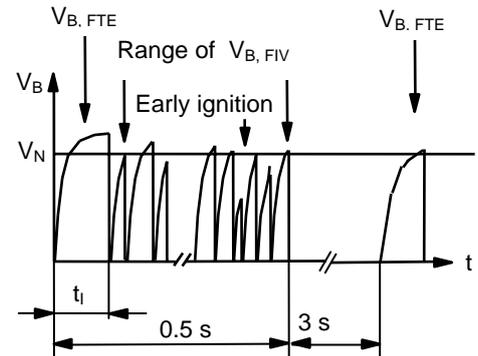
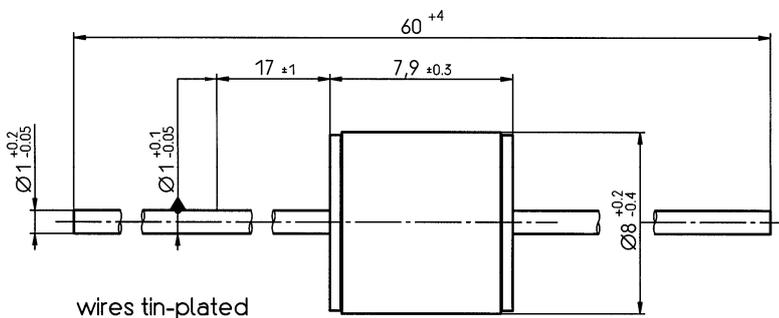


Fig. 4: Explanation of measurands



Dimensional drawing



Not to scale  
 Dimensions in mm  
 Non controlled document

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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