



## Switching spark gap

SSG with lead wires

<b>Series/Type:</b>	<b>FS1X-1G</b>
<b>Ordering code:</b>	<b>B88069X3450T502</b>
<b>Date:</b>	Issue 04 / 2005-11-11

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> <li>Ignition of HID lamps</li> </ul>

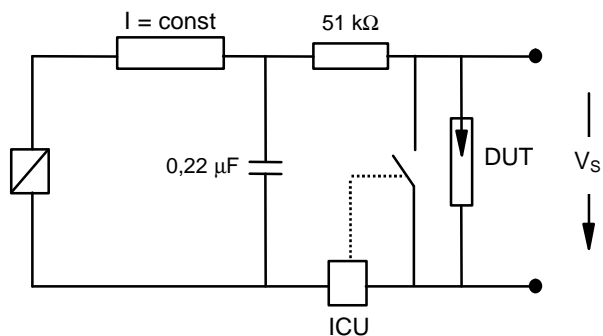
**Electrical specifications**

Nominal breakdown voltage $V_N$	1000	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	$\leq 1150$	V
Following ignition values $V_{S, FIV}$	900 ... 1130	V
Electrical life time <sup>3)</sup>		
Breakdown voltage $V_B$		
First ignition value $V_{B, FTE}$ after 24 hours in darkness	$\leq 1400$	V
Ignition time $t_i$ at $V_0$ during life	$\leq 60$	ms
Following ignition values $V_{B, FIV}$	850 ... 1150	V
Switching operations		
at $-40^\circ\text{C}$	100 000	Ignitions
at $+25^\circ\text{C}$ ; $+125^\circ\text{C}$	200 000	Ignitions
Test circuit parameters		
Open circuit voltage $V_0$	1400	V
Loading resistance R	110	k $\Omega$
Discharge capacitance C	68	nF
Inductance L	0.5	$\mu\text{H}$
Discharge peak current $I_P$	$\sim 400$	A
General technical data		
Insulation resistance at 100 V	$> 100$	M $\Omega$
Early ignition values between 600 ... 850 V	$\leq 1$	%
Breakdown time	$\leq 50$	ns
Maximum switching frequency	400	Hz
Maximum loading current	50	mA
Weight	$\sim 2$	g
Marking, blue positive	<b>EPCOS 1000 WWY O</b> 1000 - Nominal voltage WW - Calendar week of production Y - Year of production O - Non radioactive	

- 1) At delivery AQL 0,65 level II, DIN ISO 2859
- 2) Fig. 1 and 2
- 3) Fig. 3 and 4

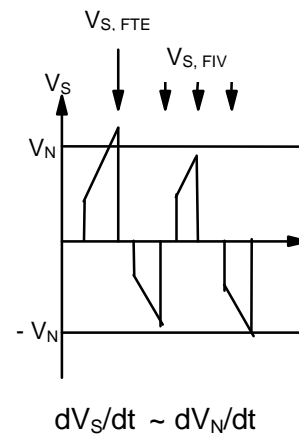
## Figures

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

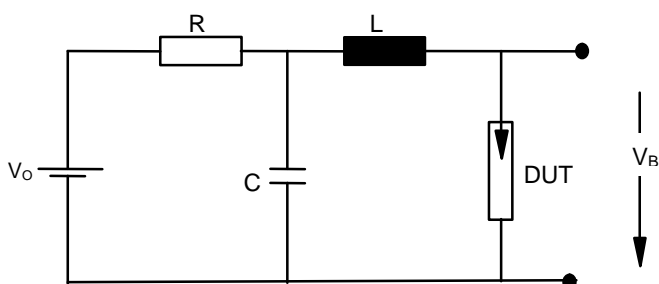


DUT device under test  
 ICU ignition control unit (sensitivity 10 ... 30 μA)  
 Discharge current 10 ... 20 mA

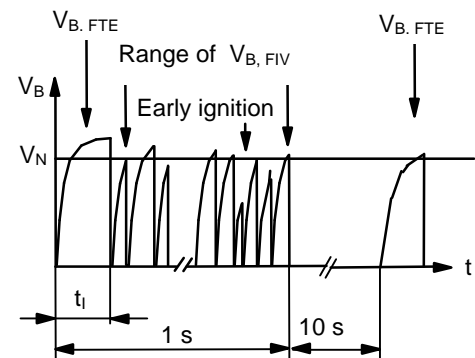
**Fig. 2:** Explanation of measurands



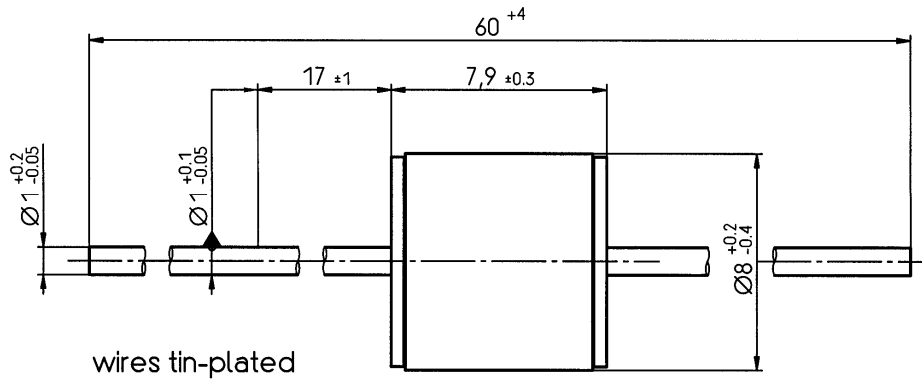
**Fig. 3:** QC- test circuit (sampling inspection at 25 °C)



**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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