Switching spark gap

SSG with lead wires

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

Features	Applications
▪ 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 compatible	▪ Ignition circuits ▪ High voltage switch

Electrical specifications

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

[a)] xxxx = S102 (100 pcs on 5 taped stripes)
= T502 (500 pcs on tape and reel)

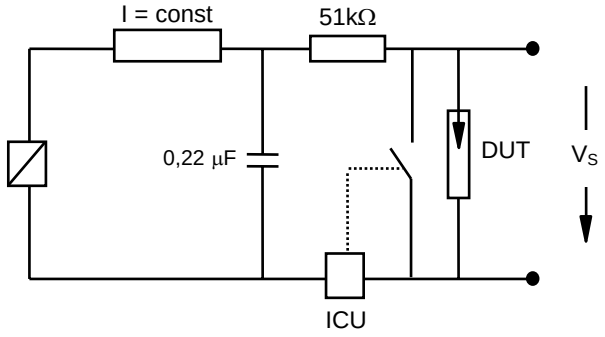
[1)] At delivery AQL 0,65 level II, DIN ISO 2859

[2)] Page 2, Fig. 1 and 2

[3)] Page 2, Fig. 3 and 4

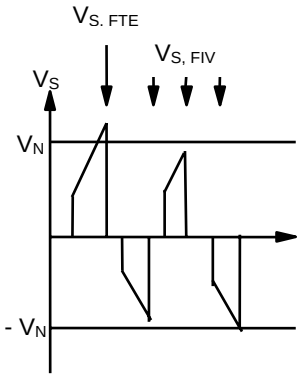
Figures

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



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

Fig. 2: Explanation of measurands



$dV_S/dt \sim dV_N/dt$

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

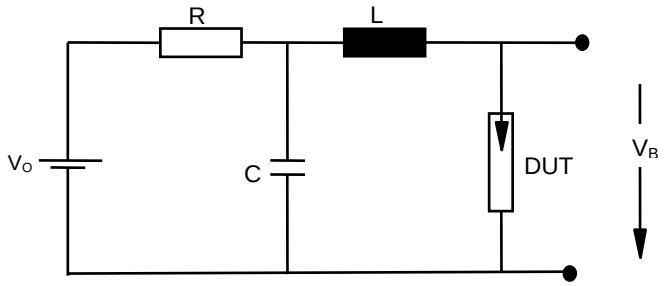
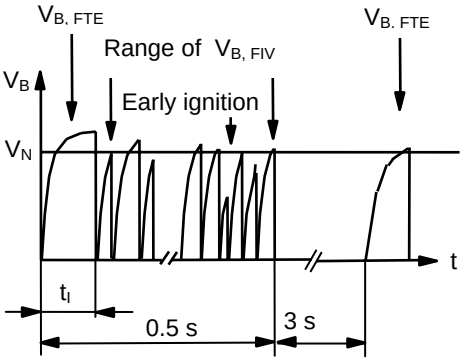
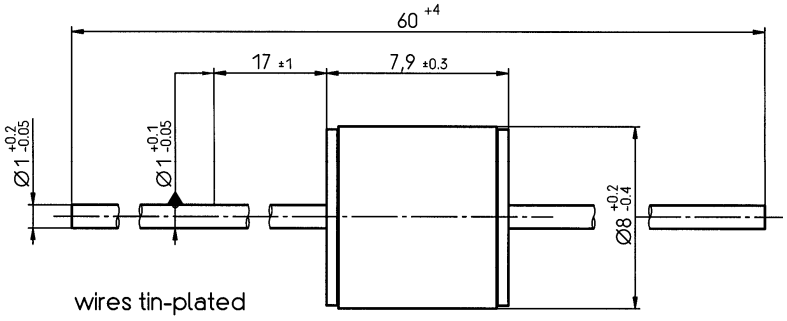


Fig. 4: Explanation of measurands



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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