



Switching spark gap

SSG with lead wires

Series/Type:	SSG5CX-1
Ordering code:	B88069X5913****
Date:	2020-04-09
Version:	01

Features

- Extremely long life time
- Stable performance over life
- Very low switching losses
- Very short breakdown time
- High reliability by robust design
- RoHS compatible

Applications

- Ignition

Electrical specifications

Nominal breakdown voltage V_n	5000	V
Initial values ²⁾ Static breakdown voltage V_s ¹⁾ First ignition value $V_{s, fte}$ after 24 hours in darkness Following ignition values $V_{s, fiv}$	≤ 6500 4000 ... 6000	V V
Electrical life time ³⁾ Breakdown voltage V_b First ignition value $V_{B, FTE}$ after 24 hours in darkness Following ignition values $V_{B, FIV}$	≤ 7000 3750 ... 6250	V V
Switching operations at 0 ... +100 °C	100 000	Ignitions
Test circuit parameters Open circuit voltage V_o Loading resistance R Discharge capacitance C Inductance L Discharge peak current I_P	7000 4000 1 20 30	V k Ω nF μ H A
General technical data Insulation resistance at 100 V Early ignition values below 3750 V Breakdown time Maximum switching frequency Weight	> 100 ≤ 1 ≤ 50 100 ~ 2	M Ω % ns Hz g
Marking, red positive	EPCOS 5000 YY O 5000 - Nominal voltage YY - Year of production O - Non radioactive	

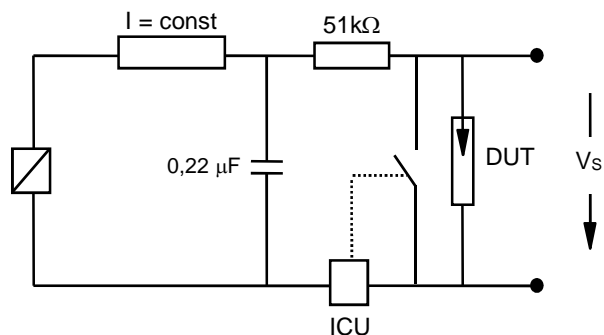
¹⁾ At delivery AQL 0,65 level II, DIN ISO 2859

²⁾ Page 2, Fig. 1 and 2

³⁾ Page 2, Fig. 3 and 4

Test circuits

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

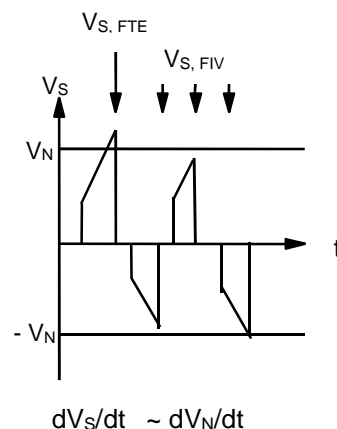


Fig. 3: QC- test circuit (sampling inspection at 25 °C)

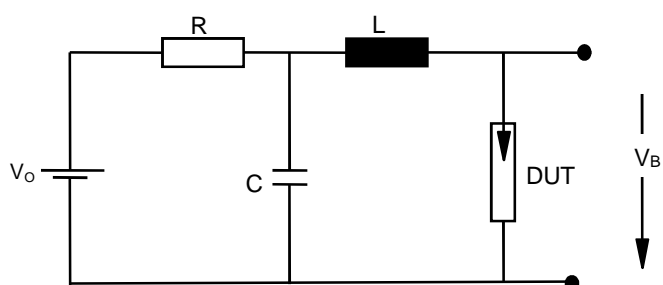
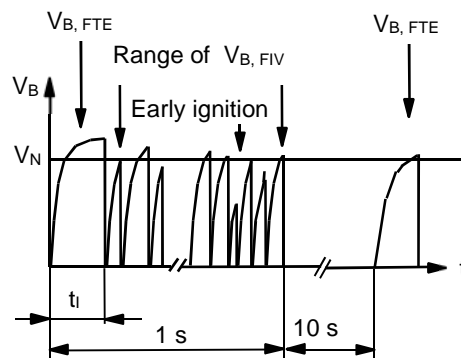
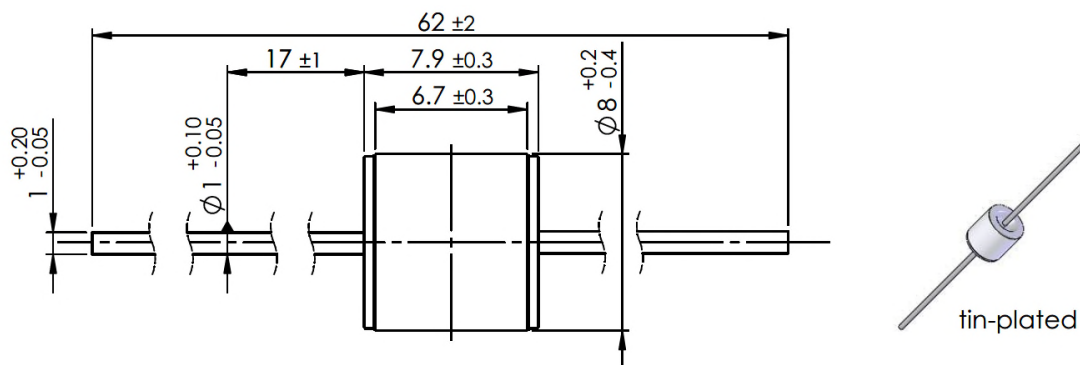


Fig. 4: Explanation of measurands



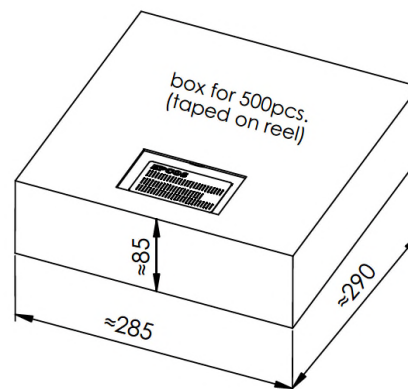
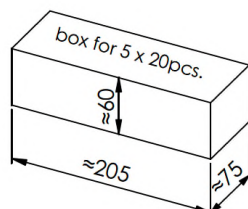
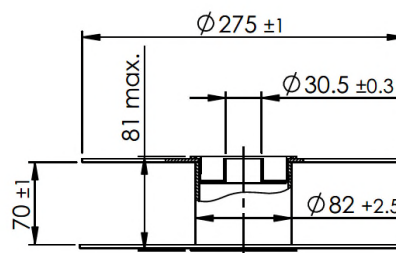
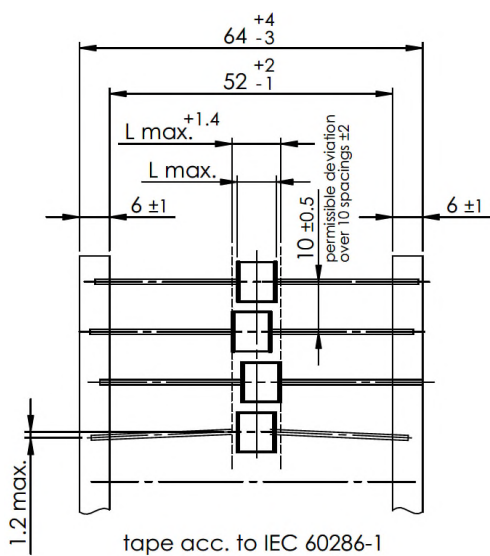
Dimensional drawing in mm



Ordering code and packing advice

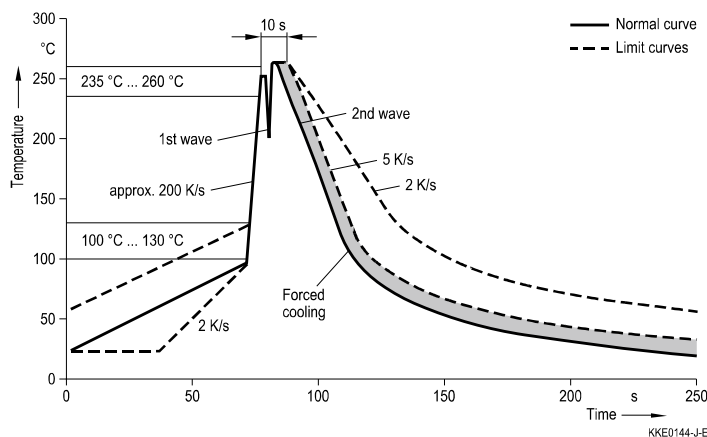
B88069X5913S102 = 100 pcs. on 5 taped stripes

B88069X5913T502 = 500 pcs. on tape and reel



Soldering parameter

Wave soldering



Wave profile features	Pb-free assembly
Solder	Sn 95.5 / Ag 3.8 / Cu 0.7
Solder bath temperature	263 (±3) °C
Dwell time	< 3 s

Soldering profile applied to a single soldering process.

Cautions and warnings

- Switching spark gaps may become hot in case of longer periods of current stress (danger of burning).
- Electromagnetic fields and ionizing radiation may affect the electrical characteristics of the switching spark gaps. The impact of this kind of disturbances (inductive and capacitive comply, field distortion by nearby conductors) has to be avoided by circuit design.
- Switching spark gaps may be used only within their specified values. In case of overload, the head contacts may fail or the component may be destroyed.
- Switching spark gaps must be handled with care and must not be dropped.
- Damaged switching spark gaps must not be re-used.

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