



## Surge arrester

### 3-electrode arrester

**Series/Type:** T30-A420XSMD  
**Ordering code:** B88069X4961\*\*\*\*  
**Date:** 2015-04-30  
**Version:** 04

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**Features**

- Small size
- Very fast response time
- High current rating
- Stable performance over life
- Very low capacitance
- High insulation resistance
- Excellent SMD handling
- RoHS-compatible

**Applications**

- Line protection
- Station protection
- Base stations

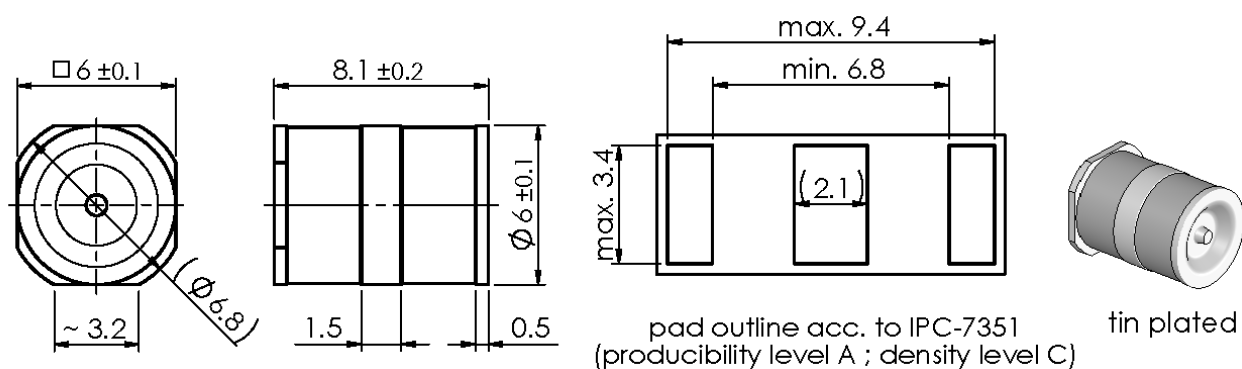
**Electrical specifications**

DC spark-over voltage <sup>1)2)3)</sup>		357 ... 525	V
Impulse spark-over voltage <sup>3)</sup>			
at 100 V/ $\mu$ s	- for 99% of measured values - typical values of distribution	< 850 < 700	V V
at 1 kV/ $\mu$ s	- for 99% of measured values - typical values of distribution	< 950 < 850	V V
Service life			
10 operations	50 Hz; 1 s <sup>4)</sup>	10	A
1 operation	50 Hz; 0.18 s <sup>4)</sup>	30	A
10 operations [5× (+) & 5× (-)]	8/20 $\mu$ s <sup>4)</sup>	10	kA
1 operation	8/20 $\mu$ s <sup>4)</sup>	15	kA
1 operation	10/350 $\mu$ s <sup>4)</sup>	2	kA
300 operations (+/- alternating polarity)	10/1000 $\mu$ s <sup>4)</sup>	200	A
Insulation resistance at 100 V <sub>DC</sub> <sup>3)</sup>		> 1	G $\Omega$
Capacitance at 1 MHz <sup>3)</sup>		< 1.5	pF
Transverse delay time <sup>5)</sup>		< 0.2	$\mu$ s
Arc voltage at 1 A		~ 30	V
Glow to arc transition current		< 1	A
Glow voltage at 0.1 A		~ 200	V
Weight		~ 1.4	g
Operation and storage temperature		-40 ... +90	°C
Climatic category (IEC 60068-1)		40/ 90/ 21	
Marking, blue negative		<b>EPCOS</b> <b>420 YY O</b> 420 - Nominal voltage YY - Year of production O - Non radioactive	
Certifications		UL 497B (E163070)	

Remarks on next page

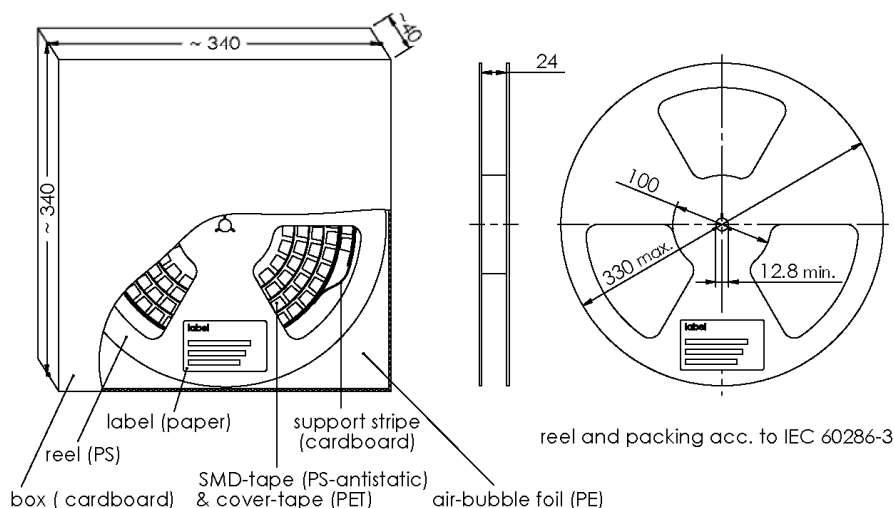
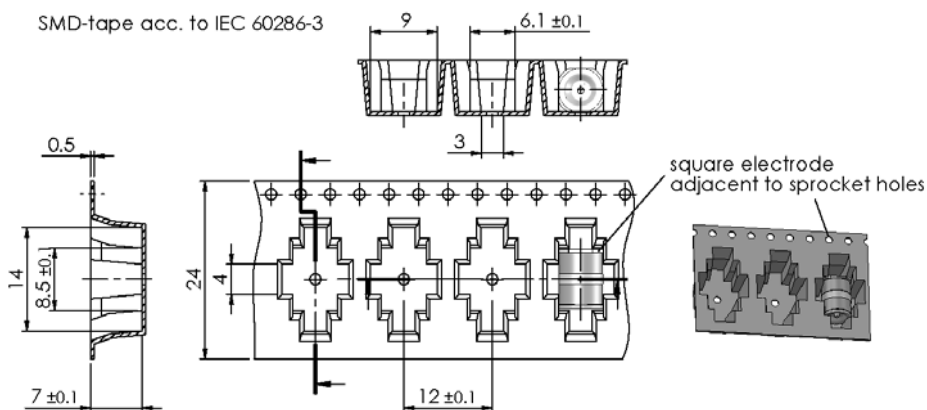
- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Tip or ring electrode to center electrode
- 4) Total current through center electrode, half value through tip respectively ring electrode.
- 5) Test according to ITU-T Rec. K.12

Terms in accordance with ITU-T Rec. K.12; IEC 61663 and IEC 61643-311.

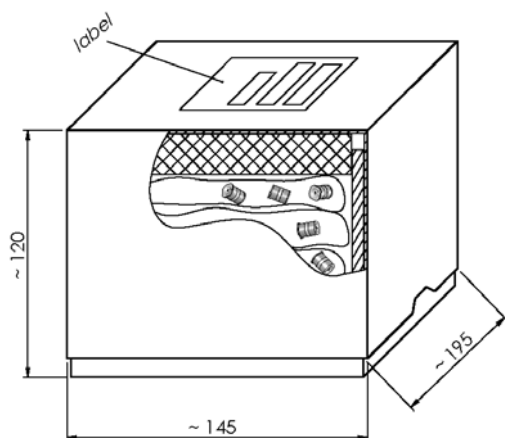
**Dimensional drawing in mm**


**Ordering codes and packing advices**

**B88069X4961T702** = SMD-tape with 700 pcs.

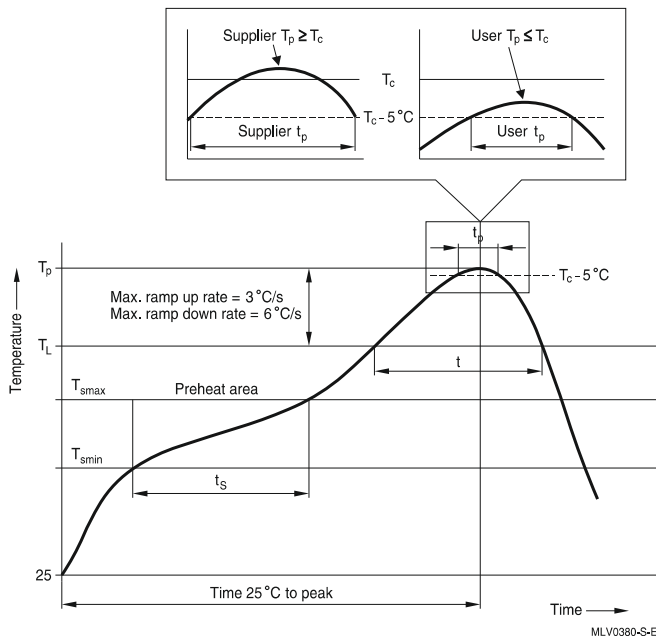


**B88069X4961C253** = 2500 pcs. in container (5 PE-bags á 500 pcs.)



## Soldering parameter

### Reflow soldering



Reflow profile features		Sn- Pb eutectic assembly	Pb-free assembly
Preheat and soak - Temperature min - Temperature max - Time	$T_{smin}$ $T_{smax}$ $t_{smin}$ to $t_{smax}$	100 °C 150 °C 60 ... 120 s	150 °C 200 °C 60 ... 180 s
Average ramp-up rate	$T_{smax}$ to $T_p$	max. 3 °C/ s	max. 3 °C/ s
Liquidous temperature Time at liquidous	$T_L$ $t_L$	183 °C 60 ... 150 s	217 °C 60 ... 150 s
Peak package body temperature *, Classification temperature **	$T_p$ , $T_c$	220 ... 235 °C **	245 ... 260 °C **
Time ( $t_p$ ) ** within 5 °C of the specified classification temperature ( $T_c$ )		20 s ***	30 s ***
Average ramp-down rate	$T_p$ to $T_{smax}$	max. 6 °C/ s	max. 6 °C/ s
Time 25 °C to peak temperature		max. 6 min	max. 8 min
* = Tolerance for peak profile temperature ( $T_p$ ) is defined as a supplier minimum and a user maximum. ** = For details please refer to JEDEC J-STD-020D. *** = Tolerance for time at peak profile temperature ( $t_p$ ) is defined as a supplier minimum and a user maximum.			

## Cautions and warnings

- Do not operate surge arresters in power supply networks, whose maximum operating voltage exceeds the minimum spark-over voltage of the surge arresters.
- Surge arresters may become hot in the event of longer periods of current stress (burn risk). In the event of overload the connectors may fail or the component may be destroyed.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.
- SMD surge arresters should be soldered within 24 month after shipment.

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