Surge arrester

3-electrode arrester

Series/Type: **T30-A90XG**
Ordering code: **B88069X3120T702**
Version/Date: Issue 04 / 2007-10-31

Features	Applications
▪ Very small size ▪ Extremely fast response time ▪ High current rating ▪ Stable performance over life ▪ Extremely low capacitance ▪ High insulation resistance ▪ RoHS-compatible	▪ Modem ▪ Data lines

Electrical specifications

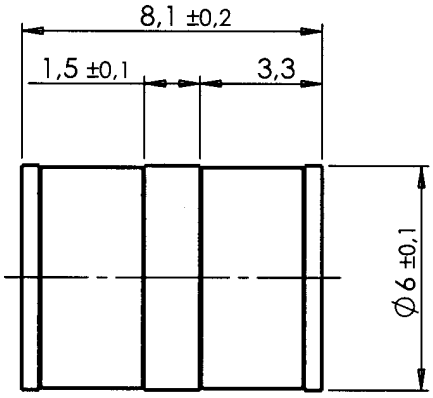
DC spark-over voltage [1) 2) 3)] DC spark-over voltage [3) 5)] DC spark-over voltage [2) 4)]	72 ... 108 72 ... 180 72 ... 230	V V V
Impulse spark-over voltage		
at 1 kV/µs - for 99 % of measured values [3)]	< 450	V
- for 50 % of measured values [3)]	< 350	V
at 1 kV/µs - for 99 % of measured values [4)]	< 700	V
- for 50 % of measured values [4)]	< 600	V
Insulation resistance at 50 V_{dc} [3)]	> 10	GΩ
Capacitance at 1 MHz [3)]	< 1.5	pF
Service life		
10 operations 50 Hz; 1 s [7)]	5	A_{rms}
10 operations 50 Hz; 1 s [6)]	10	A_{rms}
1 operation 50 Hz; 0.18 s (9 cycles) [6)]	30	A_{rms}
10 operations 8/20 µs [7)]	5	kA
10 operations 8/20 µs [6)]	10	kA
1 operation 8/20 µs [6)]	10	kA
1 operation 10/350 µs [6)]	2	kA
After service life		
Insulation resistance at 50 V_{dc} [3) 8)]	> 10	MΩ
DC spark-over voltage [2) 3)]	65 ... 150	V
DC spark-over voltage [2) 4)]	65 ... 250	V
Impulse spark-over voltage		
at 1 kV/µs - for 99 % of measured values [3)]	< 700	V
- for 99 % of measured values [4)]	< 900	V
Activation after reflow soldering [9)]		
1 operation U_{RMS} = 600 V; 1 s	2	A
Weight	~ 1.2	g
Operation and storage temperature	-40 ... +90	°C
Climatic category (IEC 60068-1)	40/ 90/ 21	

Marking, blue negative	**EPCOS** **90 YY O** 90 - Nominal voltage YY - Year of production O - Non radioactive

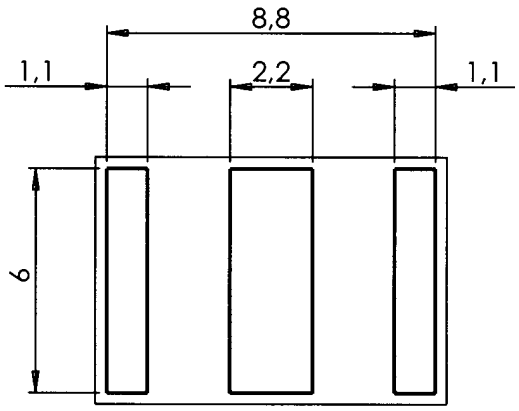
1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
3) Tip or ring electrode to center electrode
4) Tip to ring electrode
5) After 1 day storage in darkness for 80 % of tubes
6) Total current through center electrode, half value through tip respectively ring electrode
7) Total current through center electrode, same value through tip respectively ring electrode
8) For 80 % of tubes
9) Total current from ring to tip electrode

Terms in accordance with ITU-T Rec. K.12 and DIN 57845/VDE 0845

Dimensional drawing



tin-plated



recommended pad outline

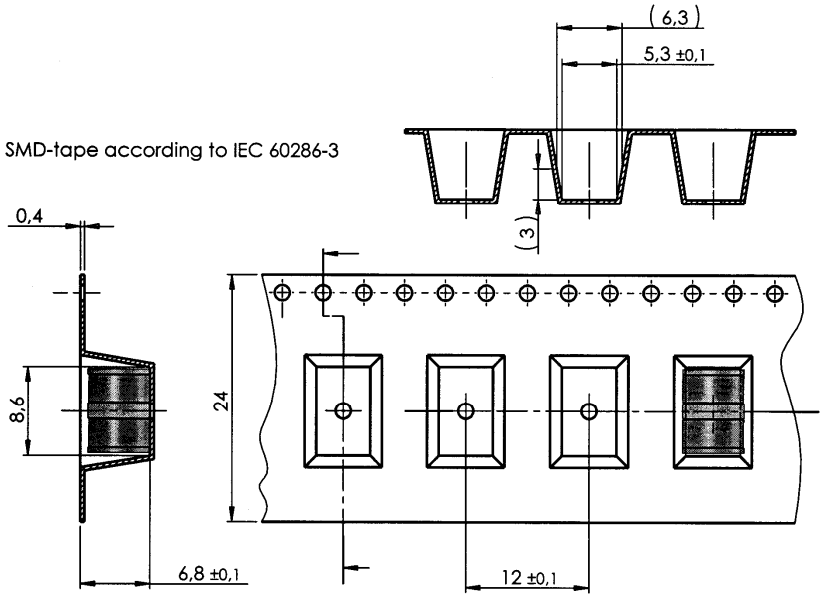
Not to scale

Dimensions in mm

Non controlled document

Packing advice

T702 = 700 pcs on SMD tape



Cautions and warnings

- Surge arresters must not be operated directly in power supply networks.
- Surge arresters may become hot in case of longer periods of current stress (danger of burning).
- Surge arresters may be used only within their specified values. In case of overload, the head contacts may fail or the component may be destroyed.
- Damaged surge arresters must not be re-used.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.** As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.
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