



## **Surge arrester**

3-electrode arrester

**Series/Type:** TG30-A90XSMD  
**Ordering code:** B88069X9991T203  
Version/Date: Issue 03 / 2011-11-23

**Features**

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

**Applications**

- ESD protection
- Applications with limited space

**Electrical specifications**

DC spark-over voltage <sup>1) 2) 4)</sup>	90 ± 30	V %
Impulse spark-over voltage <sup>4)</sup>		
at 100 V/μs - for 99 % of measured values - typical values of distribution	< 450 < 350	V V
at 1 kV/μs - for 99 % of measured values - typical values of distribution	< 650 < 550	V V
Service life		
10 operations                      50 Hz, 1 s <sup>5)</sup>	2	A
300 operations                    8/20 μs <sup>6)</sup>	100	A
10 operations [5x (+) & 5x (-)]    8/20 μs <sup>5)</sup>	2	kA
10 operations [5x (+) & 5x (-)]    5/320 μs <sup>7) 8)</sup>	150	A
300 operations ((+/-) alternating polarity) 10/1000 μs <sup>5)</sup>	20	A
Insulation resistance at 50 V <sub>DC</sub> <sup>4)</sup>	> 1	GΩ
Capacitance at 1 MHz <sup>4)</sup>	< 1.0	pF
Arc voltage at 1 A	~ 10	V
Glow to arc transition current	~ 1	A
Glow voltage	~ 60	V
Weight	~ 0.4	g
Operation and storage temperature	-40 ... +90	°C
Climatic category (IEC 60068-1)	40/ 90/ 21	
Marking	without	

<sup>1)</sup> At delivery AQL 0.65 level II, DIN ISO 2859

<sup>2)</sup> In ionized mode

<sup>3)</sup> Test according to ITU-T Rec. K.12

<sup>4)</sup> Tip or ring electrode to center electrodes

<sup>5)</sup> Total current through center electrodes, half value through tip respectively ring electrode.

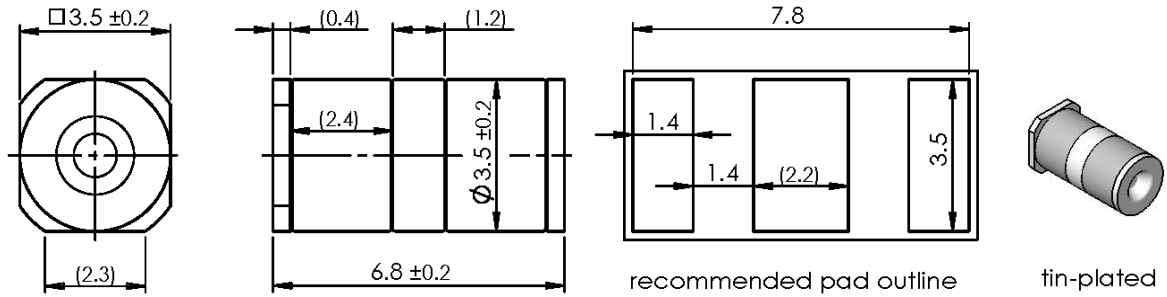
<sup>6)</sup> Tip to ring electrode

<sup>7)</sup> Tip to center electrode additional ring to center electrode

<sup>8)</sup> Test generator 6 kV, 10/700 μs, 40 Ω

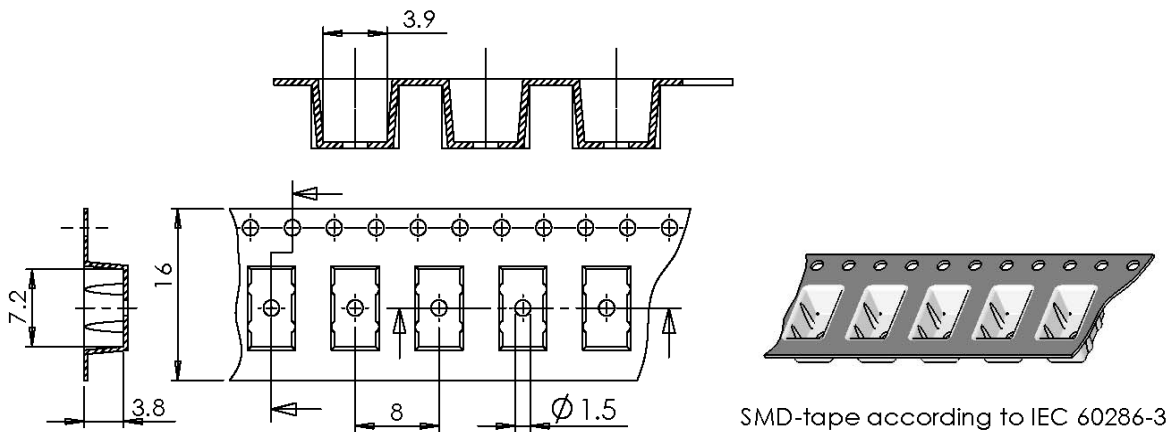
Terms in accordance with ITU-T Rec. K.12 and IEC 61663-2

**Dimensional drawing in mm**



**Ordering code and packing advice**

*B88069X9991T203 = SMD-tape with 2000 pcs*



SMD-tape according to IEC 60286-3

**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.

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