



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Surge arrester

3-electrode arrester

Series/Type: T90-A90XSMD
Ordering code: B88069X2331T902
Date: 2015-09-09
Version: 07

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Features

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

Applications

- Modem
- Data lines

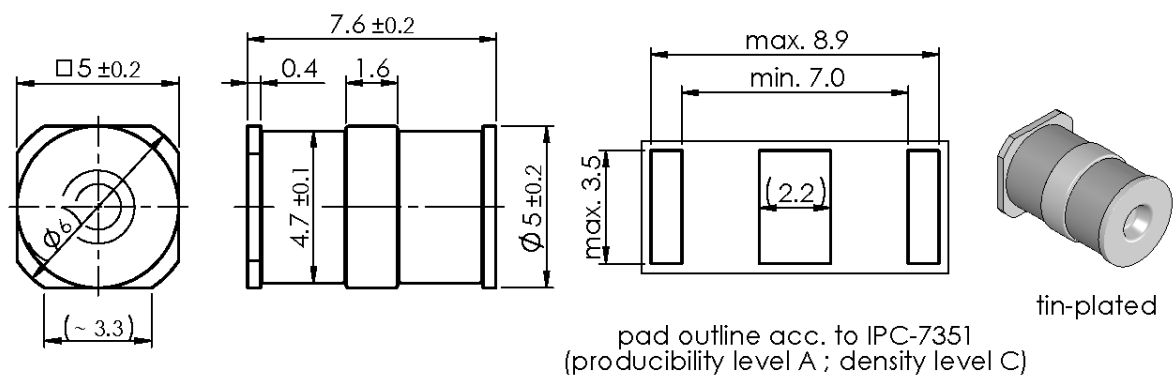
Electrical specifications

DC spark-over voltage ^{1) 2) 3)}		90 ±20	V %
Impulse spark-over voltage ³⁾			
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	< 600 < 500	V V
Service life			
10 operations	50 Hz; 1 s ⁴⁾	10	A
1 operation	50 Hz; 0.18 s (9 cycl.) ⁴⁾	10	A
10 operations	8/20 μs ⁴⁾	10	kA
1 operation	10/350 μs ⁴⁾	1	kA
300 operations (+/-, alternating pol.)	10/1000 μs ⁴⁾	200	A
Insulation resistance at 50 V _{DC} ³⁾		> 1	GΩ
Capacitance at 1 MHz ³⁾		< 1.5	pF
Transverse delay time ⁵⁾		< 0.2	μs
Arc voltage at 1 A		~ 15	V
Glow to arc transition current		< 0.5	A
Glow voltage at 0.1 A		~ 70	V
Weight		~ 0.8	g
Operation and storage temperature		-40 ... +125	°C
Climatic category (IEC 60068-1)		40/125/21	
Marking, blue negative		EPCOS 90 YY O 90 - Nominal voltage YY - Year of production O - Non radioactive	
Certifications		UL 497B (E163070)	

Remarks on next page

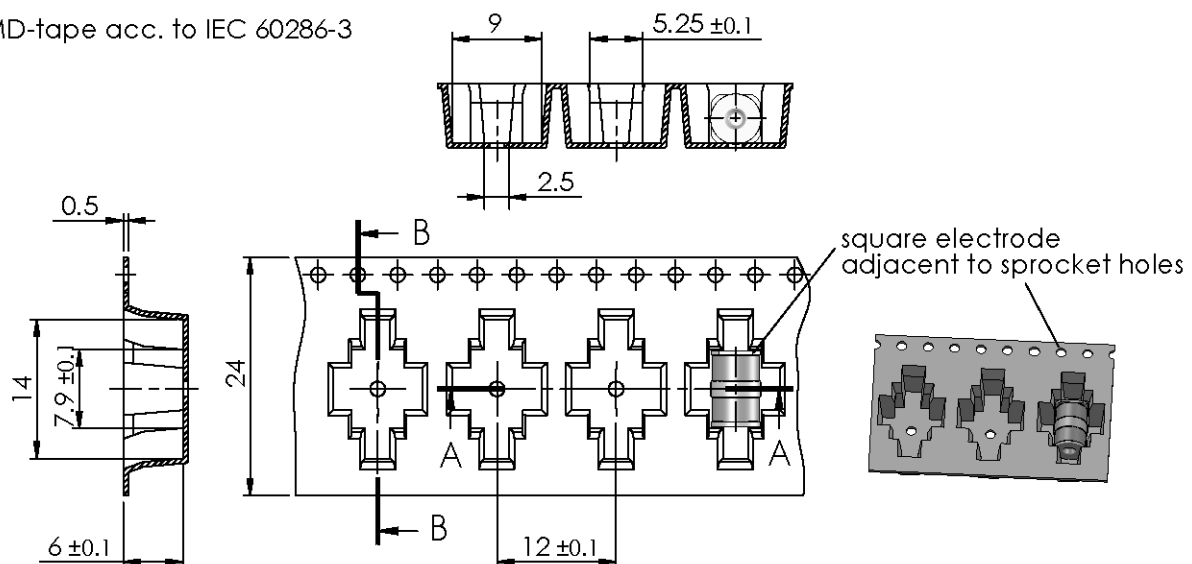
- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Tip or ring electrode to center electrode
- 4) Total current through center electrode, half value through tip respectively ring electrode.
- 5) Test according to ITU-T Rec. K.12

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

Dimensional drawing in mm

Ordering code and packing advice

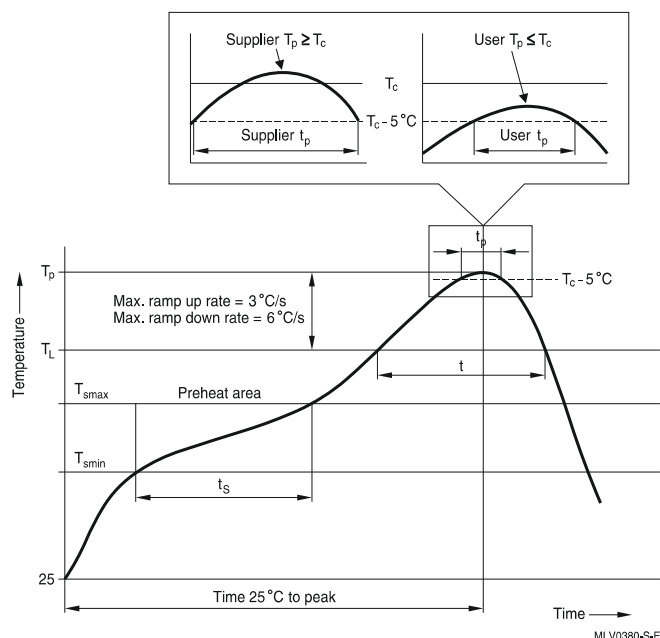
B88069X2331T902 = SMD-tape with 900 pcs.

SMD-tape acc. to IEC 60286-3



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.
- The shown SMD pad dimensions represent a safe way to mount the arrester and are a recommendation of the manufacturer. During the reflow process it must be assured that no solder material reduces the insulation distance between the pads below the arrester.
- SMD surge arresters should be soldered within 24 month after shipment.

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