

Surge arrester

2-electrode arrester

Series/Type: Ordering code:	ES470XSMD B88069X9791****
Date:	2019-07-23
Version:	04

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ES470XSMD

B88069X9791****

Surge arrester

2-electrode arrester

Features

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

Electrical specifications

RoHS-compatible

Applications

- Modem
- Consumer electronic
- Tuner
- Data lines
- Antenna

Electrical specifications			
DC spark-over voltage ^{1) 2)}		470	V
Tolerance		±20	%
Min.		376	V
Max.		564	V
Impulse spark-over voltage			
at 100 V/µs - for 99% of measured values		< 800	V
 typical values of distribution 		< 750	V
at 1 kV/µs - for 99% of measured values - typical values of distribution		< 950	V
		< 900	V
Service life			
10 operations	50 Hz, 1 s	2.5	А
1 operation	50 Hz, 0.18 s (9 cycles)	5	А
10 operations [5× (+) & 5× (–)]	8/20 µs	2.5	kA
1 operation	8/20 µs	5	kA
Insulation resistance at 100 V_{DC}		> 1	GΩ
Capacitance at 1 MHz		< 1	pF
Arc voltage at 1 A		~ 11	V
Glow to arc transition current		< 0.5	А
Glow voltage		~ 80	V
Weight		~ 0.3	g
Operation and storage temperature		-40 +125	°C
Climatic category (IEC 60068-1)		40/125/21	
Marking, red positive		EPCOS ES 470 YY OES- Series470- Nominal voltageYY- Year of productionO- Non radioactive	
Certification		UL 497B (E163070	

¹⁾ At delivery AQL 0.65 level II, DIN ISO 2859

²⁾ In ionized mode

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

PPD AB PD / PPD AB PM

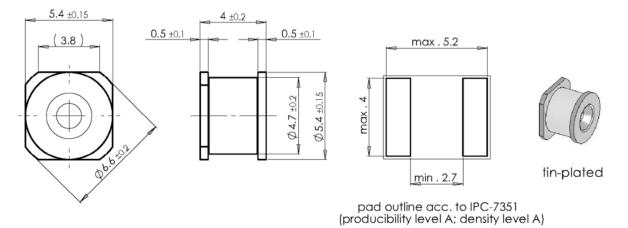


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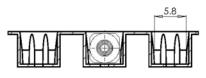
Dimensional drawing in mm

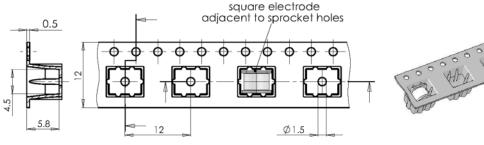


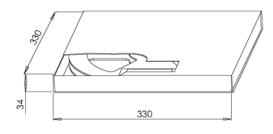
Ordering codes and packing advices

B88069X9791**T902** = 900 pcs. on SMD-tape & reel

SMD-tape according to IEC 60286-3









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ES470XSMD

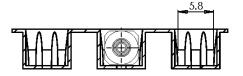
B88069X9791****

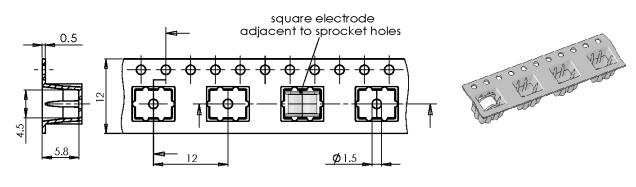
Surge arrester

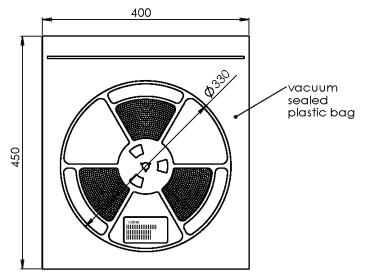
2-electrode arrester

B88069X9791**V902** = 900 pcs. on SMD-tape & reel, vacuum sealed

SMD-tape according to IEC 60286-3







②TDK

Surge arrester

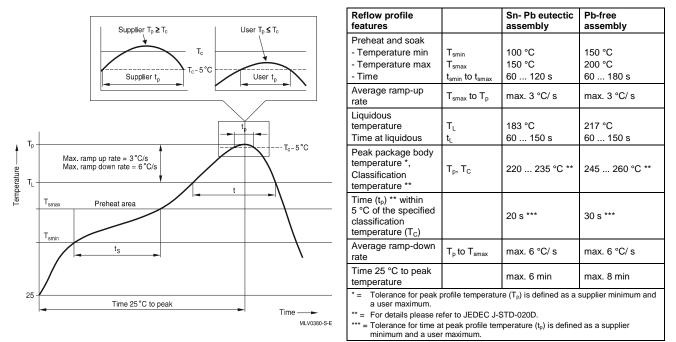
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Soldering parameter

Reflow soldering



Surface mounted components (SMD) may exhibit a temporary increase in the DC spark-over voltage after the solder reflow process. The components will recover within 24 hours. There is no quality defect nor change in protection levels during the temporary change in DC spark-over voltage.

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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Important notes

8. The trade names EPCOS, CeraCharge, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CTVS, DeltaCap, DigiSiMic, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PowerHap, PQSine, PQvar, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, ThermoFuse, WindCap are trademarks registered or pending in Europe and in other countries. Further information will be found on the Internet at www.tdk-electronics.tdk.com/trademarks.

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