



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

2-electrode arrester

**Series/Type:** EF470X  
**Ordering code:** B88069X5080\*\*\*\*  
Version/Date: Issue 07 / 2015-02-11

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**Features**

- High follow current capability
- Very fast response time
- Stable performance over life
- Very low capacitance
- High insulation resistance
- RoHS-compatible

**Applications**

- Application with high follow current
- Power supply
- Consumer electronics
- AC power line devices

**Electrical specifications**

DC spark-over voltage <sup>1) 2)</sup>	470	V
Tolerance	-15 ... +25	%
Min.	400	V
Max.	588	V
Impulse spark-over voltage		
at 100 V/μs - for 99% of measured values	< 700	V
- typical values of distribution	< 600	V
at 1 kV/μs - for 99% of measured values	< 800	V
- typical values of distribution	< 700	V
Service life		
10 operations 50 Hz, 1 s	5	A
1 operation 50 Hz, 0.18 s (9 cycles)	65	A
10 operations 8/20 μs	5	kA
1 operation 8/20 μs	10	kA
1 operation 10/350 μs	1	kA
Max. follow current during one voltage half cycle at 50 Hz <sup>3)</sup>	200	A
Insulation resistance at 100 V <sub>DC</sub>	> 10	GΩ
Capacitance at 1 MHz	< 1.5	pF
Arc voltage at 1 A	~ 18	V
Glow to arc transition current	< 0.3	A
Glow voltage	~ 150	V
Weight	~ 1.5	g
Operation and storage temperature	-40 ... +125	°C
Climatic category (IEC 60068-1)	40/ 125/ 21	
Marking, red positive	<b>EPCOS EF 470 YY O</b> EF - Series 470 - Nominal voltage YY - Year of production O - Non radioactive	
Certifications	UL 497B (E163070) UL 1449 (E319264)	

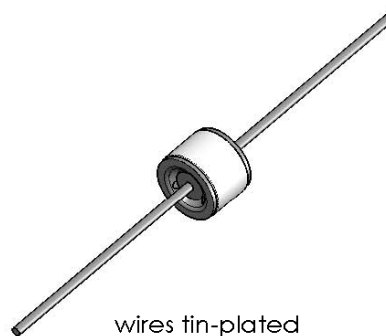
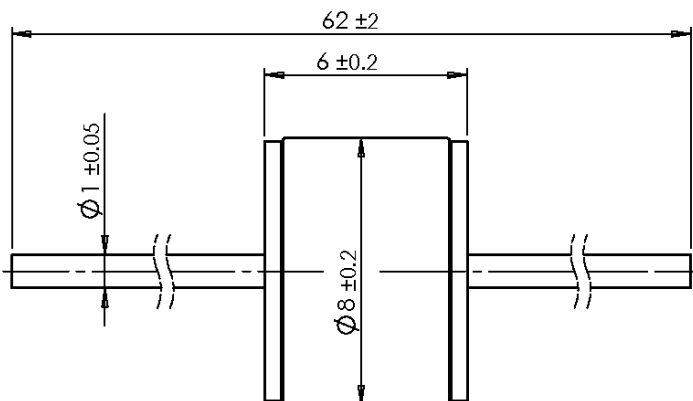
<sup>1)</sup> At delivery AQL 0.65 level II, DIN ISO 2859

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

<sup>3)</sup> Follow current has to be limited by an appropriate varistor in series.

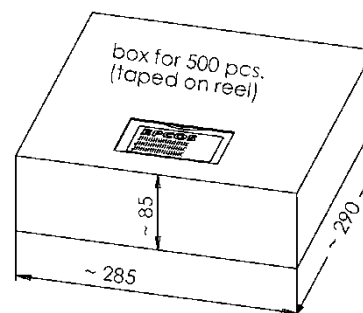
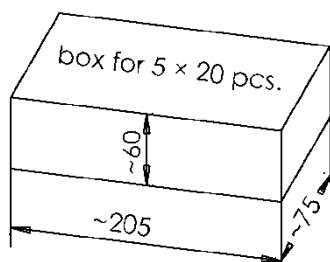
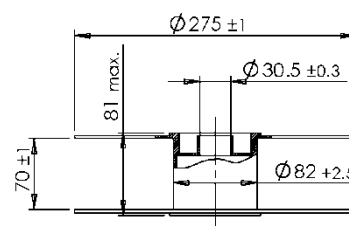
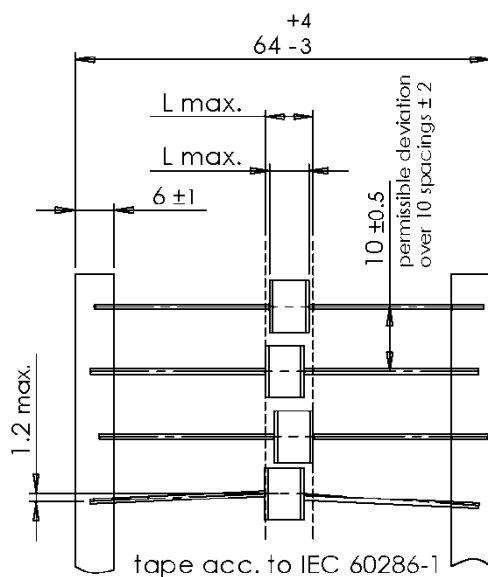
Terms in accordance with ITU-T Rec. K.12; IEC 61663-2 and IEC 61643-311.

Dimensional drawing in mm



Ordering codes and packing advices

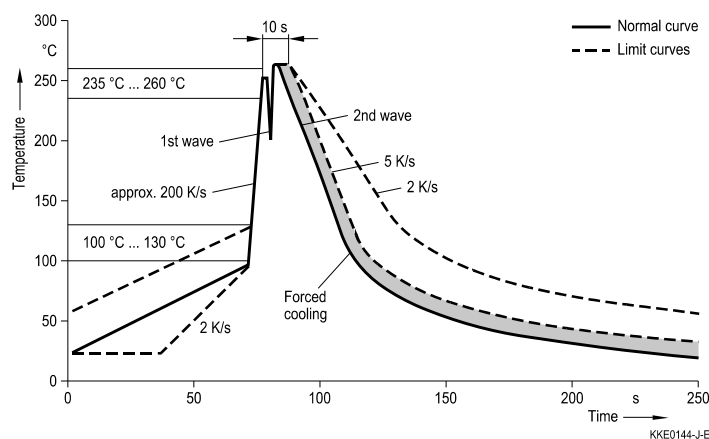
B88069X5080**S102** = 100 pcs. on 5 taped stripes    B88069X5080**T502** = 500 pcs. on tape and reel





## Soldering parameter

### Wave soldering



Wave profile features	Pb-free assembly
Solder	Sn 95.5 / Ag 3.8 / Cu 0.7
Solder bath temperature	263 (±3) °C
Dwell time	< 3 s

Soldering profile applied to a single soldering process.

## 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.
- The follow current must be limited (see page 2) so that the arrester can be properly extinguished when the surge has decayed. The arrester might otherwise heat up and ignite adjacent components.
- 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.

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