



## Surge arrester

2-electrode arrester

**Series/Type:** EM500X  
**Ordering code:** B88069X2780S102  
Date: 2019-04-04  
Version: 04


**Features**

- Small size
- Fast response time
- High current handling capability
- Stable performance over service life
- Low capacitance and insertion loss
- High insulation resistance
- RoHS-compatible

**Applications**

- Power supplies
- Antenna protection
- Air condition
- Modem
- Consumer electronics
- Dataline protection

**Electrical specifications**

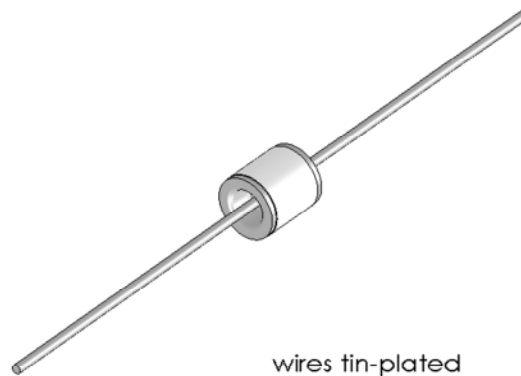
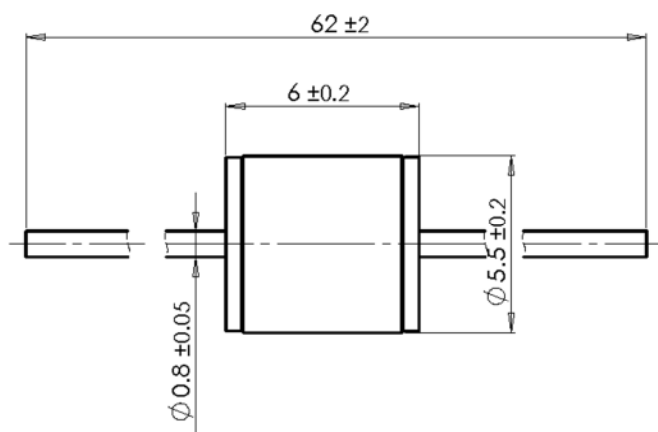
DC spark-over voltage <sup>1) 2)</sup>	500	V
Tolerance	±20	%
Min.	400	V
Max.	600	V
Impulse spark-over voltage		
at 100 V/μs - for 99% of measured values	< 950	V
- typical values of distribution	< 800	V
at 1 kV/μs - for 99% of measured values	< 1050	V
- typical values of distribution	< 900	V
Service life		
10 operations                      50 Hz, 1 s	2.5	A
1 operation                        50 Hz, 0.18 s (9 cycles)	5	A
10 operations [5x (+) & 5x (-)]    8/20 μs	2.5	kA
1 operation                        8/20 μs	5	kA
Insulation resistance at 100 V <sub>DC</sub>	> 1	GΩ
Capacitance at 1 MHz	< 1	pF
Arc voltage at 1 A	~ 10	V
Glow to arc transition current	< 0.3	A
Glow voltage	~ 60	V
Weight	~ 1	g
Operation and storage temperature	-40 ... +125	°C
Climatic category (IEC 60068-1)	40/125/21	
Marking, red positive	<b>EPCOS EM 500 YY O</b> EM - Series 500 - 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

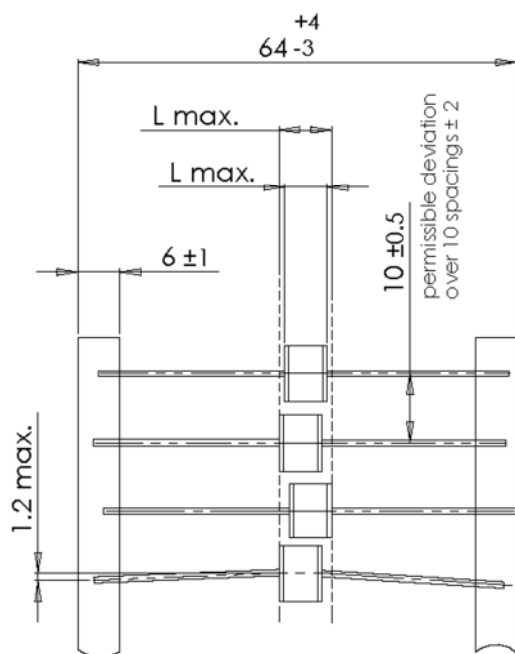
Terms in accordance with ITU-T Rec. K.12 and IEC 61643-311.

Dimensional drawing in mm

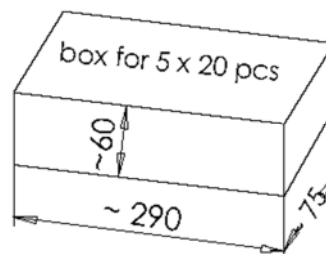


Ordering code and packing advice

B88069X2780S102 = 100 pcs. on 5 taped stripes

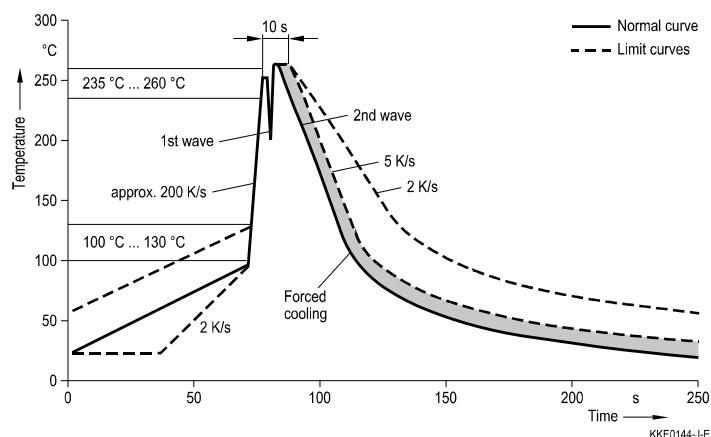


tape acc. to IEC 60286-1



## 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.
- 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.
- If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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## Important notes

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