

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	B88069X5690T502
Manufacturer:	TDK
Package:	Tape & Reel (TR), Cut Tape (CT)
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/tdk/b88069x5690t502.html>

Request a Quote:

[Submit RFQ for this part](#)



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New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



Surge arrester

2-electrode arrester

Series/Type:	EF2500X
Ordering code:	B88069X5690****
Date:	2026-04-01
Version:	10

Surge arrester

B88069X5690****

2-electrode arrester

EF2500X

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 ^{1) 2)}	2500	V
Tolerance	±20	%
Min.	2000	V
Max.	3000	V
Impulse spark-over voltage		
at 100 V/μs - for 99% of measured values	< 3200	V
- typical values of distribution	< 3000	V
at 1 kV/μs - for 99% of measured values	< 3500	V
- typical values of distribution	< 3300	V
at 5 kV/μs - for 99% of measured values	< 4000	V
- typical values of distribution	< 3500	V
Service life		
10 operations 50 Hz, 1 s	5	A
1 operation 50 Hz, 0.18 s (9 cycles)	35	A
10 operations [5× (+) & 5× (-)] 8/20 μs	5	kA
1 operation 8/20 μs	10	kA
Max. follow current during one voltage half cycle at 50 Hz ³⁾	200	A
Insulation resistance at 100 V _{DC}	> 1	GΩ
Capacitance at 1 MHz	< 1.5	pF
Arc voltage at 1 A	~ 35	V
Glow to arc transition current	< 0.3	A
Glow voltage at 0.1 A	~ 120	V
AC withstand voltage (1 min) ⁴⁾	1250	V
Weight	~ 1.5	g
Operation and storage temperature	-40 ... +125	°C
Climatic category (IEC 60068-1)	40/125/21	
Marking, red positive	TDK EF 2500 YY EF - Series 2500 - Nominal voltage YY - Year of production	
Certifications	UL 1449 (E319264)	

Remarks on next page

Surge arrester

B88069X5690****

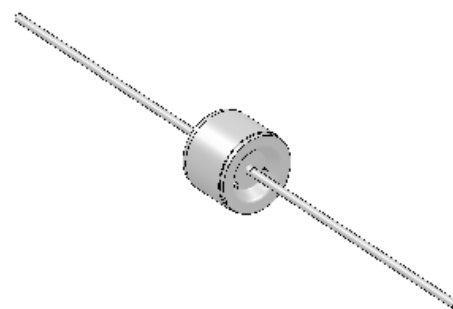
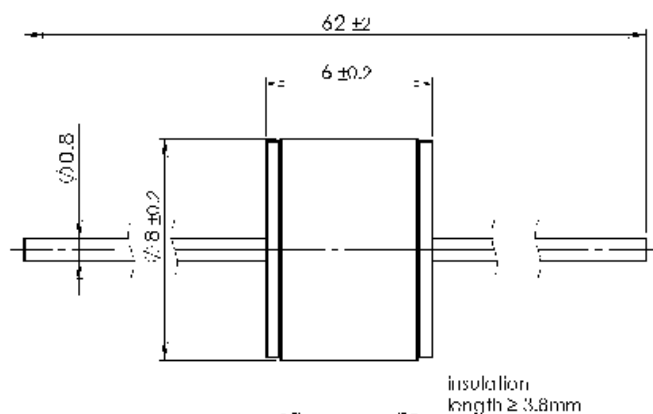
2-electrode arrester

EF2500X

- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Follow current has to be limited by an appropriate varistor in series
- 4) Test conditions in acc. with MIL-STD-202G at 25 ± 5 °C, relative humidity of $\leq 55\%$ and atmospheric pressure 860 ... 1100mbar.

Terms and current waveforms in accordance with: ITU-T Rec. K. 12; IEC 61643-21; 61643-311.

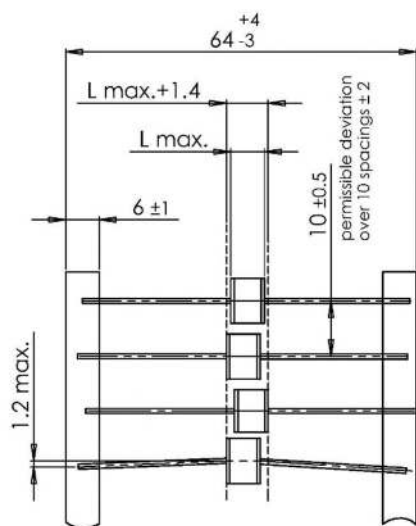
Dimensional drawing in mm



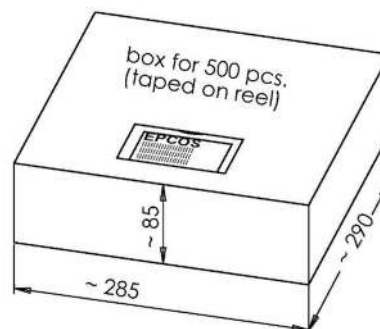
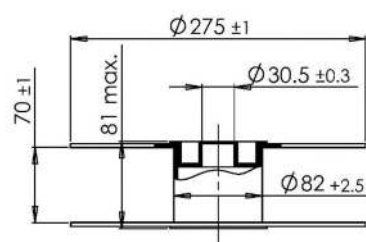
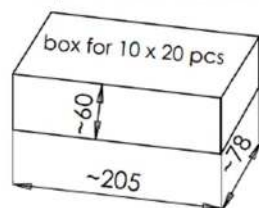
wires tin-plated

Ordering codes and packing advices

B88069X5690S202 = 200 pcs. on 10 taped stripes B88069X5690T502 = 500 pcs. on tape and reel

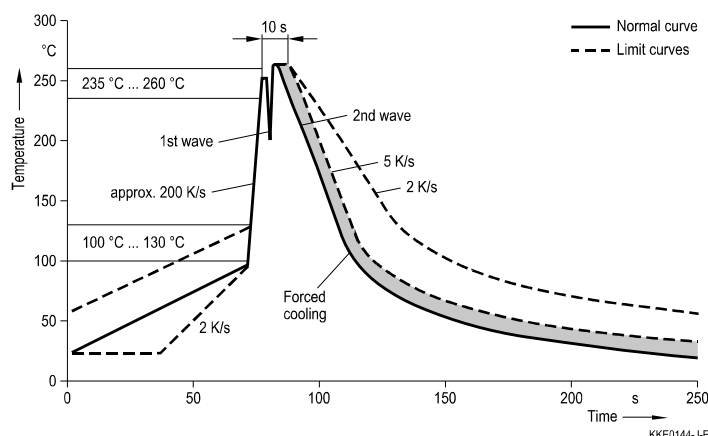


tape acc. to IEC 60286-1



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.
- Electromagnetic fields and ionizing radiation may affect the electrical characteristics of the arrester. The impact of such effects (inductive and capacitive field distortion from adjacent components) must be avoided by appropriate circuit design measures.
- 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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Release 2024-02