

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	B88069X9231T253
Manufacturer:	TDK
Package:	Tape & Reel (TR), Cut Tape (CT)
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/tdk/b88069x9231t253.html>

Request a Quote:

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Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

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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:	S30-A90X
Ordering code:	B88069X9231****
Date:	2026-04-01
Version:	12

Product description

The S30 series has been especially designed to meet data transmission protection requirements. The optimized design features a high level of protection against fast rising transients usually caused by lightning disturbances. For use in high frequency data lines, the series offers ultra low capacitances and shows only marginally signal losses up to high frequencies. The devices are extremely reliable and are able to withstand high surge currents without destruction.

Features

- Very small size (EIA 1812)
- Short response time
- High current capability
- Stable performance over service life
- Ultra low capacitance and insertion loss
- High insulation resistance
- Excellent SMD handling
- RoHS-compatible

Applications

Telecommunication:

- Ethernet, PoE, xDSL
- Cable modem, splitters, line cards
- Wireless antenna protection

Others:

- CCTV
- Switching power supply

Product characteristics

Physical dimensions (length × width × height)	0.18 × 0.12 × 0.10	in
	4.5 × 3.2 × 2.7	mm
	EIA 1812 / 4532 metric	
Weight	~ 0.2	g
Operating temperature	−40 ... +125	°C
Recommended storage ¹⁾ - temperature - humidity - period	+5 ... +35 45 ... 80 ≤ 2	°C % years
Climatic category (IEC 60068-1)	40/125/21	
Moisture sensitivity level ²⁾	1	
Marking, black positive	BY B - Nominal voltage (B ≙ 90 V) Y - Year of production (last digit)	
Certifications	UL 497B (E163070)	

Notes:

¹⁾ Specified in terms of corrosion against Sn-plating

²⁾ Tests according to JEDEC J-STD-020

Surge arrester
B88069X9231****
2-electrode arrester
S30-A90X
Electrical specifications and stress test methods

Nominal DC spark-over voltage ^{3) 4)}	90	V
Tolerance	±30	%
Min.	63	V
Max.	117	V
Impulse spark-over voltage		
at 100 V/μs - for 99% of measured values	< 500	V
- typical values of distribution	< 400	V
at 1 kV/μs - for 99% of measured values	< 600	V
- typical values of distribution	< 500	V
Service life ⁵⁾		
10 operations 50 Hz, 1 s	2.5	A
300 operations 8/20 μs	100	A
10 operations [5× (+) & 5× (-)] 8/20 μs	3	kA
1 operation 8/20 μs	3.5	kA
10 operations [5× (+) & 5× (-)] 5/320 μs ⁶⁾	150	A
100 operations [50× (+) & 50× (-)] 10/1000 μs	10	A
Insulation resistance at 50 V _{DC}	> 1	GΩ
Capacitance at 1 MHz	< 0.4	pF
Arc voltage at 1 A	~ 8	V
Glow to arc transition current	< 0.2	A
Glow voltage	~ 50	V

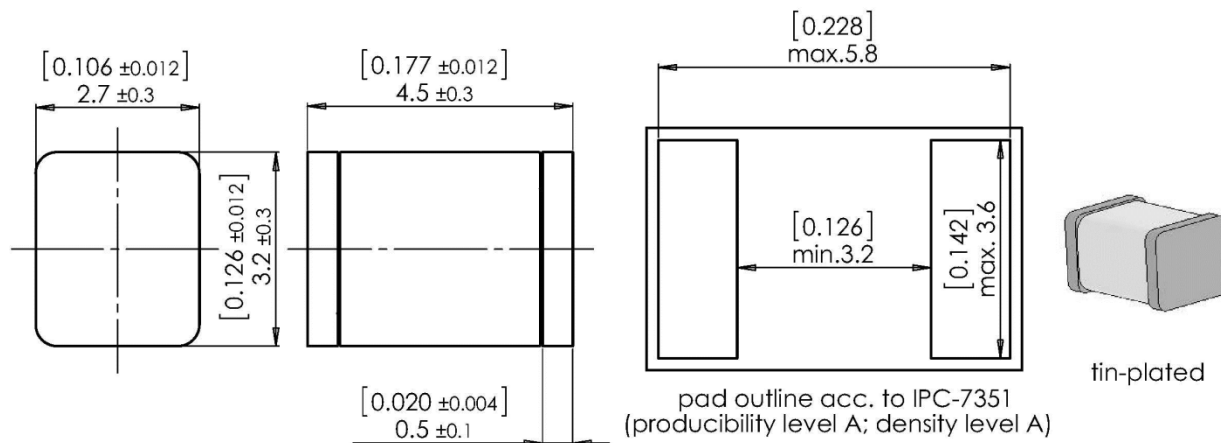
³⁾ At delivery AQL 0.65 level II, DIN ISO 2859

⁴⁾ In ionized mode

⁵⁾ Tests according to ITU-T Rec. K. 12 and UL 497B

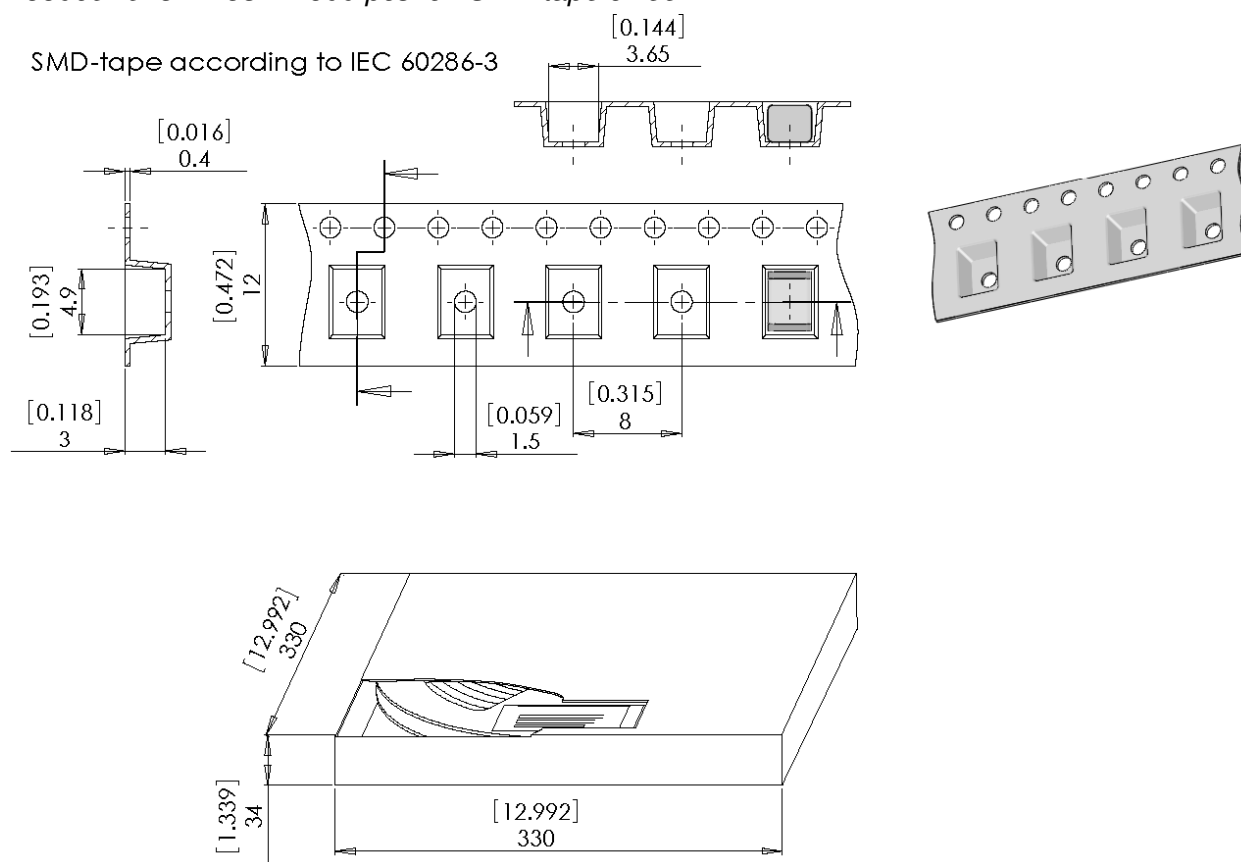
⁶⁾ Test generator 6 kV, 10/700 μs, 40 Ω

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

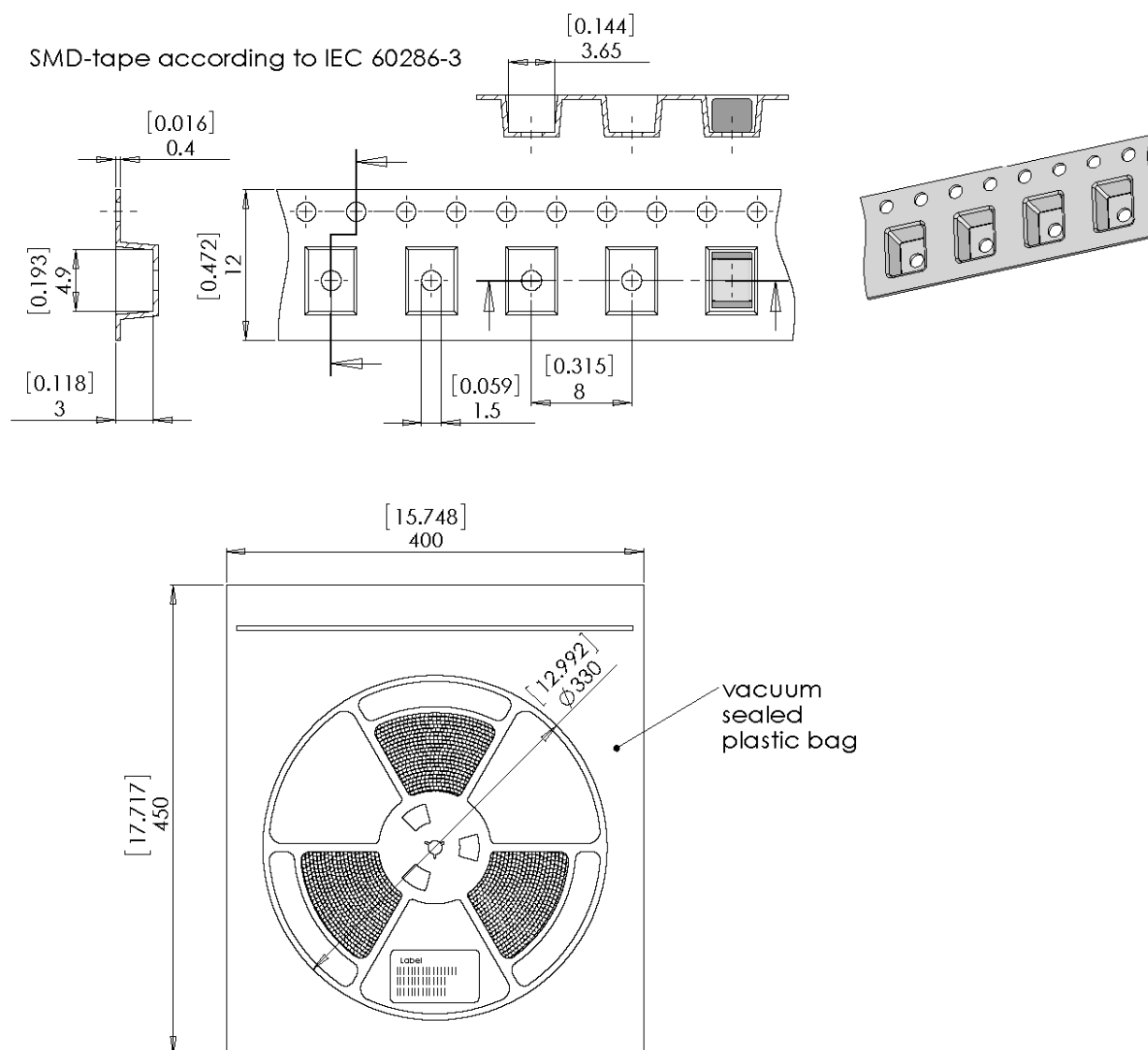
Dimensions in mm and inch [...]

Ordering code and packing advice

B88069X9231T253 = 2500 pcs. on SMD-tape & reel

SMD-tape according to IEC 60286-3



B88069X9231V253 = 2500 pcs. on SMD-tape & reel, vacuum sealed



Caution

Surge arresters are not sensitive to humidity. The vacuum bag may be damaged but this has no effect on the product performance.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule we are either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether a product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.tdk-electronics.tdk.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6. Unless otherwise agreed in individual contracts, **all orders are subject to our General Terms and Conditions of Supply**.
7. **Our manufacturing sites serving the automotive business apply the IATF 16949 standard**. The IATF certifications confirm our compliance with requirements regarding the quality management system in the automotive industry. Referring to customer requirements and customer specific requirements ("CSR") TDK always has and will continue to have the policy of respecting individual agreements. Even if IATF 16949 may appear to support the acceptance of unilateral requirements, we hereby like to emphasize that **only requirements mutually agreed upon can and will be implemented in our Quality Management System**. For clarification purposes we like to point out that obligations from IATF 16949 shall only become legally binding if individually agreed upon.

Important notes

8. The trade names EPCOS, CarXield, CeraCharge, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CTVS, DeltaCap, DigiSiMic, FilterCap, FormFit, InsuGate, LeaXield, MediPlas, MiniBlue, MiniCell, MKD, MKK, ModCap, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PiezoBrush, PlasmaBrush, PowerHap, PQSine, PQvar, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SurfIND, ThermoFuse, WindCap, XieldCap 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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