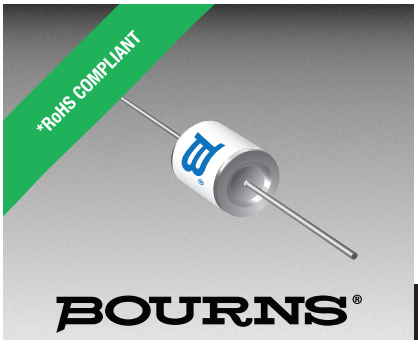

Features

- Formerly a JENGEN DEVICES product
- High insulation resistance
- Quick response, long service life
- Available DC breakdown range: 2.4 kV to 7.2 kV
- Wide operating temperature range
- RoHS compliant*

Applications

- Street lighting
- Medical devices (low/medium risk)**
- Air conditioning
- Power supplies
- Projectors
- Welders

SA2 Series High Voltage Gas Discharge Tube

Description

Bourns® SA2 Series two-electrode High Voltage Gas Discharge Tube devices are designed for high isolation applications. The series offers high insulation resistance over a wide temperature range and is offered with DC breakdowns from 2.4 kV to 7.2 kV. Other customized voltages between 2 kV and 7.2 kV are available upon request.

Agency Recognition

Agency	Category	Agency File No.
UL	UL 1449	E313168

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Electrical Characteristics

Part No.	Device Specifications									Life Ratings		
	DC Breakdown Voltage @ 500 V/s (1)				Impulse Breakdown	Ramp	Insulation Resistance @ 250 Vdc	Arc Voltage @ 5A min.	Capacitance @ 1 MHz	Nominal Impulse Discharge		Nom. DC Break-down After Life
	Min.	Typ.	Max.	Tol.	Max.	Typ.	Min.	Typ.	Max.	1 Operation	10 Operations	
SA2-2400-Dxx-STD	2040	2400	2880	-15 % to +20 %	3800 V	@1 kV/µs	10 G Ohm	20 V	1 pF	10 kA, 8/20 µs	5 kA, 8/20 µs, ±5 operations in each polarity	>2.0 kV
SA2-2400-Cxx-STD	1920	2400	2880	-20 % to +20 %								>1.9 kV
SA2-3000-Dxx-STD	2550	3000	3600	-15 % to +20 %	4500 V	@7.5 kV/µs						>2.4 kV
SA2-3000-Cxx-STD	2400	3000	3600	-20 % to +20 %								>2.3 kV
SA2-3600-Dxx-STD	3060	3600	4320	-15 % to +20 %	5400 V	@7.5 kV/µs						>3.0 kV
SA2-3600-Cxx-STD	2880	3600	4320	-20 % to +20 %								>2.8 kV
SA2-4000-Dxx-STD	3400	4000	4800	-15 % to +20 %	6000 V	@7.5 kV/µs						>3.3 kV
SA2-4000-Cxx-STD	3200	4000	4800	-20 % to +20 %								>3.1 kV
SA2-4500-Dxx-STD	3825	4500	5400	-15 % to +20 %	6500 V	@7.5 kV/µs						>4.0 kV
SA2-4500-Cxx-STD	3600	4500	5400	-20 % to +20 %								>3.8 kV
SA2-5500-Dxx-STD	4675	5500	6600	-15 % to +20 %	8000 V	@7.5 kV/µs						>4.4 kV
SA2-5500-Cxx-STD	4400	5500	6600	-20 % to +20 %								>4.2 kV
SA2-5900-Dxx-STD	5015	5900	7080	-15 % to +20 %	8000 V	@7.5 kV/µs						>4.9 kV
SA2-5900-Cxx-STD	4720	5900	7080	-20 % to +20 %								>4.6 kV
SA2-6000-Dxx-STD	5100	6000	7200	-15 % to +20 %	8000 V	@7.5 kV/µs						>5.0 kV
SA2-6000-Cxx-STD	4800	6000	7200	-20 % to +20 %								>4.7 kV
SA2-6200-Dxx-STD	5270	6200	7440	-15 % to +20 %	8000 V	@7.5 kV/µs						>5.2 kV
SA2-6200-Cxx-STD	4960	6200	7440	-20 % to +20 %								>4.9 kV
SA2-6300-Dxx-STD	5355	6300	7560	-15 % to +20 %	9200 V	@7.5 kV/µs						>5.3 kV
SA2-6300-Cxx-STD	5040	6300	7560	-20 % to +20 %								>5.0 kV
SA2-7200-Dxx-STD	6120	7200	8640	-15 % to +20 %	10000 V	@1 kV/µs						>6.3 kV
SA2-7200-Cxx-STD	5760	7200	8640	-20 % to +20 %								>6.0 kV

Notes: Model SA2-7200 specification is based on the customer providing sufficient encapsulation/working environment for the component to avoid outside surface breakdown (e.g., non-contaminated equivalent surface in RH 40 % reaches breakdown at 10-12 kV).

(1) DC and Impulse Sparkover values are in ionized mode @ 25 °C.

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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SA2 Series High Voltage Gas Discharge Tube

BOURNS®

Product Characteristics

Operating Temperature Range ..... -40 °C to +125 °C
Storage Temperature Range ..... -65 °C to +125 °C
Device Plating..... Matte-Sn
Moisture Sensitivity Level 1
ESD Classification (HBM)..... 6

Environmental Characteristics

Section	Category	Test	Condition
IEC 60068-2-13 test M	Operational	Low Air Pressure	Temp. +55 °C, Time 0.5 Sec., Pressure 600 hPa
IEC 60068-2-1, test Ab	Non-Operational	Cold	-40 °C, 96 Hours
IEC 60068-2-2, test Bb		Dry Heat	+100 °C, 96 Hours
IEC 60068-2-30, test Ca		Damp Heat, Steady State	+40 °C, 93 % RH, 21 Days
IEC 60068-2-14, test Na		Rapid Change in Temperature	Upper Temp. +100 ° C, Lower Temp. -40 °C, 5 Cycles
IEC 60068-2-6, test Fc		Vibration	10-55 Hz, 30 Min. per Axis, Double Amplitude 0.70 Min.
IEC 60068-2-27, test Ea		Shock Test	30 g, 11 ms, Half Sine Pulse
IEC 60068-2-20, test Ta		Solderability	Method 1, +235 °C, 2 Sec., Aging
IEC 60068-2-20, test Tb		Resistance to Soldering Heat	Method 1A, +260 °C, 5 Sec.
IEC 60068-2-21		Robustness of Terminations	Ua1 (Tensile), Ua2 (Thrust), Ub (Bending) and Uc (Torsion)

How to Order

SA 2 - nnnn - x x x - STD

Series Designator

No. of Electrodes
- 2 = 2 Electrodes

Breakdown Voltage

2400 = 2400 V	4500 = 4500 V	6200 = 6200 V
3000 = 3000 V	5500 = 5500 V	6300 = 6300 V
3600 = 3600 V	5900 = 5900 V	7200 = 7200 V
4000 = 4000 V	6000 = 6000 V	

Tolerance
- C = -20 % to +20 %
- D = -15 % to +20 %

Lead Shape
- B = Bent Leads*
- C = No Leads*
- K = Bent Leads with Kinks*
- K1 = Bent Leads with Kinks*
- L = Straight Leads**

Packaging
- B = Bulk
- T = Tape & Reel

Standard or Modified Product Indicator
- STD = Standard

* Available in bulk packaging only.

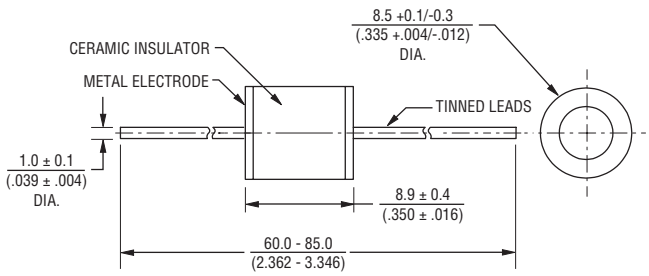
** Bulk packaging available for straight lead devices ≤3600 V. Devices >3600 V available in tape and reel only.

Typical Part Marking

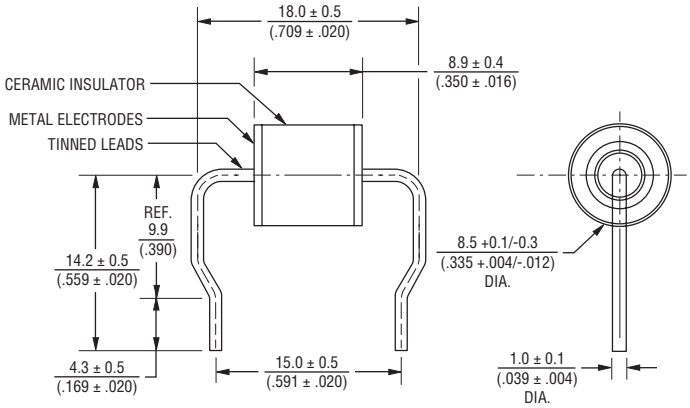
..... BSA2-xxxx

Product Dimensions

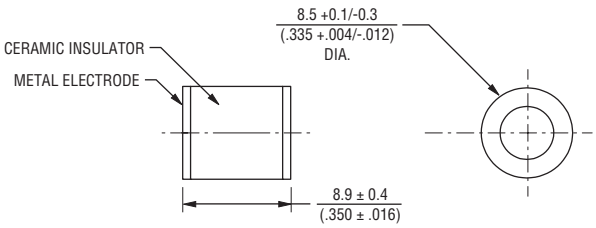
SA2-xxxx-xLx



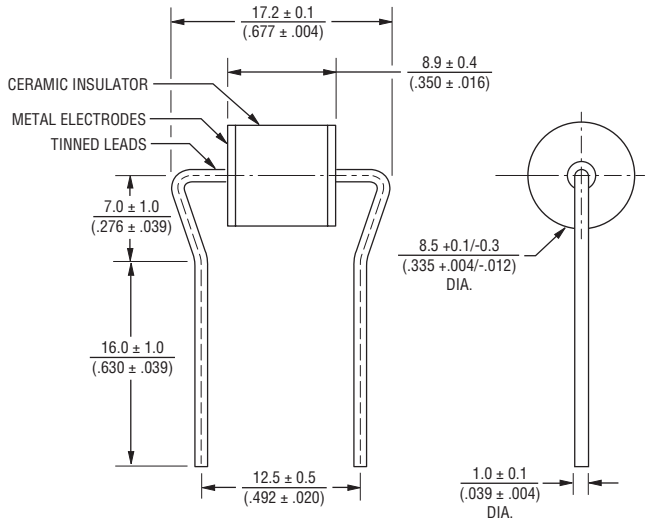
SA2-xxxx-xKx



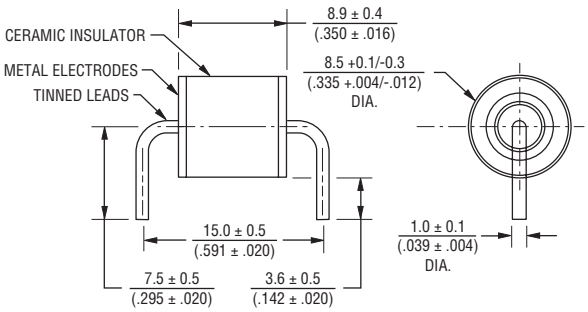
SA2-xxxx-xCx



SA2-xxxx-xK1x



SA2-xxxx-xBx



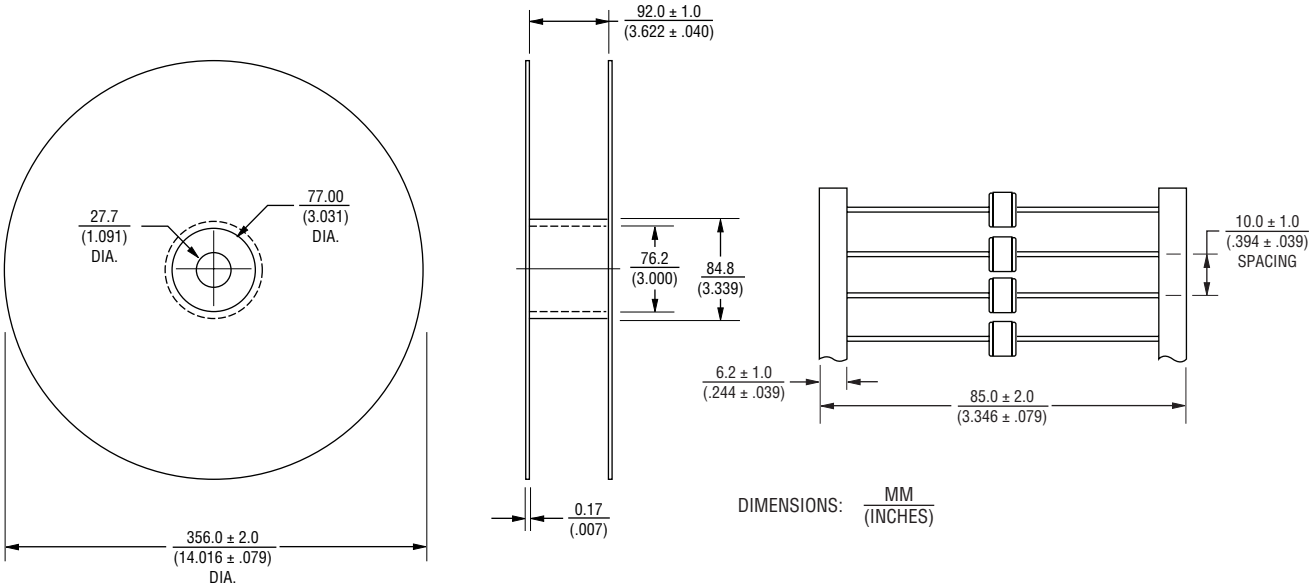
DIMENSIONS: MM / (INCHES)

Packaging Specifications

Model SA2-xxxx-xxB ships standard bulk pack, 1,000 pcs./bag*.
The optional tape and reel packaging contains 1,000 pcs./reel for Model SA2-xxxx-xLT.

* Straight leads versions >3600 V available in bulk or tape and reel packaging; all other models available in bulk packaging only.

SA2-xxxx-xLT



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