

# Bx2R2D8-xxxB

Gas Discharge Tube

## Features

- High insulation resistance
- Low capacitance ( $\leq 1.5\text{pF}$ )
- 10KA 8/20 $\mu\text{s}$  maximum surge current capacity in accordance with IEC61000-4-5
- 10KV 10/700 $\mu\text{s}$  maximum surge rating in accordance with ITU-TK.21
- Surface mounted gas arrester
- Micro-Gap Design
- Size 8.0 $\times$ 6.0
- Storage and operating temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Meets MSL level 1, per J-STD-020

## Package



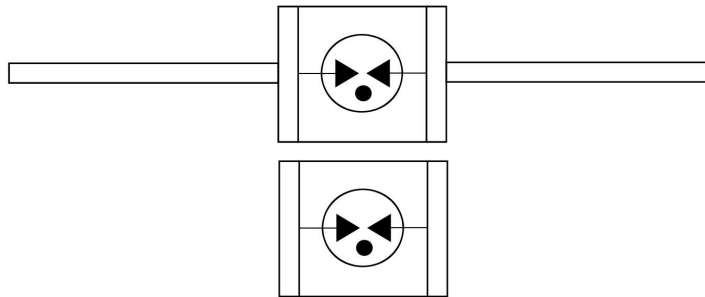
## Applications

- Communication equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Telecom SLIC protection

## Applications

- Broadband equipment
- ADSL equipment, including ADSL2+
- XDSL equipment
- Satellite and CATV equipment
- General telecom equipment

## Schematic & PIN Configuration



## Ordering information

Order code	Package	Base qty	Delivery mode
BA2R2D8-xxxB	8.0 $\times$ 6.0-W	500	Bulk
BS2R2D8-xxxB	8.0 $\times$ 6.0	500	Bulk

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

Revision: 2022-Jan-1-A



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Gas Discharge Tube

## Absolute Maximum Ratings (T<sub>A</sub>=+25°C, unless otherwise noted)

Part Number		DC Sparkover Voltage	Maximum Impulse Spark-over Voltage	Minimum Insulation Resistance		Max. Capacitance	Impulse withstanding Voltage Capacity	Nominal Impulse Discharge Current
				(GΩ)	Test DC Voltage			
		(V)	(V)		(V)	(pF)	(KV)	(KA)
BA2R2D8-75B	BS2R2D8-75B	75±20%	700	1	25	1	10	10
BA2R2D8-90B	BS2R2D8-90B	90±20%	700	1	50	1	10	10
BA2R2D8-150B	BS2R2D8-150B	150±20%	700	1	100	1	10	10
BA2R2D8-230B	BS2R2D8-230B	230±20%	700	1	100	1	10	10
BA2R2D8-300B	BS2R2D8-300B	300±20%	900	1	100	1	10	10
BA2R2D8-350B	BS2R2D8-350B	350±20%	900	1	100	1	10	10
BA2R2D8-470B	BS2R2D8-470B	470±20%	1100	1	250	1	10	10
BA2R2D8-600B	BS2R2D8-600B	600±20%	1500	1	250	1	10	10
BS2R2D8-800B	BS2R2D8-800B	800±20%	1700	1	250	1	10	10
BA2R2D8-1000B	BS2R2D8-1000B	1000±20%	1800	1	500	1.5	10	10
BA2R2D8-1500B	BS2R2D8-1500B	1500±20%	2500	1	500	1.5	10	10
BA2R2D8-2000B	BS2R2D8-2000B	2000±20%	2000	1	500	1.5	10	5
BA2R2D8-3000B	BS2R2D8-3000B	3000±20%	3000	1	500	1.5	10	5
BS2R2D8-3600B	BS2R2D8-3600B	3600±20%	4600	1	500	1.5	10	5

## Electrical Parameters

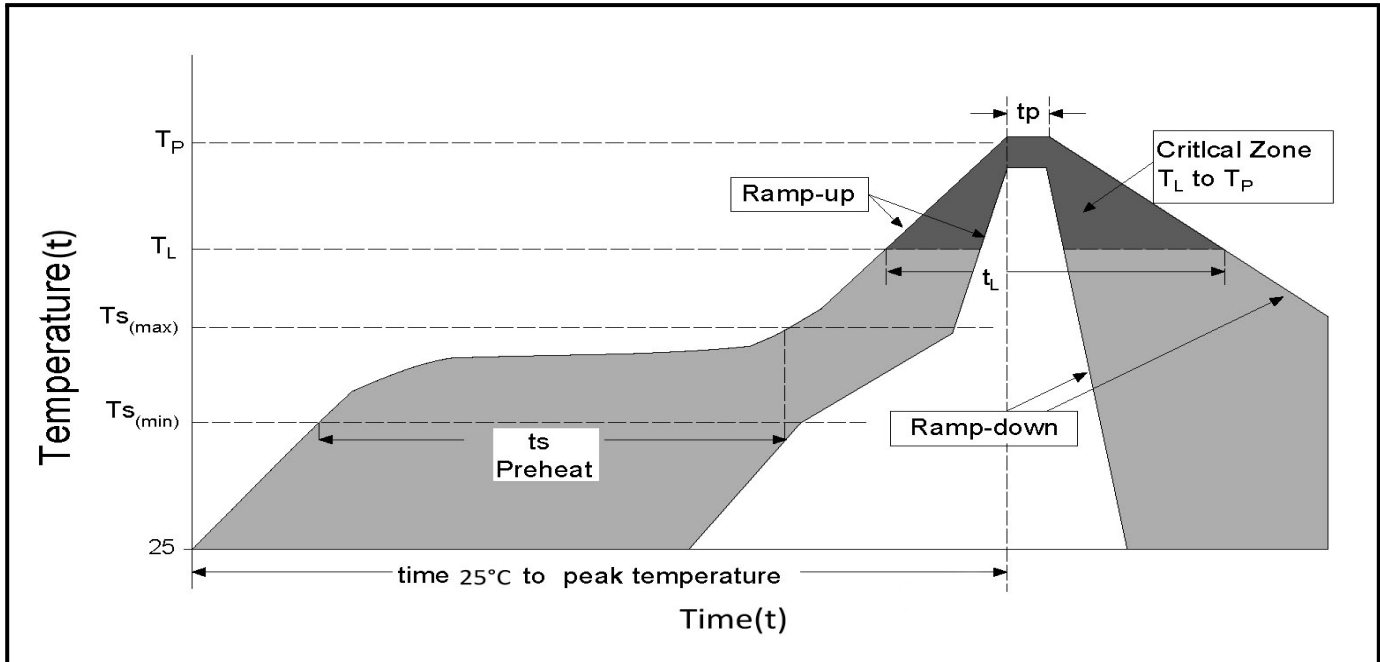
Items	Test Condition/Description	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp dv/dt=100V/s.	To meet the specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp dv/dt=1000V/us.	
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	
Impulse Discharge Current	Maximum 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time, without causing the DC spark-over voltage to change more than 25% from its initial value.	
Impulse Withstanding Voltage	The maximum 10/700μs surge that can be applied to the Gas Tube, 5 positive and 5 negative surges, with 1 minute interval time, without causing the DC spark-over voltage to change more than 25% from its initial value.	



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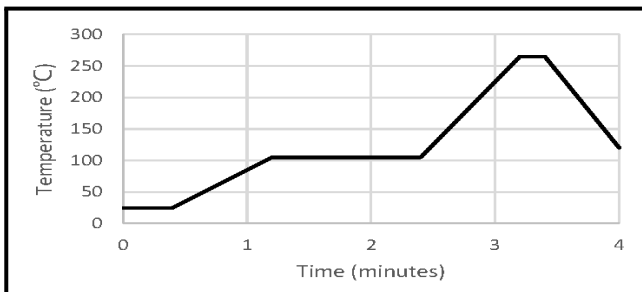
Gas Discharge Tube

## Soldering Parameters



Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ( $T_{S(min)}$ )	150°C
	- Temperature Max ( $T_{S(max)}$ )	200°C
	- Time (min to max) ( $t_s$ )	60 - 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{S(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	- Temperature ( $T_L$ ) (Liquidus)	217°C
	- Time ( $t_L$ )	60 - 150 secs
Peak Temperature ( $T_P$ )		260 <sup>+0/-5</sup> °C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 - 40 secs
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (t)		8 minutes Max.
Do not exceed		260°C

## Soldering Parameters



Wave Soldering	Lead-free assembly
Peak Temperature ( $T_P$ )	260 <sup>+0/-5</sup> °C
Dipping Time (t)	10 Sec
Soldering	1 time

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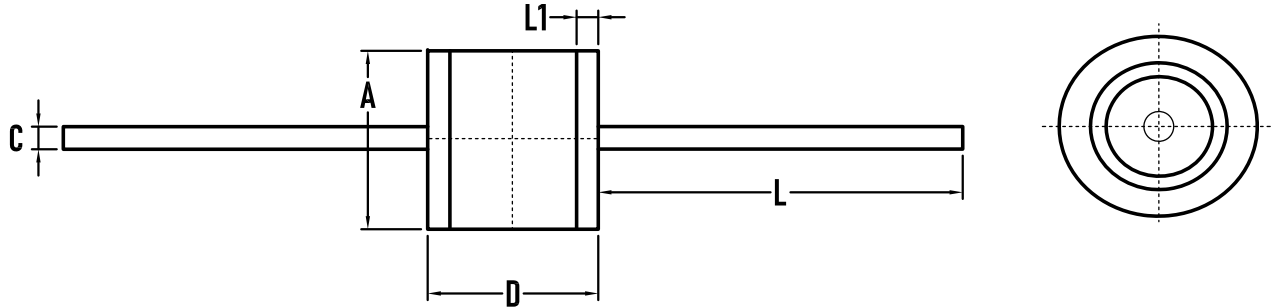
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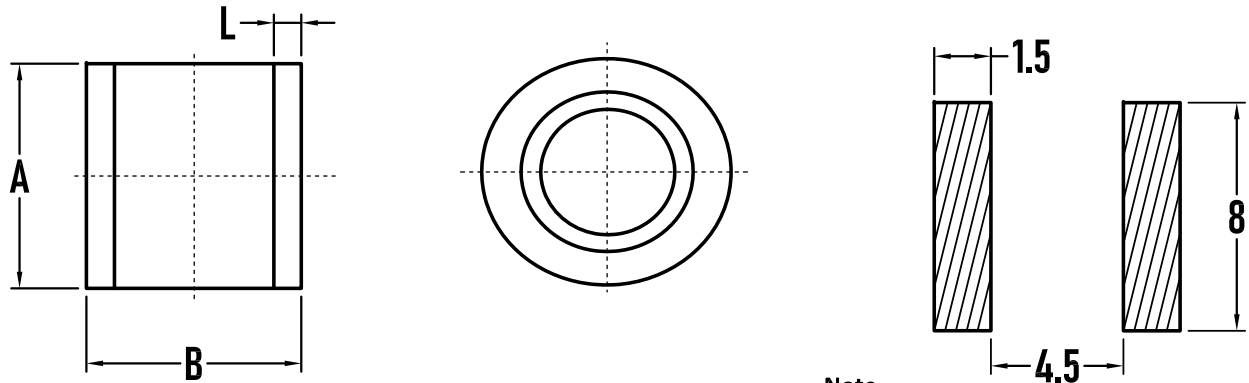
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Outline Drawing -8.0×6.0-W



Dim.	Millimeters			Inches		
	MIN.	NOW.	MAX.	MIN.	NOW.	MAX.
A	7.5	8	8.3	0.295	0.315	0.327
C	0.7	0.8	0.9	0.028	0.031	0.035
D	5.5	6	6.3	0.217	0.236	0.248
L	—	—	30	—	—	1.181
L1	0.4	0.5	0.6	0.016	0.02	0.024

Outline Drawing -8.0×6.0



Note:  
dimensions: Millimeters

Dim.	Millimeters			Inches		
	MIN.	NOW.	MAX.	MIN.	NOW.	MAX.
A	7.5	8	8.3	0.295	0.315	0.327
B	5.5	6	6.3	0.217	0.236	0.248
L	0.4	0.5	0.6	0.016	0.02	0.024

