

Bx3RD8-xxxB

Gas Discharge Tube

Features

- High insulation resistance
- Low capacitance ($\leq 2\text{pF}$)
- 10KA 8/20 μs maximum surge current capacity in accordance with IEC61000-4-5
- 10KV 10/700 μs maximum surge rating in accordance with ITU-TK.21
- Surface mounted gas arrester
- Micro-Gap Design
- Size 3R8.0 $\times$ 10
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Meets MSL level 1, per J-STD-020

Package



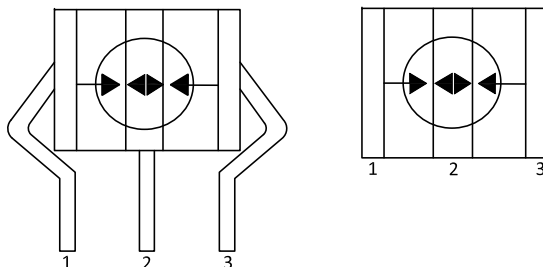
Applications

- 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
BA3RD8-xxxB	3R8.0 $\times$ 10-W	500	Bulk
BS3RD8-xxxB	3R8.0 $\times$ 10	500	Bulk



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Absolute Maximum Ratings ($T_A=+25^{\circ}\text{C}$, 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
		100V/S	1KV/us	(GΩ)	Test DC Voltage	1MHZ	10/700us ±5times	8/20us ±5times
		(V)	(V)		(V)	(pF)	(KV)	(KA)
BA3RD8-75B	BS3RD8-75B	75±30%	700	1	25	2	10	10
BA3RD8-90B	BS3RD8-90B	90±30%	700	1	50	2	10	10
BA3RD8-150B	BS3RD8-150B	150±20%	700	1	100	2	10	10
BA3RD8-230B	BS3RD8-230B	230±20%	700	1	100	2	10	10
BA3RD8-300B	BS3RD8-300B	300±20%	900	1	100	2	10	10
BA3RD8-350B	BS3RD8-350B	350±20%	900	1	100	2	10	10
BA3RD8-470B	BS3RD8-470B	470±20%	1100	1	250	2	10	10
BA3RD8-600B	BS3RD8-600B	600±20%	1500	1	250	2	10	10
BA3RD8-800B	BS3RD8-800B	800±20%	1700	1	250	2	10	10

Electrical Parameters

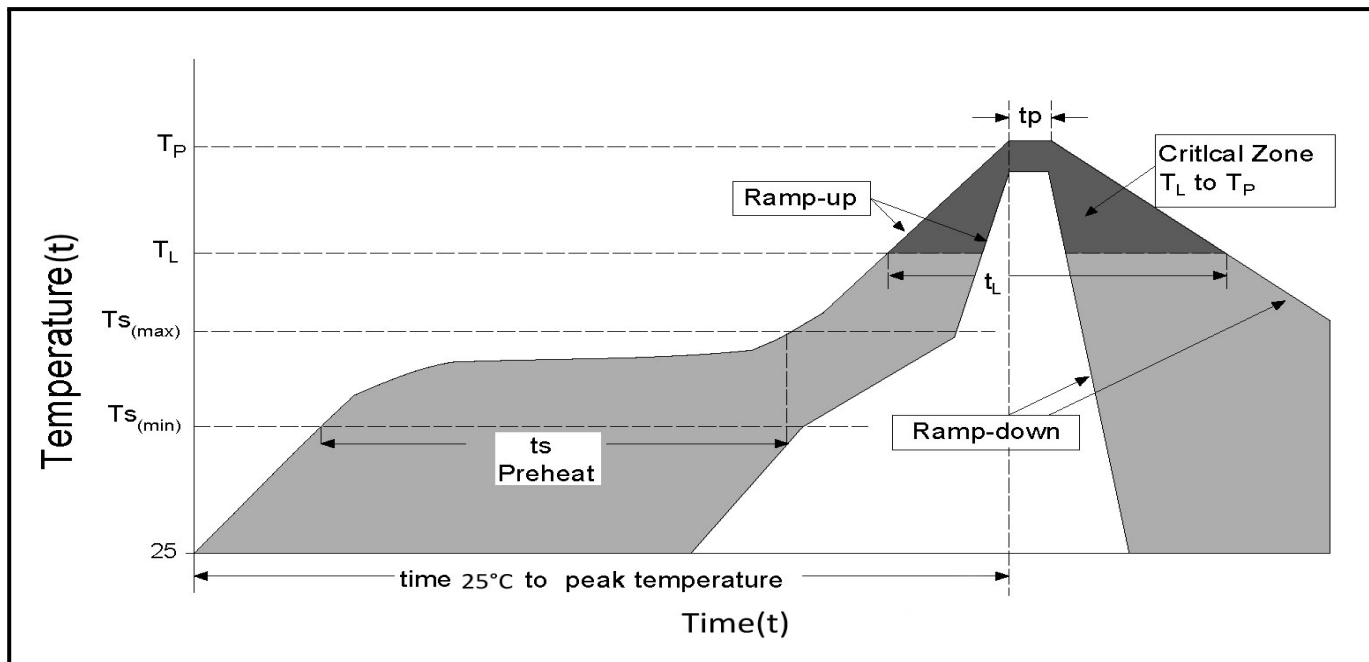
Items	Test Condition/Description	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt=100\text{V/s}$.	To meet the specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000\text{V/us}$.	
Insulation 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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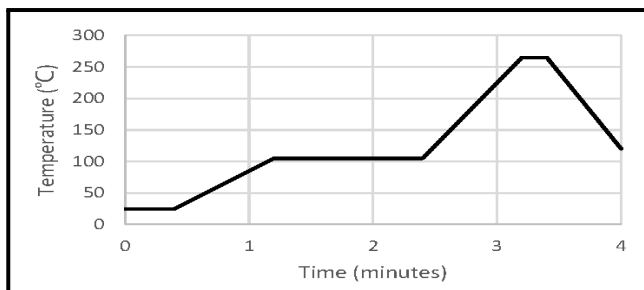
Gas Discharge Tube

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 ^{+0/-5} °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 ^{+0/-5} °C
Dipping Time (t)	10 Sec
Soldering	1 time

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Specifications are subject to change without notice.

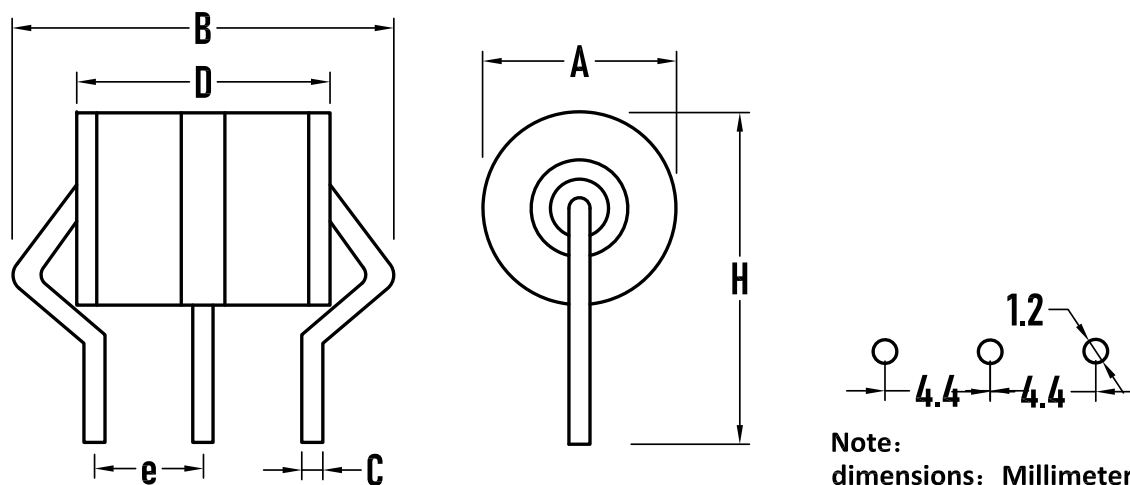
Please refer to <http://www.born-tw.com> for current information. Revision: 2022-Jan-1-A



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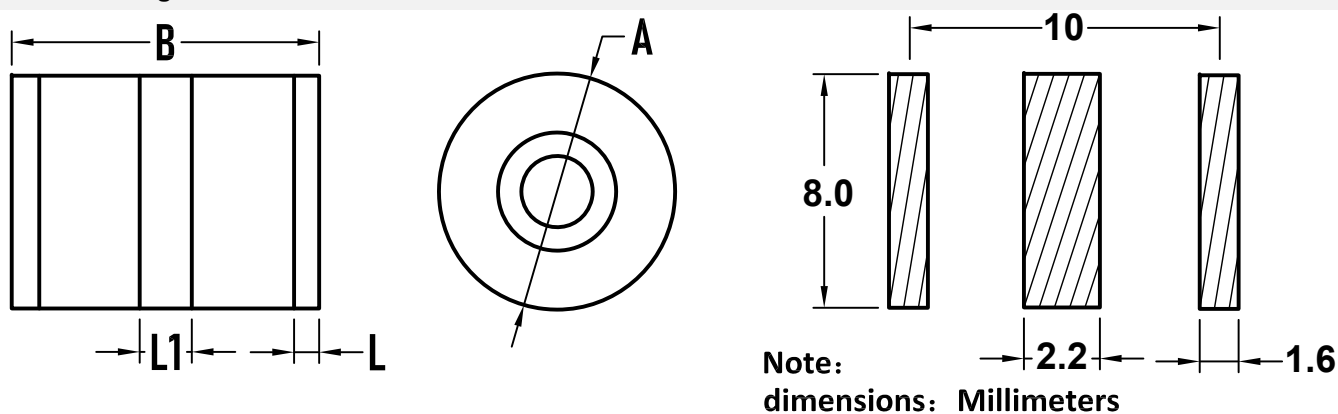
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Outline Drawing -3R8.0×10-W



Dim.	Millimeters			Inches		
	MIN.	NOW.	MAX.	MIN.	NOW.	MAX.
A	7.2	8	8.2	0.283	0.315	0.323
B	11.5	12	12.5	0.453	0.472	0.492
C	0.9	1	1.1	0.035	0.039	0.043
D	9.5	10	10.5	0.374	0.394	0.413
e	4	4.4	4.8	0.157	0.173	0.189
H	14.5	15	15.5	0.571	0.591	0.61

Outline Drawing -3R8.0×10



Dim.	Millimeters			Inches		
	MIN.	NOW.	MAX.	MIN.	NOW.	MAX.
A	7.2	8	8.2	0.283	0.315	0.323
B	9.5	10	10.5	0.374	0.394	0.413
L	0.4	0.5	0.6	0.016	0.02	0.024
L1	1.3	1.5	1.7	0.051	0.059	0.067

