

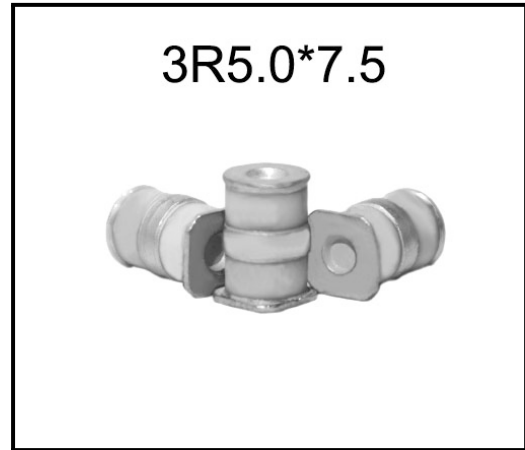
BS3RD5-xxxA

Gas Discharge Tube

Features

- High insulation resistance
- Low capacitance ($\leq 1\text{pF}$)
- 5KA 8/20 μs maximum surge current capacity in accordance with IEC61000-4-5
- 6KV 10/700 μs maximum surge rating in accordance with ITU-TK.21
- Surface mounted gas arrester
- Micro-Gap Design
- Size 3R5.0 \times 7.5
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Meets MSL level 1, per J-STD-020

Package



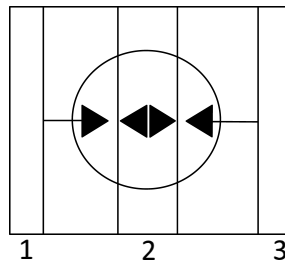
Applications

- Communication equipment
- CATV equipment
- 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
BS3RD5-xxxA	3R5.0x7.5	1k	Tape and reel

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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



BS3RD5-xxxA

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Absolute Maximum Ratings (T_A=+25°C, unless otherwise noted)

Part Number	DC Sparkover Voltage	Maximum Impulse Spark-over Voltage	Minimum Insulation Resistance		Maximum 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)
BS3RD5-75A	75±20%	700	1	25	1	6	5
BS3RD5-90A	90±20%	700	1	50	1	6	5
BS3RD5-150A	150±20%	700	1	100	1	6	5
BS3RD5-230A	230±20%	700	1	100	1	6	5
BS3RD5-300A	300±20%	900	1	100	1	6	5
BS3RD5-350A	350±20%	900	1	100	1	6	5
BS3RD5-470A	470±20%	1100	1	250	1	6	5
BS3RD5-600A	600±20%	1500	1	250	1	6	5
BS3RD5-800A	800±20%	1700	1	250	1	6	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.	

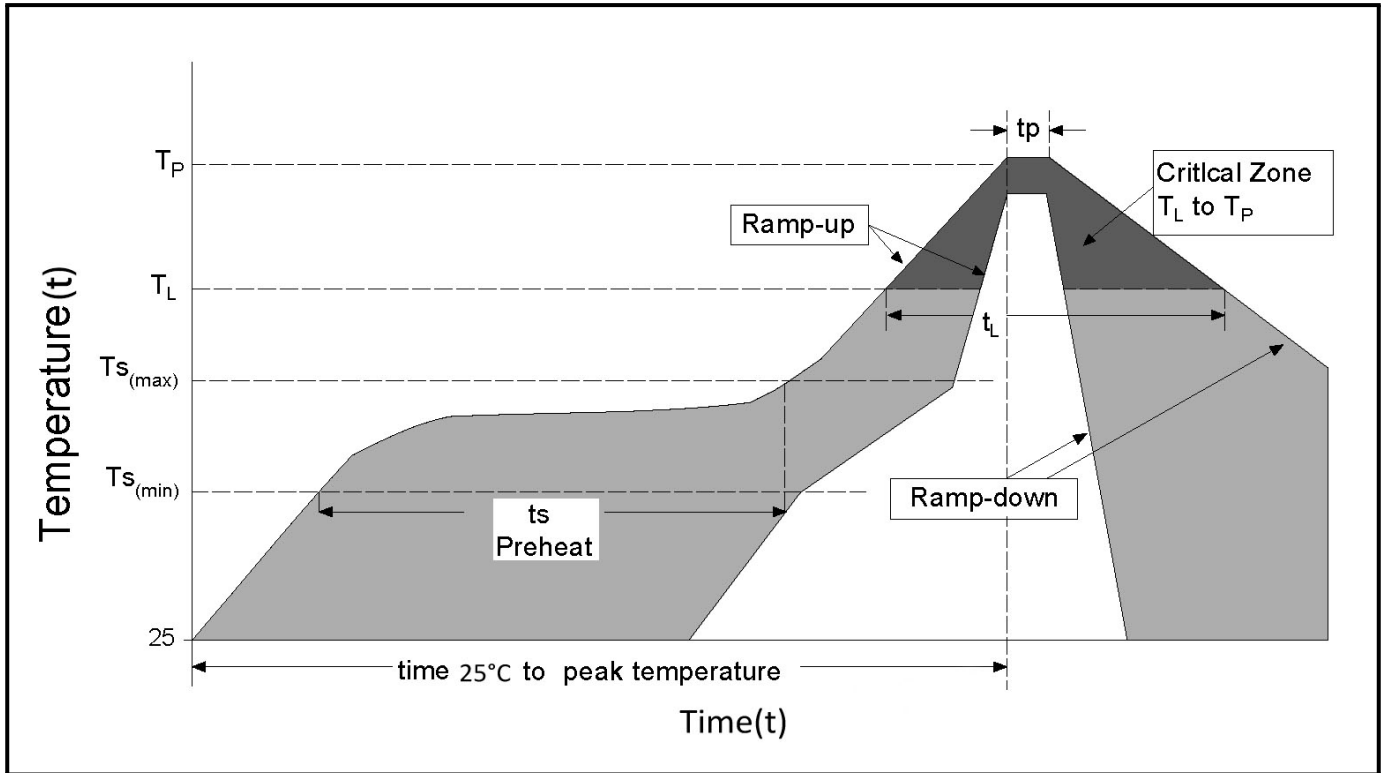




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Soldering Parameters



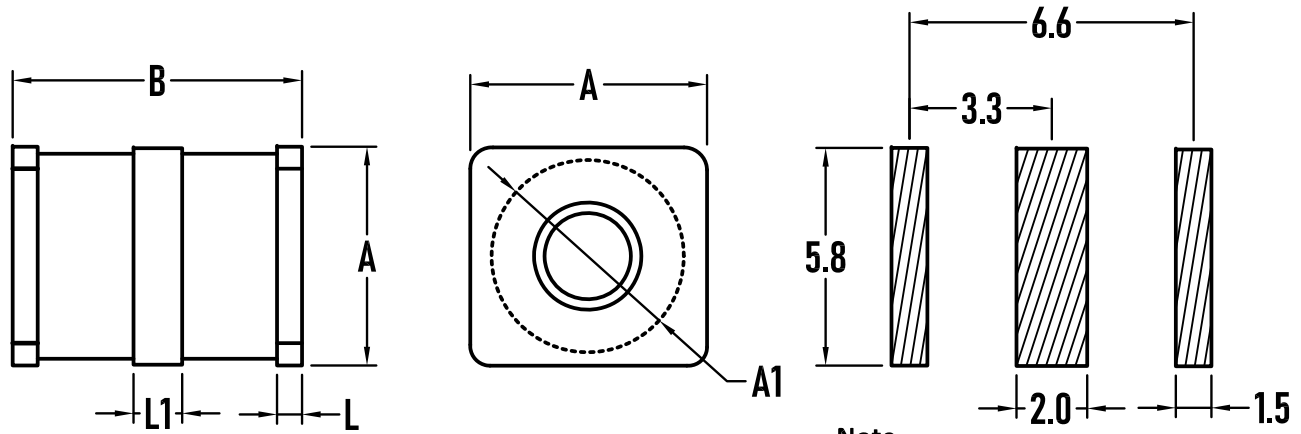
Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{S(min)}$)	150°C
	- Temperature Max ($T_{S(max)}$)	200°C
	- Time (min to max) (t_s)	60 - 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (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



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Outline Drawing – 3R5.0x7.5



Note:
dimensions: Millimeters

Dim.	Millimeters			Inches		
	MIN.	NOW.	MAX.	MIN .	NOW.	MAX.
A	4.9	5	5.1	0.193	0.197	0.201
B	6.9	7.2	7.5	0.272	0.283	0.295
A1	4.7	4.8	4.9	0.185	0.189	0.193
L	0.3	0.4	0.5	0.012	0.016	0.02
L1	1.3	1.5	1.7	0.051	0.059	0.067

