

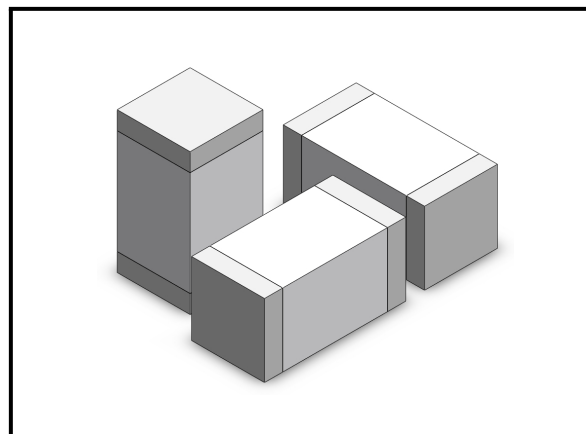
BSAxxxN

GDT Protection Component

Features

- High insulation resistance
- Ultra low capacitance ($<0.5\text{pF}$)
- 0.5KA surge capability tested with 8/20 μs pulse as defined by IEC61000-4-5
- 4KV 10/700 μs maximum surge rating in accordance with ITU-TK.21
- Surface mounted gas arrester
- Size 3216(1206)
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Package



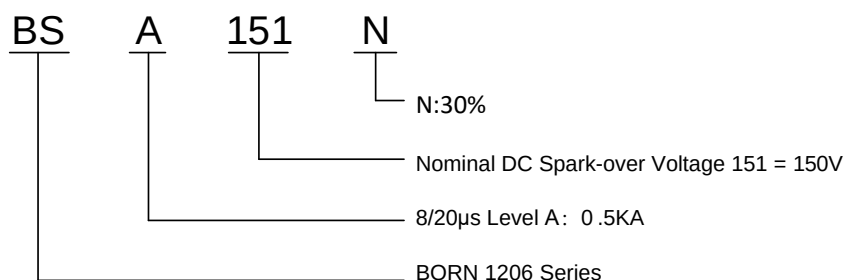
Applications

- 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

Part Numbering



Ordering information

Order code	Package	Base qty	Delivery mode
BSAxxxN	1206	2500	Tape and Reel

**BORN SEMICONDUCTOR, INC. ALL
RIGHT RESERVED**

Specifications are subject to change without notice.

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



BSAxxxN

GDT Protection Component

Absolute Maximum Ratings ($T_A=+25^{\circ}\text{C}$, unless otherwise noted)

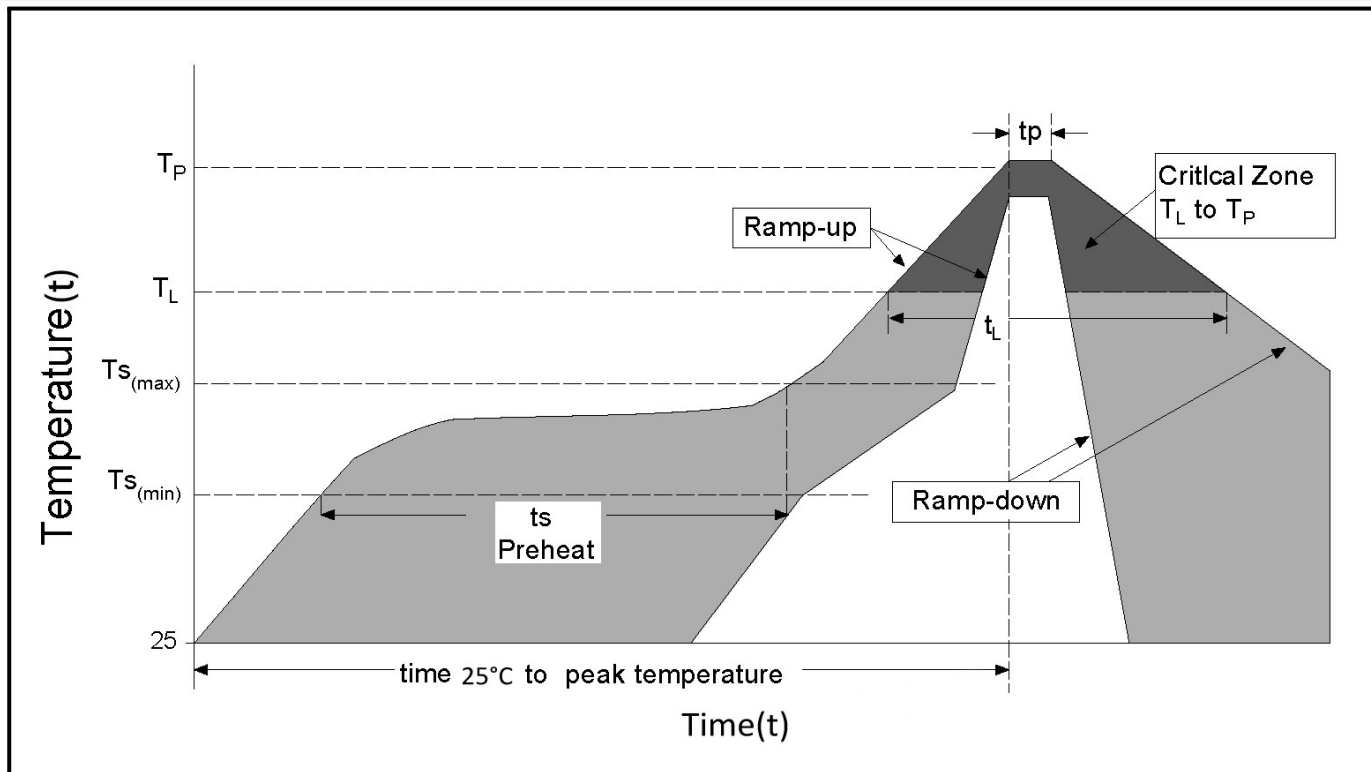
Part Number	DC Sparkover Voltage	Maximum Impulse Spark-over Voltage	Minimum Insulation Resistance		Max. Capacitance	Impulse withstanding Voltage Capacity	Nominal Impulse Discharge Current
	100V/S	1KV/us	(GΩ)	Test DC Voltage	1MHZ	10/700us ±5times	8/20us ±5times
	(V)	(V)		(V)	(pF)	(KV)	(KA)
BSA900N	90±30%	700	1	50	0.5	4	0.5
BSA151N	150±30%	750	1	50	0.5	4	0.5
BSA201N	200±30%	950	1	100	0.5	4	0.5
BSA231N	230±30%	950	1	100	0.5	4	0.5
BSA301N	300±30%	950	1	100	0.5	4	0.5
BSA351N	350±30%	950	1	100	0.5	4	0.5
BSA401N	400±30%	1050	1	100	0.5	4	0.5
BSA471N	470±30%	1050	1	100	0.5	4	0.5

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	
Nominal Impulse Discharge Current	The maximum current applying a waveform of 8/20μs that can be applied across the terminals of the gas tube. One hour after the test is completed, re-testing of the DC spark-over voltage does not exceed ±40% of the nominal DC spark-over voltage. Dwell time between pulses is 3 minutes.	



Soldering Parameters



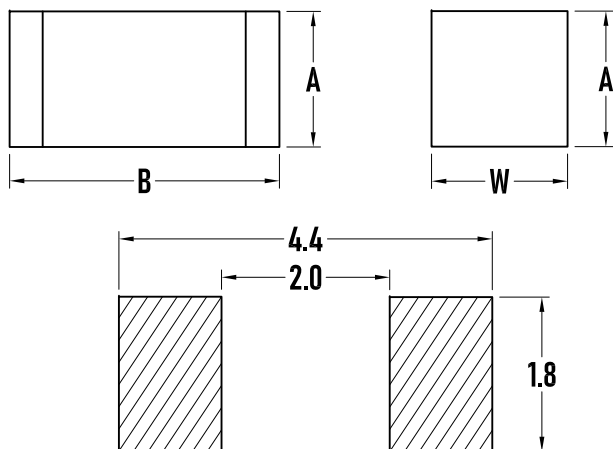
Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{S(min)}$)	150°C
	- Temperature Max ($T_{S(max)}$)	200°C
	- Time (min to max) (t_s)	60 - 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		5°C/second max
Reflow	- Temperature (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)		10 – 30 secs
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (t)		8 minutes Max.
Do not exceed		260°C



BSAxxxN

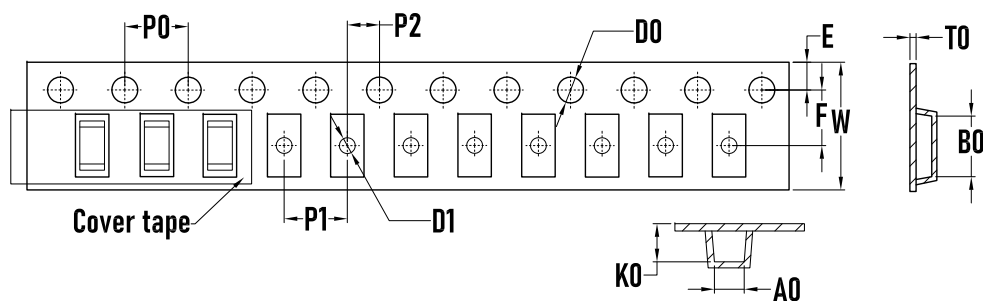
GDT Protection Component

Outline Drawing –1206



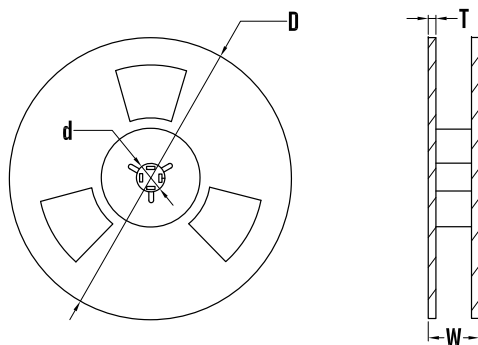
Dim.	Millimeters		
	MIN.	NOW.	MAX.
A	1.3	1.6	1.9
B	2.9	3.2	3.5
W	1.3	1.6	1.9

Packaging Tape



SYMBOL	MILLIMETER
A0	2.00±0.10
B0	3.80±0.10
D0	1.55±0.50
D1	1.00±0.50
E	1.75±0.10
F	3.50±0.10
K0	2.00±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
W	8.00±0.20
T0	0.30±0.10

Packaging Reel



SYMBOL	MILLIMETER
D	170±2.0
d	13.00±0.5
T	1.2±0.20
W	12.0±2.0
Quantity	2500PCS



Cautions and warnings

- Gas discharge tubes (GDT) must not be operated directly in power supply networks.
- Gas discharge tubes (GDT) may become hot in case of longer periods of current stress (danger of burning).
- Gas discharge tubes (GDT) may be used only within their specified values. In the event of overload, the head contacts may fail or the component may be destroyed.
- Damaged Gas discharge tubes (GDT) must not be re-used.

