

**Micro Surface Mount,  
2-Electrode Gas Discharge Tube B2G2SS Series**
**Descriptions**

The Gas Discharge Tube (GDT) operates as a symmetrical voltage-dependent switch. Features as very high surge current handling capability, very high insulation resistance and ultra-low capacitance meet almost perfectly all requirements made on a protective element.

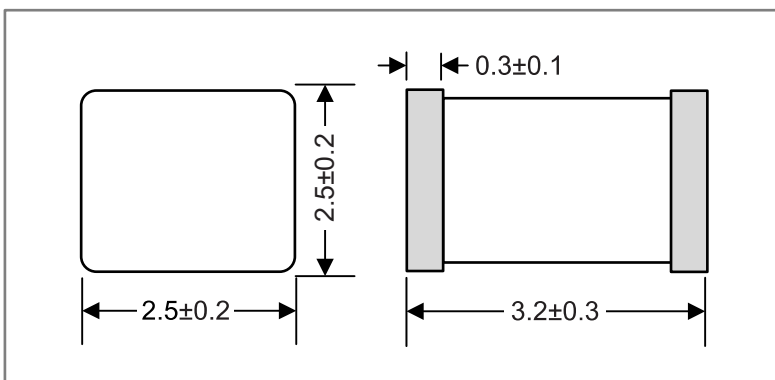
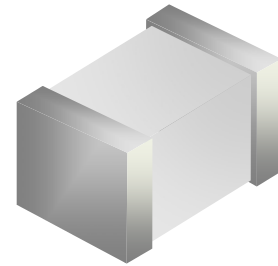
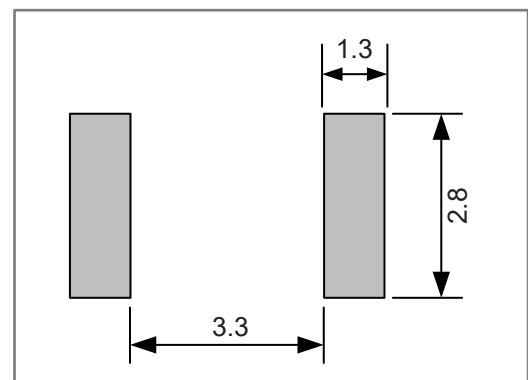
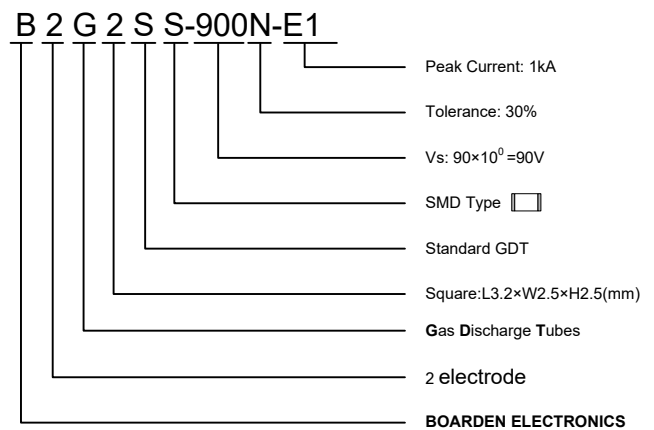
The B2G2SS Series are designed for surface mounting on PCB with small size 3.2x2.5x2.5mm. Low insertion loss and small factors are perfectly suited to broadband equipment applications.

**Features**

- 2-electrode arrester
- Very small size
- Rugged Ceramic-Metal construction
- Stable performance over life
- Extremely low capacitance ( $\leq 0.5\text{pF}$ )
- High insulation resistance

**Applications**

- PCI cards
- Modem
- Splitter
- Line cards
- Applications with limited space

**Product Dimensions (mm)**
**Dimension**

**Recommended Pad Size**

**Part Numbering System**

**Order information**

Device	Qualities	Reel Size
B2G2SS Series	2500	13 Inch

**Electrical Characteristics (TA=25°C unless otherwise noted)**

Part Number	V <sub>s</sub> <sup>1),2)</sup> @100V/s	V <sub>ss</sub>		IMDC				ACDC	IR <sup>3)</sup>	C
		100V/μs	1kV/μs	8/20μs ±5 times	8/20μs 1 time	10/1000μs 100 times	10/700μs 40 Ω ±5 times	@50Hz 1s 5 times		1MHz
		Max.	Max.	Nom.	Max.	Min.	Nom.	Nom.	Min	Max
		V	V	A	A	A	V	A	GΩ	pF
B2G2SS-750N-E1	75 ± 30%	500	600	1000	2000	10	6000	1	1	0.5
B2G2SS-900N-E1	90 ± 30%	500	600	1000	2000	10	6000	1	1	0.5
B2G2SS-121N-E1	120 ± 30%	500	600	1000	2000	10	6000	1	1	0.5
B2G2SS-151N-E1	150 ± 30%	500	600	1000	2000	10	6000	1	1	0.5
B2G2SS-201N-E1	200 ± 30%	600	700	1000	2000	10	6000	1	1	0.5
B2G2SS-231N-E1	230 ± 30%	600	700	1000	2000	10	6000	1	1	0.5
B2G2SS-301N-E1	300 ± 30%	700	800	1000	2000	10	6000	1	1	0.5
B2G2SS-351N-E1	350 ± 30%	800	900	1000	2000	10	6000	1	1	0.5
B2G2SS-401N-E1	400 ± 30%	850	950	1000	2000	10	6000	1	1	0.5
B2G2SS-471N-E1	470 ± 30%	900	1000	1000	2000	10	6000	1	1	0.5
B2G2SS-601N-E1	600 ± 30%	1100	1200	1000	2000	10	6000	1	1	0.5
B2G2SS-801N-E1	800 ± 30%	1400	1600	1000	2000	10	6000	1	1	0.5
Glow voltage at 10mA.....					~60V					
Arc voltage at 1A.....					~10V					
Glow to Arc transition current.....					~0.2A					
Weight.....					~0.095g					
Operation and storage temperature.....					-40 ~ +90°C					
Climatic category (IEC 60068-1).....					40/90/21					
Marking.....					Blank					

1) At delivery AQL 0.65 level II, DIN ISO 2859

2) In ionized mode

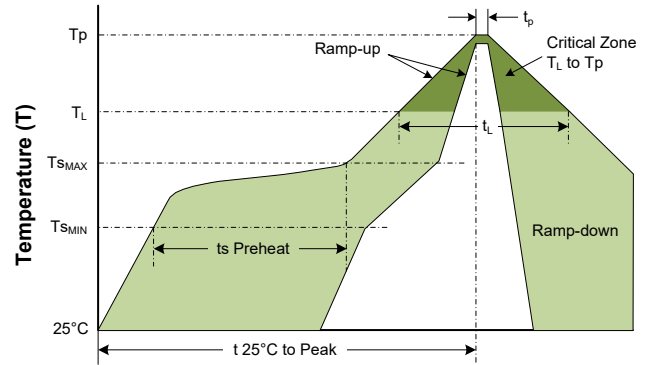
3) Insulation resistance measuring voltage: 75V at 25Vdc; 90~150V at 50Vdc; other at 100Vdc

Terms in accordance with ITU-T Rec.K.12, IEC 61643-311, GB/T 9043

- V<sub>s</sub> - DC Spark Over Voltage
- V<sub>ss</sub> - Impluse Spark Over Voltage
- IMDC - Impulse Discharge Current
- ACDC - AC Discharge Current
- IR - Insulation Resistance
- C - Capacitance

## Soldering Parameters

Profile Feature	Lead-Free Assembly
Average Ramp-up Rate ( $T_{S_{MAX}}$ to $T_p$ ) Average Ramp-down Rate ( $T_p$ to $T_L$ )	3°C/second max. 6°C/second max.
<b>Preheat</b> • Temperature Min ( $T_{S_{MIN}}$ ) • Temperature Max ( $T_{S_{MAX}}$ ) • Time ( $t_s$ Preheat)	150°C 200°C 60-180 seconds
<b>Time maintained above:</b> • Temperature ( $T_L$ ) • Time ( $t_L$ )	217°C 60-150 seconds
<b>Peak/Classification Temperature</b> • Temperature ( $T_p$ )	260 <sup>+0/-5</sup> °C
<b>Time within 5°C of actual Peak</b> Time ( $t_p$ )	20-40 seconds
<b>Time 25°C to peak Temperature</b>	8 minutes max
<b>Do not exceed</b>	280 °C



### Flow/Wave Soldering (Solder Dipping)

<b>Peak Temperature :</b>	265 °C
<b>Dipping Time :</b>	10 seconds
<b>Soldering :</b>	1 time

## Cautions and warnings

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

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