

Axial / No wire, 2-Electrode Gas Discharge Tube B2G5SA(N) 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.

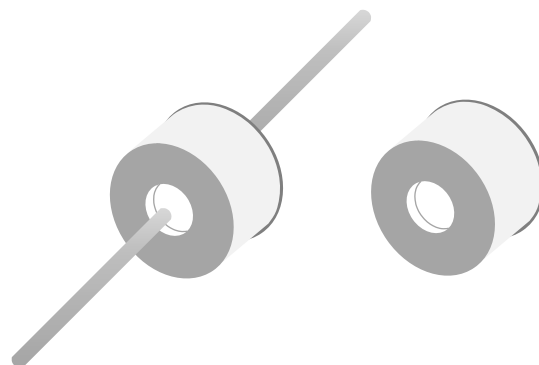
The B2G5SA(N) Series are 2-pole GDTs designed for protection of power lines. Low insertion loss is also perfectly suited to broadband equipment applications.

Features

- 2-electrode arrester
- Very small size
- Rugged Ceramic-Metal construction
- Stable performance over life
- Extremely low capacitance ($\leq 1\text{pF}$)
- High insulation resistance

Applications

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



Part Numbering System

B 2 G 5 S A-900M-E5

Peak Current	E5: 5kA; E10: 10kA
Tolerance: 20%	
Vs: $90 \times 10^0 = 90\text{V}$	
A: Axial Type; N: No wire Type	
Standard GDT	
$\varnothing 5.5 \times 6.0(\text{mm})$	
Gas Discharge Tubes	
2 electrode	
BOARDEN ELECTRONICS	

Order information

Device	Qualities	Size
B2G5SA Series	500/Box	275*150*50 mm
	1000/R	13 Inch
B2G5SN Series	1000/R	13 Inch

Product Dimensions (mm)

Axial Wire Type	No Wire Type

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

Part Number		DC Spark Over Voltage ^{1),2)} @100V/s	Impluse Spark Over Voltage		Impulse Withstand Ratings			AC Discharge Current
			100V/μs	1kV/μs	8/20μs ±5 times	8/20μs 1 time	10/1000μs 300 times	@50Hz 1s 5 times
			Max.	Max.	Nom.	Max.	Min.	Nom.
Axial Wire	No Wire	V	V	V	kA	kA	A	A
B2G5SA-750M-E5	B2G5SN-750M-E5	75±20%	500	600	5	10	100	5
B2G5SA-900M-E5	B2G5SN-900M-E5	90±20%	500	600	5	10	100	5
B2G5SA-151M-E5	B2G5SN-151M-E5	150±20%	500	600	5	10	100	5
B2G5SA-231M-E5	B2G5SN-231M-E5	230±20%	600	700	5	10	100	5
B2G5SA-251M-E5	B2G5SN-251M-E5	250±20%	600	700	5	10	100	5
B2G5SA-301M-E5	B2G5SN-301M-E5	300±20%	750	850	5	10	100	5
B2G5SA-351M-E5	B2G5SN-351M-E5	350±20%	800	900	5	10	100	5
B2G5SA-401M-E5	B2G5SN-401M-E5	400±20%	850	950	5	10	100	5
B2G5SA-421M-E5	B2G5SN-421M-E5	420±20%	850	950	5	10	100	5
B2G5SA-471M-E5	B2G5SN-471M-E5	470±20%	900	1000	5	10	100	5
B2G5SA-601M-E5	B2G5SN-601M-E5	600±20%	1000	1200	5	10	100	5
B2G5SA-801M-E5	B2G5SN-801M-E5	800±20%	1200	1400	5	10	100	5
Minimum Insulation Resistance ³⁾				1GΩ				
Maximum Capacitance @1MHz.....				1.0pF				
Glow voltage at 10mA.....				~60V				
Arc voltage at 1A.....				~10V				
Glow to Arc transition current.....				~0.5A				
Weight.....				~0.82g (Axial) ~0.55g (No Wire)				
Operation and storage temperature.....				-40 ~ +90°C				
Climatic category (IEC 60068-1).....				40/90/21				
Marking, Red.....				□ S xxx yy xxx -Nominal voltage; yy -Production year				

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

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

Part Number		DC Spark Over Voltage ^{1),2)} @100V/s	Impluse Spark Over Voltage		Impulse Withstand Ratings			AC Discharge Current
			100V/μs	1kV/μs	8/20μs ± 5 times	8/20μs 1 time	10/1000μs 300 times	@50Hz 1s 5 times
			Max.	Max.	Nom.	Max.	Min.	Nom.
Axial Wire	No Wire	V	V	V	kA	kA	A	A
B2G5SA-750M-E10	B2G5SN-750M-E10	75 ± 20%	500	600	10	12	100	10
B2G5SA-900M-E10	B2G5SN-900M-E10	90 ± 20%	500	600	10	12	100	10
B2G5SA-151M-E10	B2G5SN-151M-E10	150 ± 20%	500	600	10	12	100	10
B2G5SA-231M-E10	B2G5SN-231M-E10	230 ± 20%	600	700	10	12	100	10
B2G5SA-251M-E10	B2G5SN-251M-E10	250 ± 20%	600	700	10	12	100	10
B2G5SA-301M-E10	B2G5SN-301M-E10	300 ± 20%	750	850	10	12	100	10
B2G5SA-351M-E10	B2G5SN-351M-E10	350 ± 20%	800	900	10	12	100	10
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B2G5SA-421M-E10	B2G5SN-421M-E10	420 ± 20%	850	950	10	12	100	10
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Weight.....				~0.82g (Axial) ~0.55g (No Wire)				
Operation and storage temperature.....				-40 ~ +90°C				
Climatic category (IEC 60068-1).....				40/90/21				
Marking, Blue.....				□ S xxx yy xxx -Nominal voltage; yy -Production year				

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

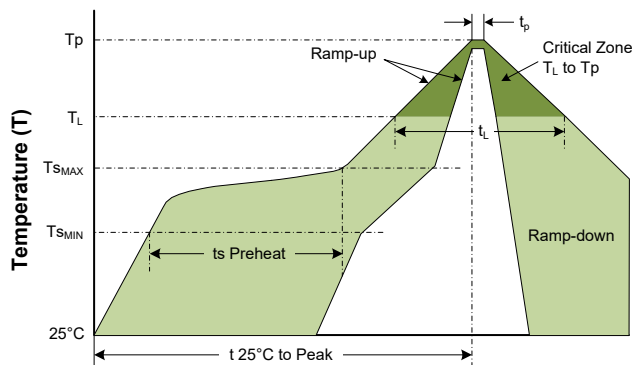
2) In ionized mode

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

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.
Preheat • Temperature Min ($T_{S_{MIN}}$) • Temperature Max ($T_{S_{MAX}}$) • Time (t_s Preheat)	150°C 200°C 60-180 seconds
Time maintained above: • Temperature (T_L) • Time (t_L)	217°C 60-150 seconds
Peak/Classification Temperature • Temperature (T_p)	260 ^{+0/-5} °C
Time within 5°C of actual Peak Time (t_p)	20-40 seconds
Time 25°C to peak Temperature	8 minutes max
Do not exceed	280 °C



Flow/Wave Soldering (Solder Dipping)

Peak Temperature :	265 °C
Dipping Time :	10 seconds
Soldering :	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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Specifications are subject to change without notice.

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