



**DESCRIPTION**

SRC Devices 2 electrode high voltage CG3 Comgaps (1.0 - 8.5 kV) are designed for surge protection in applications for which bias voltages or signal levels of several hundred volts are normally present. Comgaps function as switches which dissipate a minimum amount of energy and therefore handle currents that far surpass other types of transient voltage protection.

**FEATURES**

- Rugged ceramic-metal construction
- Non-radioactive
- Low capacitance (<1pF)
- Available in tape-and-reel packaging
- Available with or without leads

**APPLICATIONS**

- CRT terminal
- CATV equipment
- Antennas
- Power supplies
- Medical electronics

**APPROVALS**

- UL Recognized: File Number E111526
- CSA Approved: File Number LR89617

**RATINGS (@ 25° C)**

Parameter	Min	Typ	Max	Unit
DC Breakdown Voltage	800	1000	1200	V
	1200	1500	1800	V
	1600	2000	2400	V
	2000	2500	3000	V
	2400	3000	3600	V
	3200	4000	4800	V
	4000	5000	6000	V
	6000	7500	9000	V
	6800	8500	10200	V
Insulation Resistance	10 <sup>10</sup>	-	-	Ω
Capacitance	-	-	1	pF
Operational Temperature	-40	-	+125	°C

(See detailed specifications for more information.)

# TWO ELECTRODE HIGH VOLTAGE SURGE ARRESTERS

## CG3 Series



### SPECIFICATIONS

All characteristics at 25°C

PARAMETER	CONDITIONS	SYMBOL	CG3-1.0			CG3-1.5			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
<b>Device Specifications</b>									
DC Breakdown	500V/s	V <sub>BD</sub>	800	1000	1200	1200	1500	1800	V
Impulse Breakdown	100V/μs	V <sub>BD</sub>	-	-	1500	-	-	2200	V
Insulation Resistance	100V	IR	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	Ω
Capacitance	1MHz	C	-	-	1	-	-	1	pF
Arc Voltage	I=5A min	V <sub>ARC</sub>	-	10	-	-	10	-	V
Mechanical Outline		-	-	A	-	-	A	-	-
<b>Life Ratings<sup>(1)</sup></b>									
Surge Life	.002mF, 100Ω	-	500	-	-	500	-	-	shots
Max Current Surge	10kA (8/20μs)	-	5	-	-	5	-	-	shots
AC Follow-on Current	<sup>1</sup> / <sub>2</sub> cycle @ 60Hz	-	-	-	300	-	-	300	A pk

PARAMETER	CONDITIONS	SYMBOL	CG3-2.0			CG3-2.5			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
<b>Device Specifications</b>									
DC Breakdown	500V/s	V <sub>BD</sub>	1600	2000	2400	2000	2500	3000	V
Impulse Breakdown	100V/μs	V <sub>BD</sub>	-	-	3000	-	-	3750	V
Insulation Resistance	100V	IR	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	Ω
Capacitance	1MHz	C	-	-	1	-	-	1	pF
Arc Voltage	I=5A min	V <sub>ARC</sub>	-	10	-	-	10	-	V
Mechanical Outline		-	-	A	-	-	A	-	-
<b>Life Ratings<sup>(1)</sup></b>									
Surge Life	.002mF, 100Ω	-	500	-	-	500	-	-	shots
Max Current Surge	10kA (8/20μs)	-	5	-	-	5	-	-	shots
AC Follow-on Current	<sup>1</sup> / <sub>2</sub> cycle @ 60Hz	-	-	-	300	-	-	300	A pk

PARAMETER	CONDITIONS	SYMBOL	CG3-3.0			CG3-4.0			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
<b>Device Specifications</b>									
DC Breakdown	500V/s	V <sub>BD</sub>	2400	3000	3600	3200	4000	4800	V
Impulse Breakdown	100V/μs	V <sub>BD</sub>	-	-	4500	-	-	6000	V
Insulation Resistance	100V	IR	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	Ω
Capacitance	1MHz	C	-	-	1	-	-	1	pF
Arc Voltage	I=5A min	V <sub>ARC</sub>	-	10	-	-	10	-	V
Mechanical Outline		-	-	B	-	-	B	-	-
<b>Life Ratings<sup>(1)</sup></b>									
Surge Life	.002mF, 100Ω	-	500	-	-	500	-	-	shots
Max Current Surge	10kA (8/20μs)	-	5	-	-	5	-	-	shots
AC Follow-on Current	<sup>1</sup> / <sub>2</sub> cycle @ 60Hz	-	-	-	300	-	-	300	A pk

(1) End-of-life limits are:

DC: 50% of minimum initial DC breakdown voltage limit to 150% of maximum initial DC breakdown voltage limit.

Impulse: less than 150% of initial impulse breakdown voltage limit.

### SPECIFICATIONS

All characteristics at 25°C

PARAMETER	CONDITIONS	SYMBOL	CG3-5.0			CG3-7.5			CG3-8.5			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
<b>Device Specifications</b>												
DC Breakdown	500V/s	V <sub>BD</sub>	4000	5000	6000	6000	7500	9000	6800	8500	10200	V
Impulse Breakdown	100V/μs	V <sub>BD</sub>	-	-	7500	-	-	10000	-	-	13500	V
Insulation Resistance	100V	IR	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	Ω
Capacitance	1MHz	C	-	-	1	-	-	1	-	-	1	pF
Arc Voltage	I=5A min	V <sub>ARC</sub>	-	10	-	-	10	-	-	10	-	V
Mechanical Outline			-	B	-	-	B	-	-	B	-	-
<b>Life Ratings<sup>(1)</sup></b>												
Surge Life	.002mF, 100Ω	-	500	-	-	500	-	-	500	-	-	shots
Max Current Surge	10kA (8/20μs)	-	5	-	-	5	-	-	5	-	-	shots
AC Follow-on Current	<sup>1</sup> / <sub>2</sub> cycle @ 60Hz	-	-	-	300	-	-	300	-	-	300	A pk

(1) End-of-life limits are:

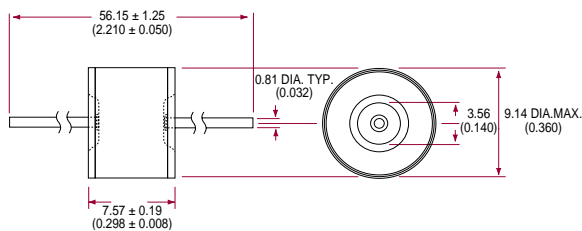
DC: 50% of minimum initial DC breakdown voltage limit to 150% of maximum initial DC breakdown voltage limit.  
 Impulse: less than 150% of initial impulse breakdown voltage limit.

### MECHANICAL DIMENSIONS

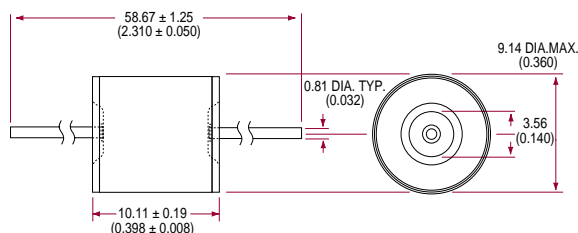
Other lead forms are available upon request.  
 Contact SRC Devices for more information.

Outline A

DIMENSIONS  
mm  
(inches)

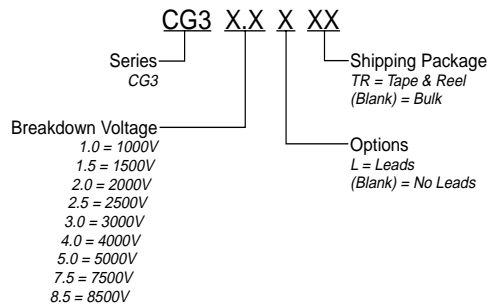


Outline B



### ORDERING INFORMATION

CG3's with other breakdown voltages in the 1.0-8.5kV range are available upon request. A complete part number is represented by the digits below. For example, CG3-1.5 is a non-leaded 1500V device, CG3-5.0L is a leaded 5000V device, and CG3-7.5LTR is a leaded 7500V device on tape-and-reel per EIA standard RS-296-D.



#### Tape & Reel Information

CG3XXLTR - Tape & Reel per EIA RS-296-D. Quantity = 1,000/Reel

CG3XXLTE - Tape & Reel per IEC286-1. Quantity = 1,000/Reel