

TWO ELECTRODE SURGE ARRESTERS

CG/CG2 Series



DESCRIPTION

SRC Devices CG/CG2 GDT's are designed for a high degree of surge protection at a low cost. The CG Series (75-110V) is used for protection of test and communication equipment in which low voltage limits and extremely low arc voltages are required. The CG2 Series (145V-1000V) is used for protecting equipment for which higher voltage limits and holdover voltages are necessary. 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

- Small size
- Rugged ceramic-metal construction
- Low capacitance (<1pF)
- Non Radioactive 600-1000 V
- Available with or without leads
- Available in tape-and-reel packaging

APPLICATIONS

- Communication lines
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Instrumentation circuits
- Medical electronics

APPROVALS

- UL Recognized: File Number E111526
- Meets REA PE-80

RATINGS (@ 25° C)

| Parameter | Min | Typ | Max | Units |
|-------------------------|------------------|------|------|-------|
| DC Breakdown Voltage | 60 | 75 | 90 | V |
| | 72 | 90 | 108 | V |
| | 88 | 110 | 132 | V |
| | 116 | 145 | 174 | V |
| | 195 | 230 | 265 | V |
| | 213 | 250 | 288 | V |
| | 255 | 300 | 345 | V |
| | 297 | 350 | 403 | V |
| | 400 | 470 | 540 | V |
| | 510 | 600 | 690 | V |
| | 680 | 800 | 920 | V |
| 850 | 1000 | 1150 | V | |
| Insulation Resistance | 10 ¹⁰ | - | - | Ω |
| Capacitance | - | - | 1 | pF |
| Operational Temperature | -40 | - | +125 | °C |

(See detailed specifications for more information.)

SPECIFICATIONS

All characteristics at 25°C

| PARAMETER | CONDITIONS | SYMBOL | CG75 | | | CG90 | | | CG110 | | | UNITS |
|-----------------------------------|---------------------|------------------|-----------------|-----|-----|-----------------|-----|-----|-----------------|-----|-----|-------|
| | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | |
| Device Specifications | | | | | | | | | | | | |
| DC Breakdown | 500V/s | V _{BD} | 60 | 75 | 90 | 72 | 90 | 108 | 88 | 110 | 132 | V |
| Impulse Breakdown | 100V/μs | V _{bd} | - ¹⁰ | - | 400 | - ¹⁰ | - | 400 | - ¹⁰ | - | 450 | V |
| Insulation Resistance | 50V | IR | 10 | - | - | 10 | - | - | 10 | - | - | Ω |
| Capacitance | 1MHz | C | - | - | 1 | - | - | 1 | - | - | 1 | pF |
| Arc Voltage | I=5A min | V _{ARC} | - | 10 | - | - | 10 | - | - | 10 | - | V |
| Life Ratings⁽¹⁾ | | | | | | | | | | | | |
| Surge Life | 500A (10/1000μs) | - | 1000 | - | - | 1000 | - | - | 1000 | - | - | shots |
| Max Current Surge | 20kA (8/20μs) | - | 5 | - | - | 5 | - | - | 5 | - | - | shots |
| AC Current | 10x 1sec @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A |
| DC Holdover Voltage | per REA PE-80, 0.2A | - | - | 55 | - | - | 65 | - | - | 80 | - | V |

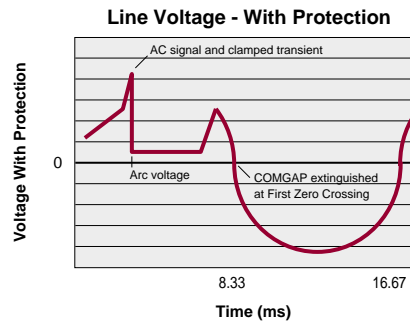
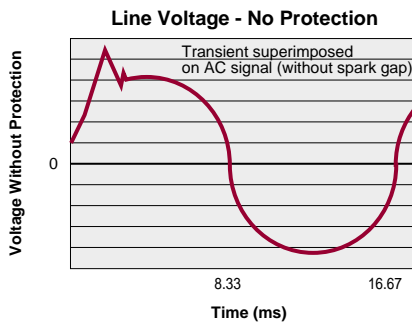
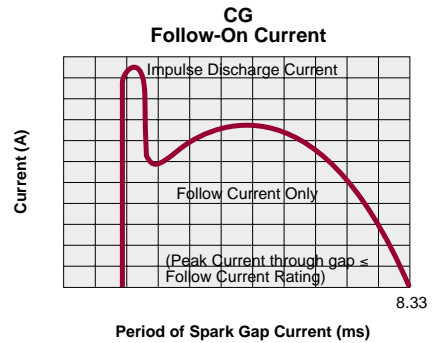
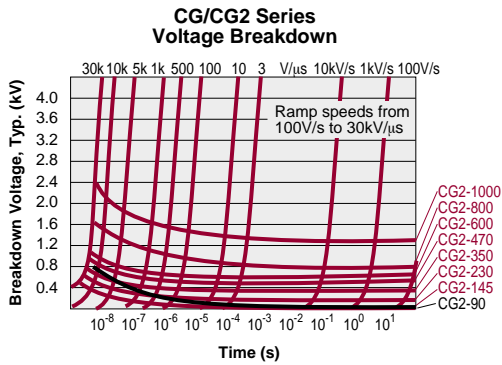
| PARAMETER | CONDITIONS | SYMBOL | CG2145 | | | CG2230 | | | CG2250 | | | UNITS |
|-----------------------------------|---------------------|------------------|-----------------|-----|-----|-----------------|-----|-----|-----------------|-----|-----|-------|
| | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | |
| Device Specifications | | | | | | | | | | | | |
| DC Breakdown | 500V/s | V _{BD} | 116 | 145 | 174 | 195 | 230 | 265 | 213 | 250 | 288 | V |
| Impulse Breakdown | 100V/μs | V _{bd} | - ¹⁰ | - | 500 | - ¹⁰ | - | 600 | - ¹⁰ | - | 625 | V |
| Insulation Resistance | 100V | IR | 10 | - | - | 10 | - | - | 10 | - | - | Ω |
| Capacitance | 1MHz | C | - | - | 1 | - | - | 1 | - | - | 1 | pF |
| Arc Voltage | I=5A min | V _{ARC} | - | 15 | - | - | 15 | - | - | 15 | - | V |
| Life Ratings⁽¹⁾ | | | | | | | | | | | | |
| Surge Life | 500A (10/1000μs) | - | 1000 | - | - | 1000 | - | - | 1000 | - | - | shots |
| Max Current Surge | 20kA (8/20μs) | - | 5 | - | - | 5 | - | - | 5 | - | - | shots |
| AC Current | 10x 1sec @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A |
| AC Follow-on Current | 1/2 cycle @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A pk |
| DC Holdover Voltage | per REA PE-80, 0.2A | - | - | 90 | - | - | 150 | - | - | 150 | - | V |

| PARAMETER | CONDITIONS | SYMBOL | CG2300 | | | CG2350 | | | CG2470 | | | UNITS |
|-----------------------------------|---------------------|------------------|-----------------|-----|-----|-----------------|-----|-----|-----------------|-----|-----|-------|
| | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | |
| Device Specifications | | | | | | | | | | | | |
| DC Breakdown | 500V/s | V _{BD} | 255 | 300 | 345 | 297 | 350 | 403 | 400 | 470 | 540 | V |
| Impulse Breakdown | 100V/μs | V _{bd} | - ¹⁰ | - | 700 | - ¹⁰ | - | 750 | - ¹⁰ | - | 850 | V |
| Insulation Resistance | 100V | IR | 10 | - | - | 10 | - | - | 10 | - | - | Ω |
| Capacitance | 1MHz | C | - | - | 1 | - | - | 1 | - | - | 1 | pF |
| Arc Voltage | I=5A min | V _{ARC} | - | 15 | - | - | 15 | - | - | 15 | - | V |
| Life Ratings⁽¹⁾ | | | | | | | | | | | | |
| Surge Life | 500A (10/1000μs) | - | 1000 | - | - | 1000 | - | - | 1000 | - | - | shots |
| Max Current Surge | 20kA (8/20μs) | - | 5 | - | - | 5 | - | - | 5 | - | - | shots |
| AC Current | 10x 1sec @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A |
| AC Follow-on Current | 1/2 cycle @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A pk |
| DC Holdover Voltage | per REA PE-80, 0.2A | - | - | 150 | - | - | 150 | - | - | 150 | - | V |

| PARAMETER | CONDITIONS | SYMBOL | CG2600 | | | CG2800 | | | CG21000 | | | UNITS |
|-----------------------------------|---------------------|------------------|-----------------|-----|------|-----------------|-----|------|-----------------|------|------|-------|
| | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | |
| Device Specifications | | | | | | | | | | | | |
| DC Breakdown | 500V/s | V _{BD} | 510 | 600 | 690 | 680 | 800 | 920 | 850 | 1000 | 1150 | V |
| Impulse Breakdown | 100V/μs | V _{bd} | - ¹⁰ | - | 1000 | - ¹⁰ | - | 1200 | - ¹⁰ | - | 1500 | V |
| Insulation Resistance | 100V | IR | 10 | - | - | 10 | - | - | 10 | - | - | Ω |
| Capacitance | 1MHz | C | - | - | 1 | - | - | 1 | - | - | 1 | pF |
| Arc Voltage | I=5A min | V _{ARC} | - | 15 | - | - | 15 | - | - | 15 | - | V |
| Life Ratings⁽¹⁾ | | | | | | | | | | | | |
| Surge Life | 500A (10/1000μs) | - | 1000 | - | - | 1000 | - | - | 1000 | - | - | shots |
| Max Current Surge | 10kA (8/20μs) | - | 10 | - | - | 10 | - | - | 10 | - | - | shots |
| AC Current | 10x 1sec @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A |
| AC Follow-on Current | 1/2 cycle @ 60Hz | - | - | - | 20 | - | - | 20 | - | - | 20 | A pk |
| DC Holdover Voltage | per REA PE-80, 0.2A | - | - | 150 | - | - | 150 | - | - | 150 | - | V |

⁽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.

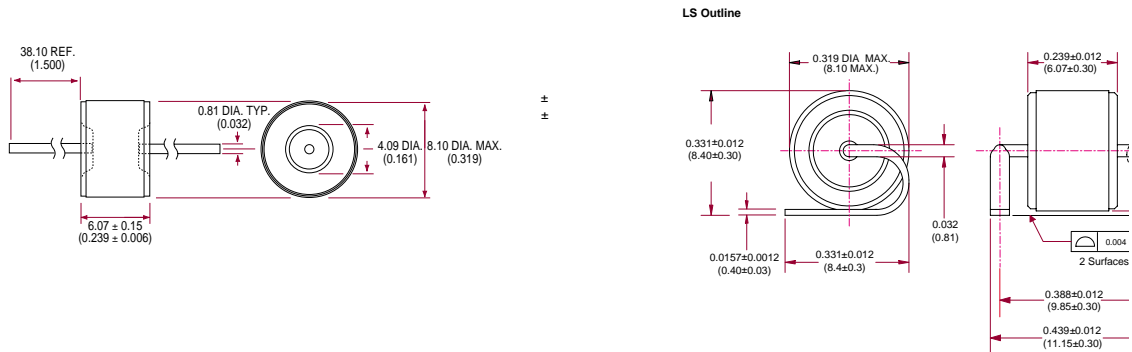
PERFORMANCE CHARACTERISTICS



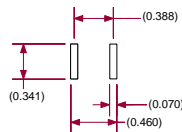
MECHANICAL DIMENSIONS

DIMENSIONS
mm
(inches)

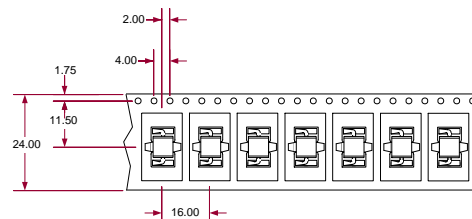
Other lead forms are available upon request.
Contact REMtech for more information.



LS Recommended Land Pattern



LS Tape & Reel Packaging



Tape & Reel packaging is available on request. See ordering information below for part number structure.

ORDERING INFORMATION

Tape & Reel Information

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

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

CGXXXLSTR - See figure above for tape & reel information. Quantity = 1,400/Reel

CG/CG2's with other breakdown voltages in the 75-1000 V range are available upon request. A complete part number is represented by the digits below. For example, CG75 is a non-leaded 75V device, CG2-230L is a leaded 230V device, and CG2-800LTR is a leaded 800V device on tape-and-reel per EIA standard RS-296-D.

