CG/CG2 Series





DESCRIPTION

CP Clare's two electrode CG/CG2 Comgaps are designed for a high degree of surge protection at a low cost. The CG Series (75-110V) is primarily 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 the protection of test and communication 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)</p>
- Non Radioactive 600-1000 V
- Available with or without leads
- Available in tape-and-reel packaging

APPROVALS

- UL Recognized: File Number E111526
- Meets RFA PF-80

APPLICATIONS

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

RATINGS (@ 25° C)

Parameter	Min	Тур	Max	Units
DC Breakdown Voltage (± 20%)	60	75	90	V
	72	90	108	V
	88	110	132	V
	116	145	174	V
	184	230	276	V
	200	250	300	V
	240	300	360	V
	280	350	420	V
	376	470	564	V
	480	600	720	V
	640	800	960	V
	800	1000	1200	V
Insulation Resistance	1010	-	-	Ω
Capacitance	-	-	1	pF
Operational Temperature	-40	-	+125	°C

(See detailed specifications for more information.)



SPECIFICATIONS

CG/CG2 Series

Device Specifications Surge Life Surge	All characteristics at 25°C			(CG75			CG90		(CG110)	
DC Breakdown 500V/s V 00	PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Life Ratings(1) Surge Life 500A (10/1000μs) - 1000 - - 1000 - - 1000 - - 1000 - - 5 - - 5 - - 5 - - 5 - - 5 - - 5 - - 5 - - 5 - - 5 - - 20 - - 20 - - 20 - - 20 - - 20 - - 20 - - 20 - - 20 - - 20 -	DC Breakdown Impulse Breakdown Insulation Resistance Capacitance	100V/μs 50V 1MHz	IR C	10 ¹⁰	-	400 - 1	-	-	400 - 1	10 ¹⁰	-		V V Ω pF V
Do Holidovel voltage pel near re-out, 0.2A 00 - 00 - 00 - 00 - 00 - 00 - 00	Surge Life Max Current Surge	20kÀ (8/20μs) ´		5	- - - 55	-		- - - 65	-	5		- - 20 -	shots shots A V

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Device Specifications												
DC Breakdown	500V/s	V _{BD}	116	145	174	184	230	276	200	250	300	V
Impulse Breakdown	100V/μs	V Dd	-	-	500	-	-	600	-	-	625	V
Insulation Resistance	100V	IŘ	10 ¹⁰	-	-	10 ¹⁰	-	-	1010	-	-	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	Α
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

CG2-300

CG2-350

CG2-470

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Device Specifications DC Breakdown Impulse Breakdown Insulation Resistance Capacitance Arc Voltage	500V/s 100V/μs 100V 1MHz I=5A min	V _{BD} V _{bd} IR C V _{ARC}	240 - 10 ¹⁰ -	300 - - - 15	360 700 - 1	280 - 10 ¹⁰ -	350 - - - 15	420 750 - 1	376 - 10 ¹⁰ -	470 - - - 15	564 850 - 1	V V Ω pF V
Life Ratings ⁽¹⁾ Surge Life Max Current Surge	500A (10/1000μs) 20kA (8/20μs)		1000 5	-	-	1000 5	-	- -	1000 5		-	shots shots

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
			C	G2-60	0	С	G2-80	00	C			
DC Holdover Voltage	per REA PE-80, 0.2A	-	-	150	-	-	150	-	-	150	-	V
AC Follow-on Current	1/2 cycle @ 60Hz	-	-	-	20	-	-	20	-	-	20	A pk
AC Current	10x 1sec @ 60Hz	-	-	-	20	-	-	20	-	-	20	Α
Max Current Surge	20kÅ (8/20µs)	-	5	-	-	5	-	-	5	-	-	shots
Surge Life	500A (10/1000µs)	-	1000	-	-	1000	-	-	1000	-	-	shots
Life Ratings ⁽¹⁾												
Arc Voltage	I=5A min	V _{ARC}	-	15	-	-	15	-	-	15	-	V
Capacitance	1MHz	C	-	-	1	-	-	1	-	-	1	pF
Insulation Resistance	100V	IR	10 ¹⁰	-	-	10 ¹⁰	-	-	10 ¹⁰	-	-	Ω
Impulse Breakdown	100V/μs	V _{bd}	-	-	700	-	-	750	-	-	850	V

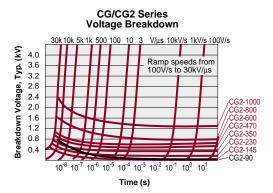
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Device Specifications												
DC Breakdown	500V/s	V _{BD}	480	600	720	640	800	960	800	1000	1200	V
Impulse Breakdown	100V/μs	V bd IR	-	-	1000	-	-	1200	-	-	1500	V
Insulation Resistance	100V	ΙŘ	10 ¹⁰	-	-	10 ¹⁰	-	-	10 ¹⁰	-	-	Ω
Capacitance	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	Α
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

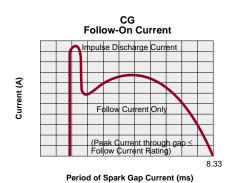
DC: 50% of minimum initial DC breakdown voltage limit to 150% of maximum initial DC breakdown voltage limit Impulse: less than 150% of initial Impulse breakdown voltage limit.

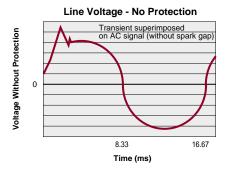


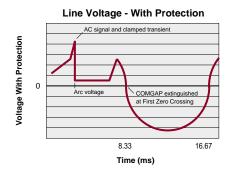
CG/CG2 Series

PERFORMANCE CHARACTERISTICCS









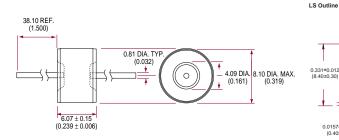
CG/CG2 Series

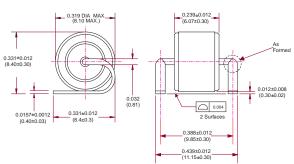
MECHANICAL DIMENSIONS

Other lead forms are available upon request.

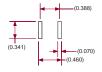
Contact CP Clare for more information.

DIMENSIONS mm (inches)

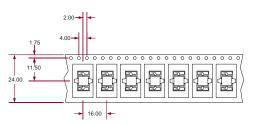




LS Recommended Land Pattern



LS Tape & Reel Packaging



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

ORDERING INFORMATION

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.

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 = 1,000/Reel

