

TWO ELECTRODE SURGE ARRESTERS

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)
- 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 (± 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	10 ¹⁰	-	-	Ω
Capacitance	-	-	1	pF
Operational Temperature	-40	-	+125	°C

(See detailed specifications for more information.)

SPECIFICATIONS

CG/CG2 Series

All characteristics at 25°C

All characteristics at 25°C			CG75			CG90			CG110			
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Device Specifications												
DC Breakdown	500V/s	V _{BD}	60	75	90	72	90	108	88	110	132	V
Impulse Breakdown	100V/μs	V _{bd}	-	-	400	-	-	400	-	-	450	V
Insulation Resistance	50V	IR	10 ¹⁰	-	-	10 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

			CG2-145			CG2-230			CG2-250			
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 _{bd}	-	-	500	-	-	600	-	-	625	V
Insulation Resistance	100V	IR	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	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

			CG2-300			CG2-350			CG2-470			
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Device Specifications												
DC Breakdown	500V/s	V _{BD}	240	300	360	280	350	420	376	470	564	V
Impulse Breakdown	100V/μs	V _{bd}	-	-	700	-	-	750	-	-	850	V
Insulation Resistance	100V	IR	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	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

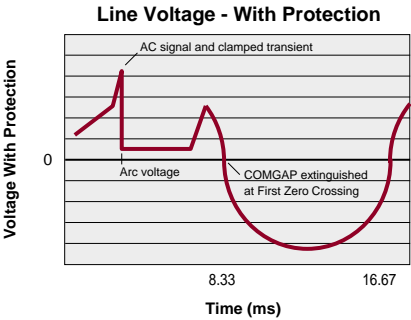
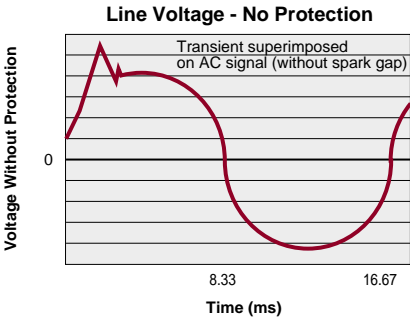
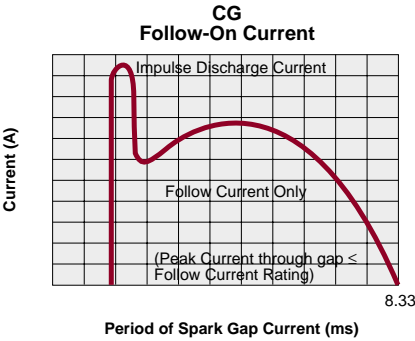
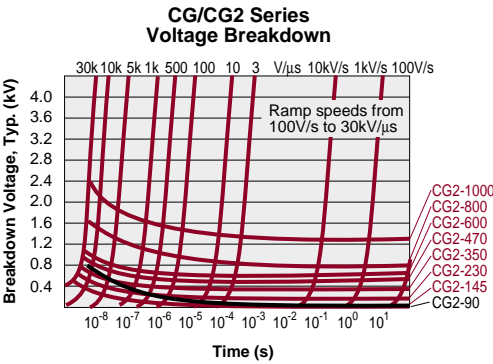
			CG2-600			CG2-800			CG2-1000			
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	UNITS
Device Specifications												
DC Breakdown	500V/s	V _{BD}	480	600	720	640	800	960	800	1000	1200	V
Impulse Breakdown	100V/μs	V _{bd}	-	-	1000	-	-	1200	-	-	1500	V
Insulation Resistance	100V	IR	10 ¹⁰	-	-	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	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 CHARACTERISTICCS



mm
(inches)

ORDERING INFORMATION

—Options
LS = Leaded SMT
L = Leads
(Blank) = No Leads