

## THREE ELECTRODE SURGE ARRESTERS

### PMT3(310) Series



#### DESCRIPTION

Clare's three electrode PMT3(310) Comgaps are designed for a high degree of surge protection at a low cost. This series (150-500V) is primarily used for the protection of telecommunications equipment in which simultaneous crowbar action of two signal lines is required. 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 (<1 pF)
- Available with fail-safe clip
- Available with or without leads
- Available with various lead spacings
- Available in tube packaging
- REA PE-80

#### APPLICATIONS

- Telephone interface
- Telephone line cards
- Repeaters
- Modems
- Line test equipment

#### APPROVALS

- UL File: E145795 (UL497B)

#### RATINGS (@ 25° C)

Parameter	Min	Typ	Max	Units
DC Breakdown Voltage (line - ground)	120	150	180	V
	184	230	276	V
	200	250	300	V
	280	350	420	V
	320	400	480	V
	400	500	600	V
Insulation Resistance	10 <sup>10</sup>	-	-	Ω
Capacitance (line - ground)	-	-	1	pF
Capacitance (line - line)	-	-	0.5	pF
Operational Temperature	-40	-	+125	°C

(See detailed specifications for more information.)

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#### SPECIFICATIONS

All characteristics at 25°C

PARAMETER	CONDITIONS	SYMBOL	PMT3(310) 150XX			PMT3(310) 230XX			PMT3(310) 250XX			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
<b>Device Specifications</b>												
DC Breakdown (I-g)	500V/s	V <sub>BD(I-g)</sub>	120	150	180	184	230	276	200	250	300	V
DC Breakdown (I-I)	500V/s	V <sub>BD(I-I)</sub>	-	-	360	-	-	552	-	-	600	V
Impulse Breakdown(I-g)	100V/μs	V <sub>bd</sub>	-	-	500	-	-	600	-	-	600	V
Insulation Resistance	100V	IR	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	Ω
Capacitance (I-g)	1MHz	C(I-g)	-	-	1	-	-	1	-	-	1	pF
Capacitance (I-I)	1MHz	C(I-I)	-	-	0.5	-	-	0.5	-	-	0.5	pF
Arc Voltage	1= 5A min	V <sub>ARC</sub>	-	16	-	-	16	-	-	16	-	V
<b>Life Ratings<sup>(1)</sup></b>												
Surge Life	500A (10/1000μs)		400	-	-	400	-	-	400	-	-	shots
Max Current Surge	10kA + 10kA (8/20μs)		10	-	-	10	-	-	10	-	-	shots
AC Current	11 cycles @ 60Hz		-	N/A	-	-	-	65+65	-	-	65+65	A
AC Follow-on Current	1/2 cycle @ 60Hz		-	N/A	-	-	-	20	-	-	20	A pk

PARAMETER	CONDITIONS	SYMBOL	PMT3(310) 350XX			PMT3(310) 400XX			PMT3(310) 500XX			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
<b>Device Specifications</b>												
DC Breakdown (I-g)	500V/s	V <sub>BD(I-g)</sub>	280	350	420	320	400	480	400	500	600	V
DC Breakdown (I-I)	500V/s	V <sub>BD(I-I)</sub>	-	-	800	-	-	1000	-	-	1200	V
Impulse Breakdown(I-g)	100V/μs	V <sub>bd</sub>	-	-	750	-	-	750	-	-	850	V
Insulation Resistance	100V	IR	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	10 <sup>10</sup>	-	-	Ω
Capacitance (I-g)	1MHz	C(I-g)	-	-	1	-	-	1	-	-	1	pF
Capacitance (I-I)	1MHz	C(I-I)	-	-	0.5	-	-	0.5	-	-	0.5	pF
Arc Voltage	1=5A min	V <sub>ARC</sub>	-	16	-	-	16	-	-	16	-	V
<b>Life Ratings<sup>(1)</sup></b>												
Surge Life	500A (10/1000μs)		400	-	-	400	-	-	400	-	-	shots
Max Current Surge	10kA + 10kA (8/20μs)		10	-	-	10	-	-	10	-	-	shots
AC Current	11 cycles @ 60Hz		-	-	65+65	-	-	65+65	-	-	65+65	A
AC Follow-on Current	1/2 cycle @ 60Hz		-	-	20	-	-	20	-	-	20	A pk

<sup>(1)</sup>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.

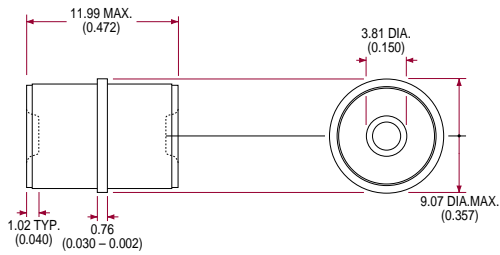
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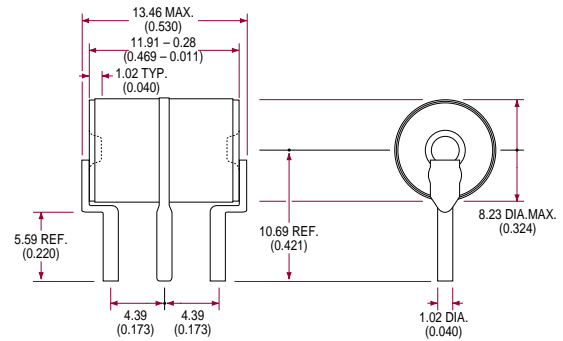
### MECHANICAL DIMENSIONS

DIMENSIONS  
mm  
(inches)

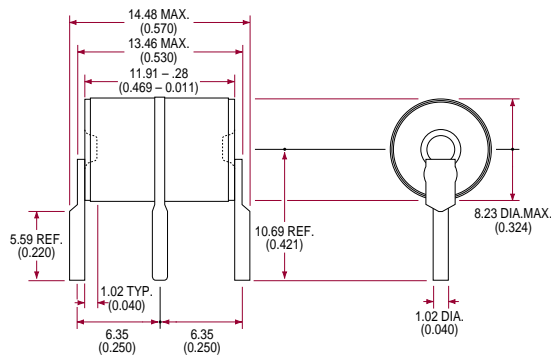
01 Outline



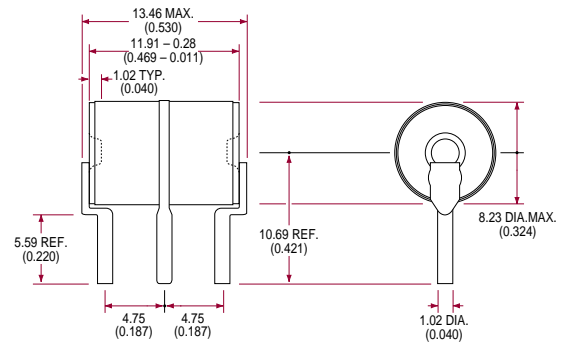
04 Outline



06 Outline



10 Outline



Note: Lead space tolerance is  $\pm 0.13$  (0.005)

### ORDERING INFORMATION

PMT3(310) s with other breakdown voltages in the 75-500V range are available upon request. A complete part number is represented by the digits below. For example, PMT3(310)25010 is a 250V device with outline #10 (pins on 4.75 mm centers). Parts are packed in tubes.

