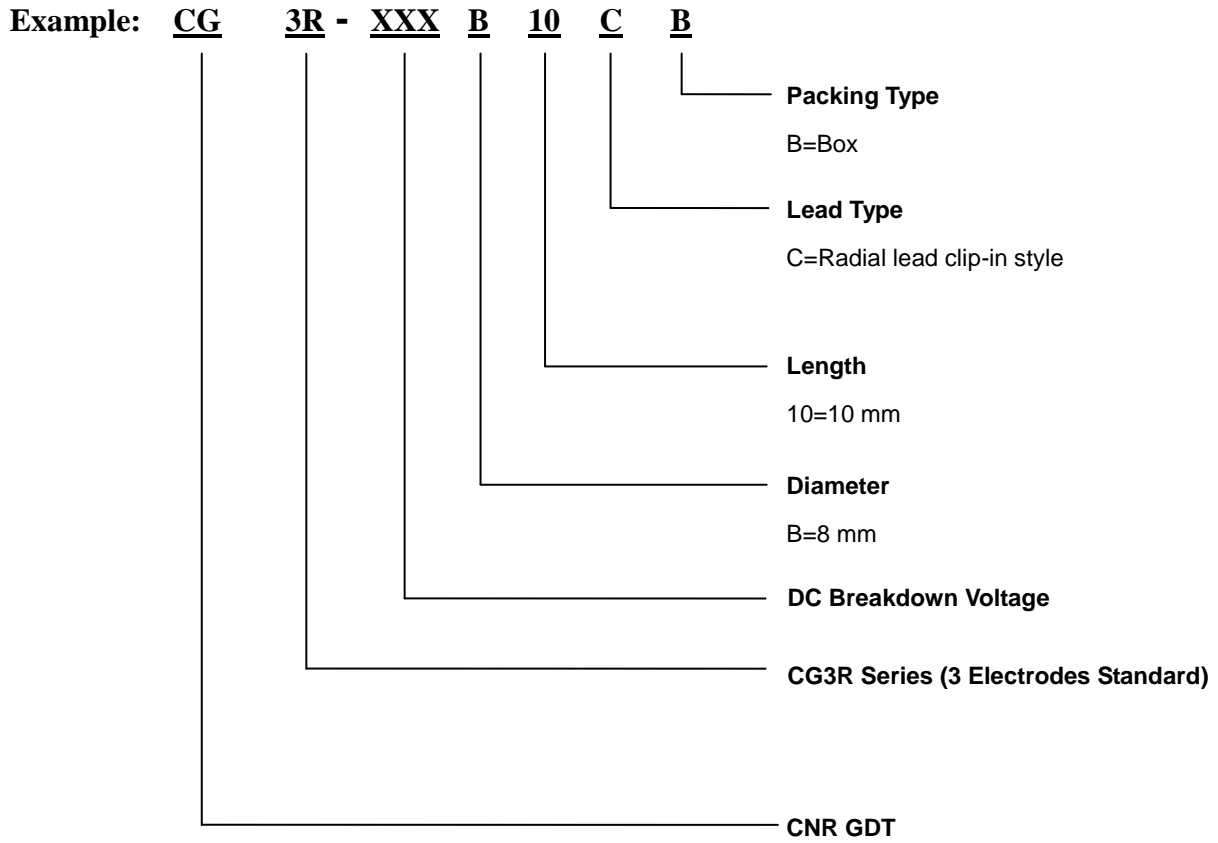


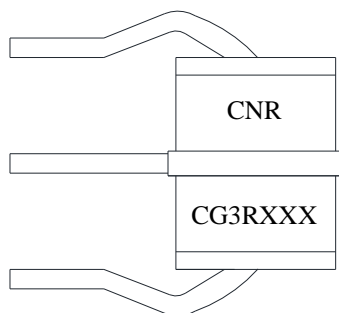
**1. Scope:**

This Specification covers the CNR GDT surge protector series for manufacturing gas tube arrests.

**2. Part Number**

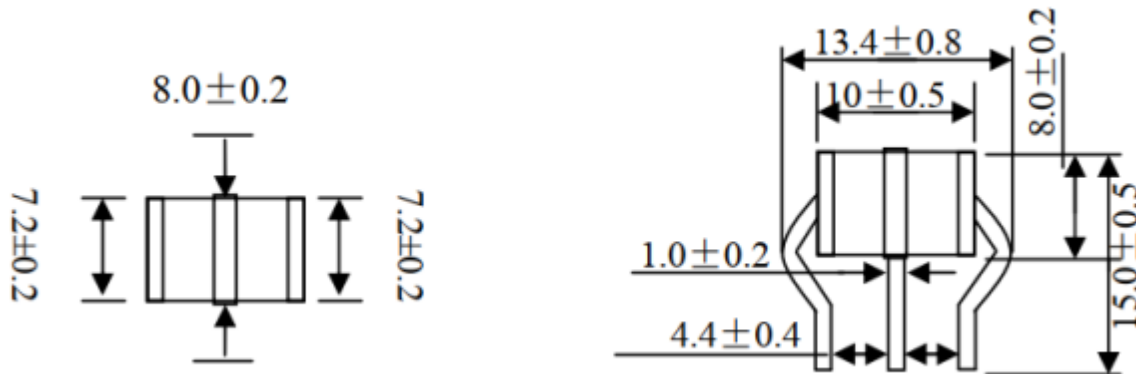


**3. Marking**



XXX = DC Breakdown Voltage

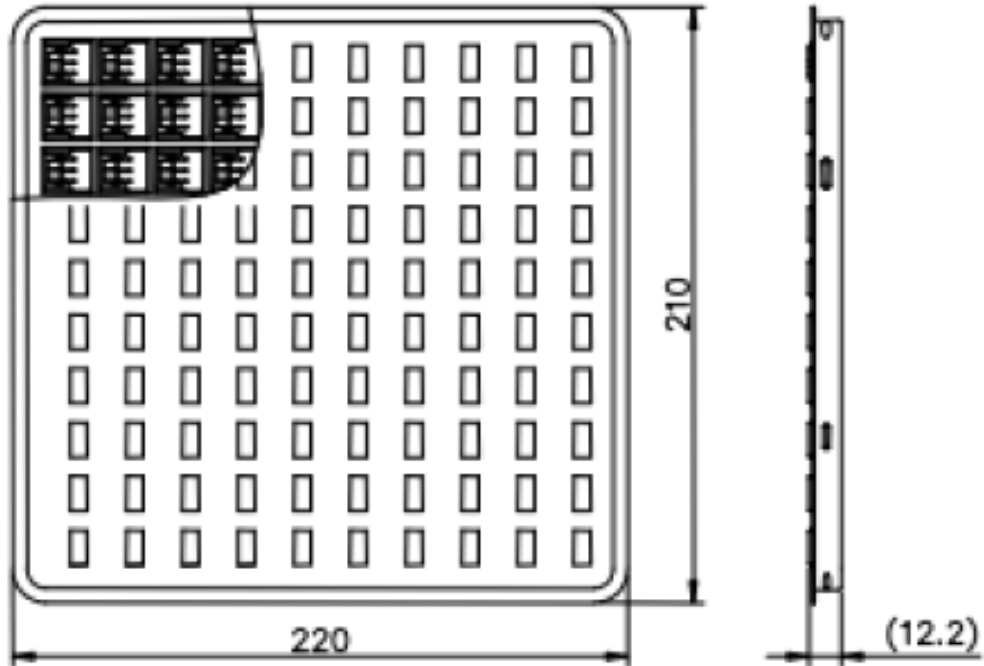
**4. Production Dimensions (mm)**



**5. Electrical Specification**

Model Name	DC Breakdown Voltage	Maximum Impulse Breakdown Voltage		Maximum Impulse Discharge Current (8/20 $\mu$ s)	Impulse Life (10/1000 $\mu$ s)	Alternating Discharge Current	DC Holdover Voltage	Minimum Insulation Resistance		Maximum Capacitance (1MHz)
	(100V/S)	100V/ $\mu$ s	1KV/ $\mu$ s	20 times	200A	50Hz, 1Sec	<150ms	(G $\Omega$ )	(V <sub>DC</sub> )	(pF)
	(V)	(V)	(V)	(KA)	(times)	(A)	(V)			
CG3R-075	75 $\pm$ 20%	600	700	10	130	20	52	>1	50	<1.5
CG3R-090	90 $\pm$ 20%	600	700	10	130	20	52	>1	50	<1.5
CG3R-145	145 $\pm$ 20%	500	700	10	130	20	80	>1	50	<1.5
CG3R-200	200 $\pm$ 20%	500	700	10	130	20	80	>1	50	<1.5
CG3R-230	230 $\pm$ 20%	600	700	10	130	20	135	>1	50	<1.5
CG3R-300	300 $\pm$ 20%	650	750	10	130	20	135	>1	100	<1.5
CG3R-350	350 $\pm$ 20%	700	800	10	130	20	135	>1	100	<1.5
CG3R-400	400 $\pm$ 20%	800	900	10	130	20	135	>1	100	<1.5
CG3R-420	420 $\pm$ 20%	800	900	10	130	20	135	>1	100	<1.5
CG3R-470	470 $\pm$ 20%	900	1000	10	130	20	135	>1	100	<1.5
CG3R-550	550 $\pm$ 20%	1000	1100	10	130	20	135	>1	100	<1.5
CG3R-600	600 $\pm$ 20%	1000	1100	10	130	20	135	>1	100	<1.5

## 6. Packaging



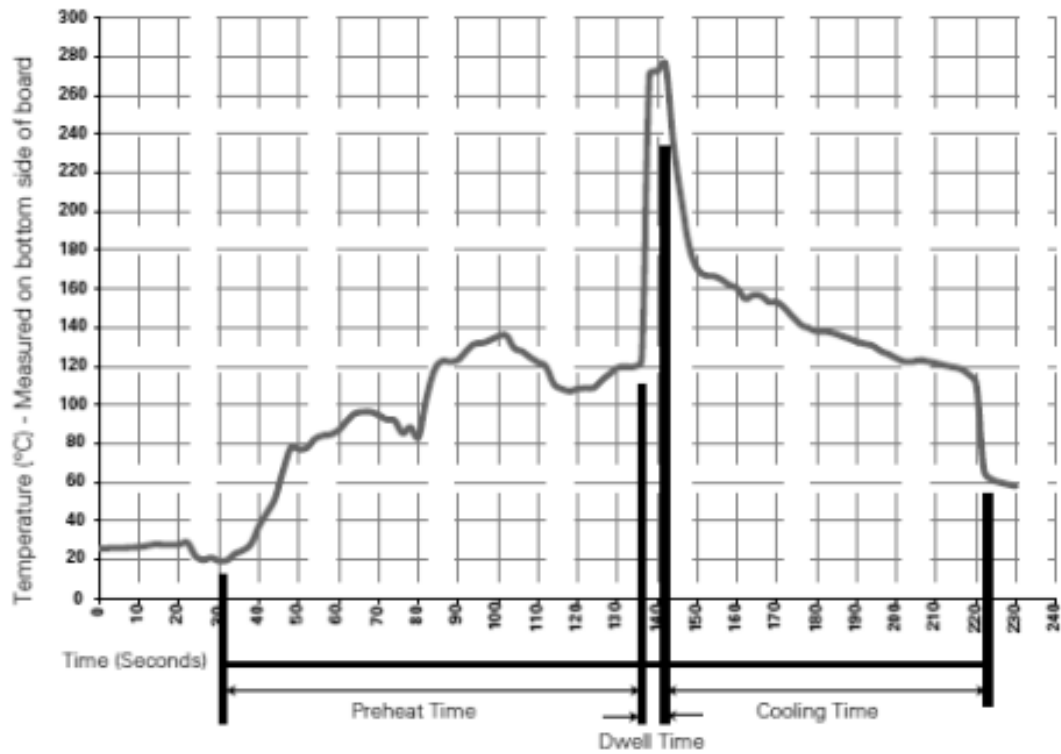
Part Number	Component Package	Quantity
CG3R series	8*10	500

## 7. Storage Environment

1. Operate temperature:  $-40^{\circ}\text{C}$  to  $90^{\circ}\text{C}$
2. Storage temperature:  $-40^{\circ}\text{C}$  to  $115^{\circ}\text{C}$
3. Relative humidity:  $\leq 75\% \text{RH}$
4. Do not store in an environment with corrosive gas or direct sunlight.

- Storage period: 1 year

## 8. Soldering Parameters-wave Soldering



<b>WAVE PARAMETER</b>	<b>LEAD-FREE RECOMMENDATION</b>
Preheat	
Temperature Minimum :	100°C
Temperature Minimum :	150°C
Preheat time :	60-180 seconds
Solder Pot Temperature :	280°C Maximum
Solder Dwell Time :	2-5 seconds

**9. Electrical Terms and Definitions**

<b>Item</b>	<b>Test Condition / Description</b>	<b>Requirement</b>
<b>DC Breakdown Voltage</b>	The voltage measured at a rise time of 100v/s.	To meet the specified value
<b>Maximum Impulse Breakdown Voltage</b>	The maximum breakdown voltage at rise times of 100v/us and 1000v/us.	
<b>Maximum Impulse Discharge Current</b>	The maximum current applying a waveform of 8/20us that can be applied across the terminals of the gas tube without causing the gas tube to change more than $\pm 25\%$ from its initial measured DC breakdown voltage. Dwell time between pulses is 3 minutes.	
<b>Impulse Life</b>	The minimum number of impulses of a specified waveform and peak current which a gas tube will conduct without causing the gas tube to change more than $\pm 25\%$ from its initial measured DC breakdown voltage. Dwell time between pulses is 1-2 minutes.	
<b>Alternating Discharge Current</b>	Rated RMS value of AC current at 50Hz, 1 sec. 10 times. Intervals: 3min. DC breakdown voltage may not change more than $\pm 25\%$ from its initial measured DC breakdown voltage. $IR > 10^8$ ohms (-20%, +30% for 70 – 90V).	
<b>DC Holdover Voltage</b>	The maximum DC voltage across the two terminals of the gas tube under which it may be expected to return to the high impedance state after the gas tube breakdown.	
<b>Capacitance</b>	The capacitance of a gas tube shall be measured each terminal to each other terminal. Test frequency: 1MHz In measurements involving 3-electrode gas tubes, the terminal not being tested shall be connected to a ground plane.	