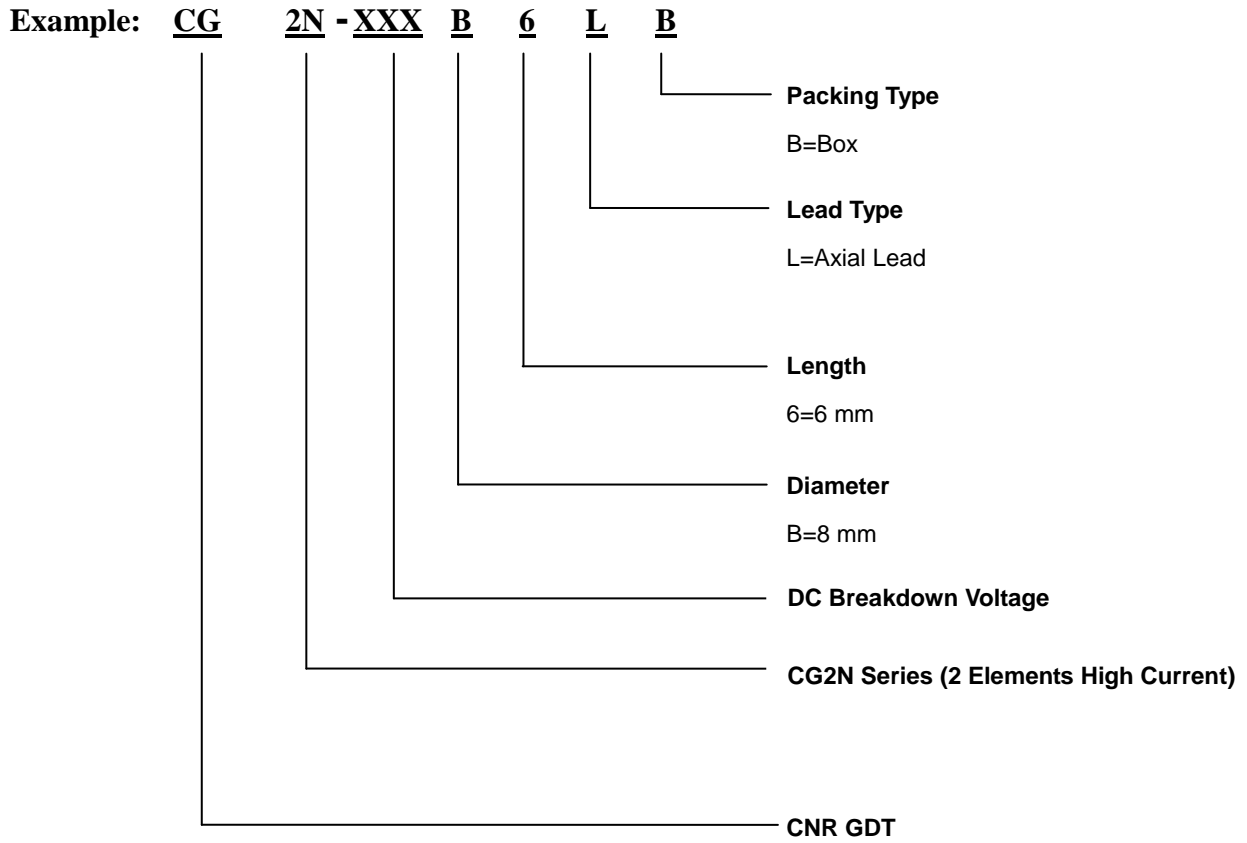




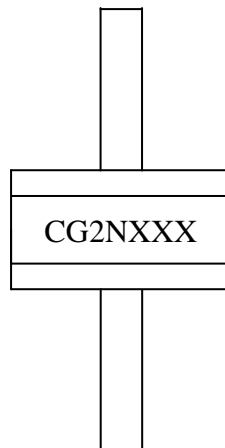
1. Scope:

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

2. Part Number

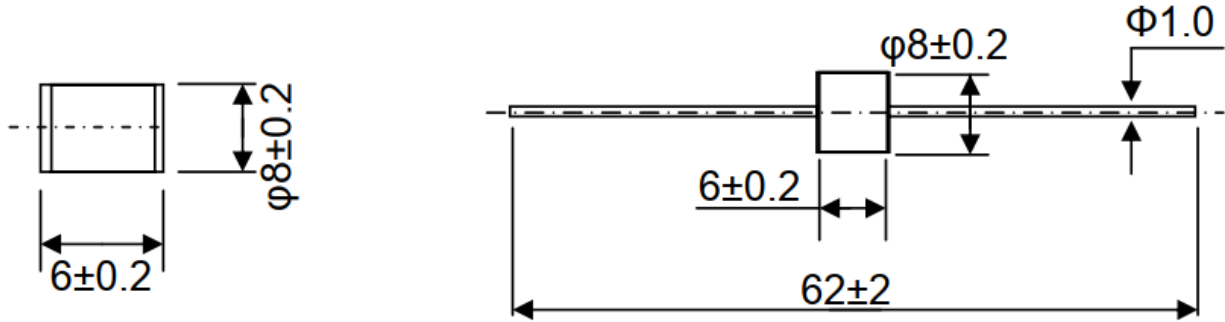


3. Marking



XXX = DC Breakdown Voltage

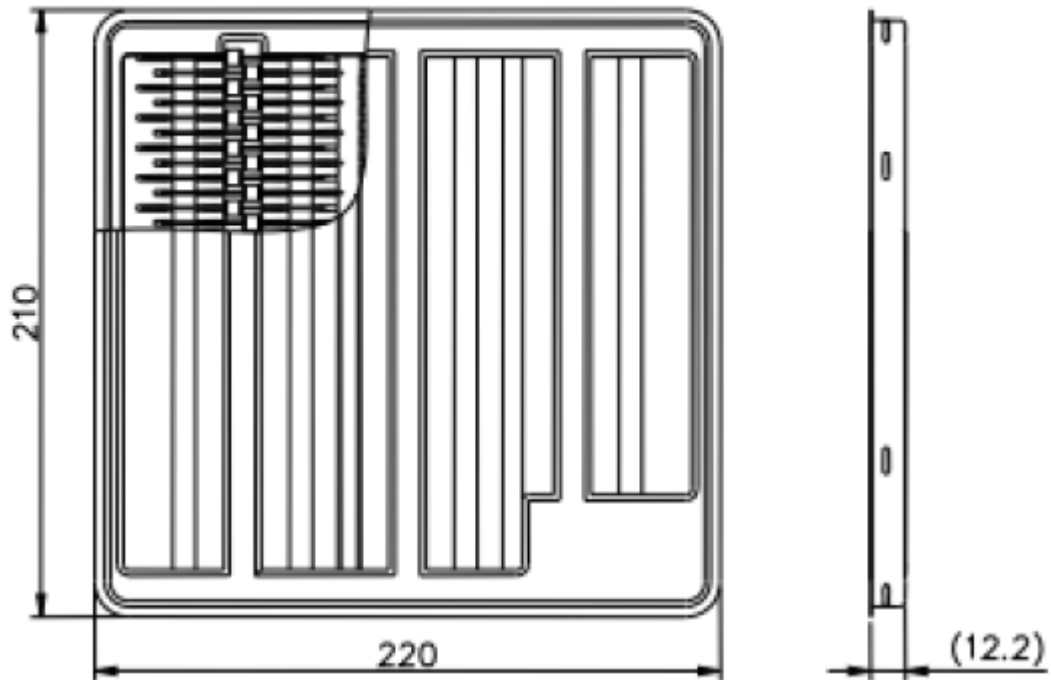
4. Production Dimensions (mm)



5. Electrical Specification

Model Name	DC Breakdown Voltage	Maximum Impulse Breakdown Voltage		Maximum Impulse Discharge Current (8/20 μ s)		Impulse Life (10/1000 μ s)	Normal Alternating Discharge Current		DC Holdover Voltage	Minimum Insulation Resistance		Maximum Capacitance (1MHz)		
		100V/ μ s	1KV/ μ s	1 time	10 times		100A	50Hz, 1Sec		Single 9cycles	<150ms		(G Ω)	(V _{DC})
		(V)	(V)	(V)	(KA)		(times)	(A)		(V)	(G Ω)		(V _{DC})	(pF)
CG2N-070	70 \pm 20%	500	600	20	10	300	20	65	52	>1	25	<1.5		
CG2N-075	75 \pm 20%	500	600	20	10	300	20	65	52	>1	25	<1.5		
CG2N-090	90 \pm 20%	500	600	20	10	300	20	65	52	>1	50	<1.5		
CG2N-120	120 \pm 20%	500	700	20	10	300	20	65	52	>1	100	<1.5		
CG2N-130	130 \pm 20%	500	700	20	10	300	20	65	52	>1	100	<1.5		
CG2N-145	145 \pm 20%	500	700	20	10	300	20	65	52	>1	100	<1.5		
CG2N-180	150 \pm 20%	500	700	20	10	300	20	65	52	>1	100	<1.5		
CG2N-230	230 \pm 20%	500	700	20	10	300	20	65	80	>1	100	<1.5		
CG2N-250	250 \pm 20%	500	700	20	10	300	20	65	135	>1	100	<1.5		
CG2N-300	300 \pm 20%	700	900	20	10	300	20	65	135	>1	100	<1.5		
CG2N-350	350 \pm 20%	700	900	20	10	300	20	65	135	>1	100	<1.5		
CG2N-400	400 \pm 20%	800	1000	20	10	300	20	65	135	>1	100	<1.5		
CG2N-470	470 \pm 20%	900	1100	20	10	300	20	65	135	>1	250	<1.5		
CG2N-600	600 \pm 20%	1100	1300	20	10	300	20	65	135	>1	250	<1.5		

6. Packaging



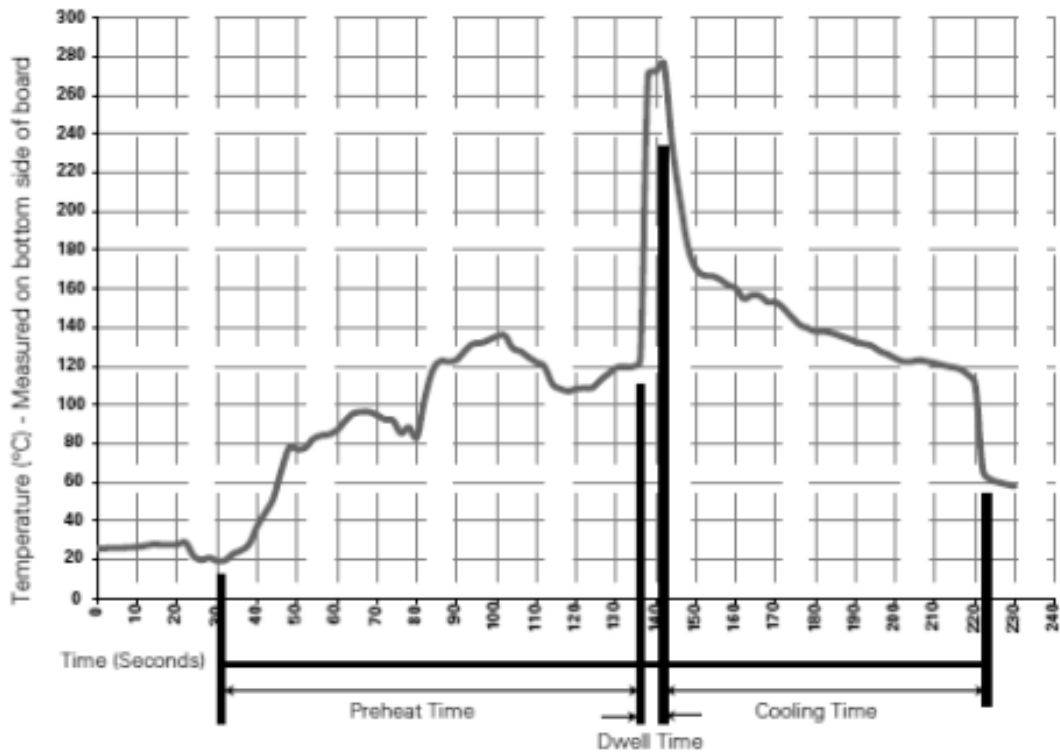
Part Number	Component Package	Quantity
CG2N series	8*6	500

7. Storage Environment

1. Operate temperature: -40°C to 90°C
2. Storage temperature: -40°C to 115°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



WAVE PARAMETER	LEAD-FREE RECOMMENDATION
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**

Item	Test Condition / Description	Requirement
DC Breakdown Voltage	The voltage measured at a rise time of 100v/s.	To meet the specified value
Maximum Impulse Breakdown Voltage	The maximum breakdown voltage at rise times of 100v/us and 1000v/us.	
Maximum Impulse Discharge Current	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.	
Impulse Life	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.	
Alternating Discharge Current	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).	
DC Holdover Voltage	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.	
Capacitance	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.	