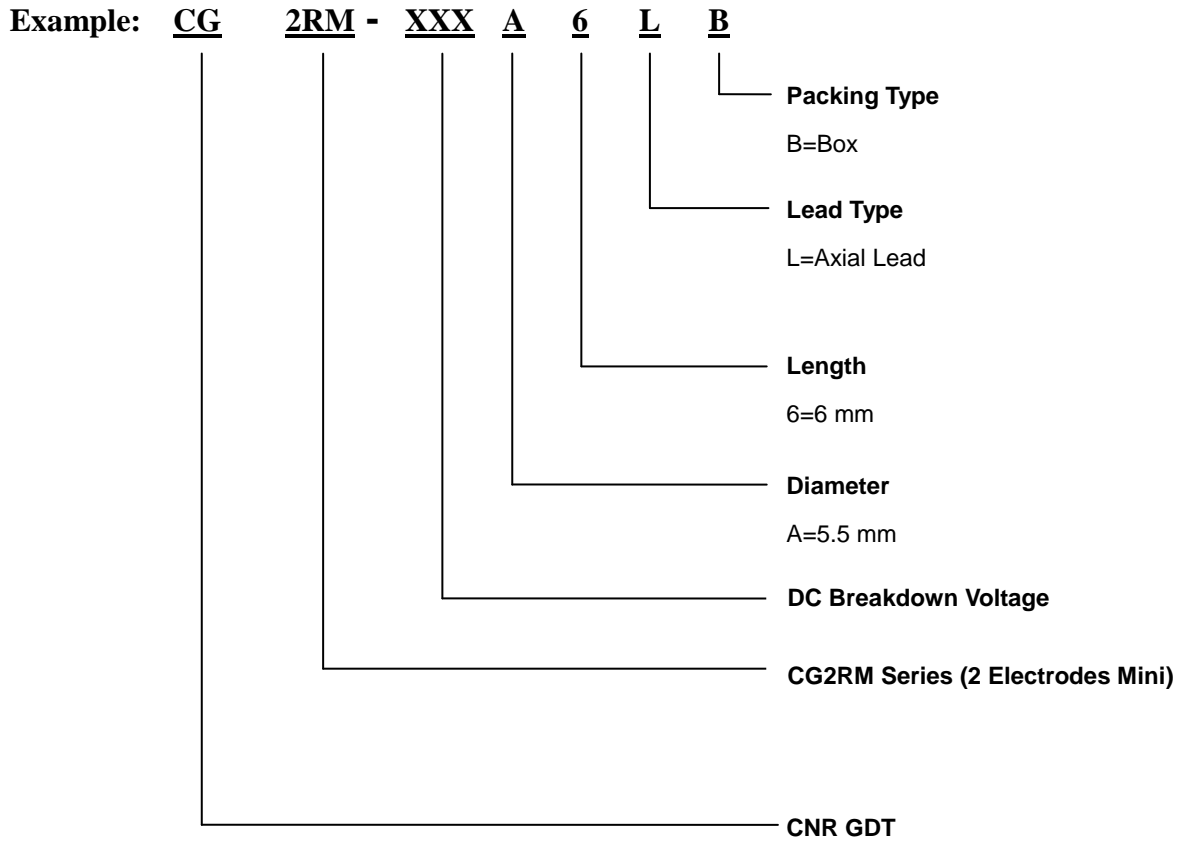




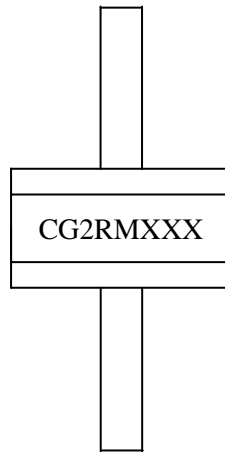
1. Scope:

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

2. Part Number

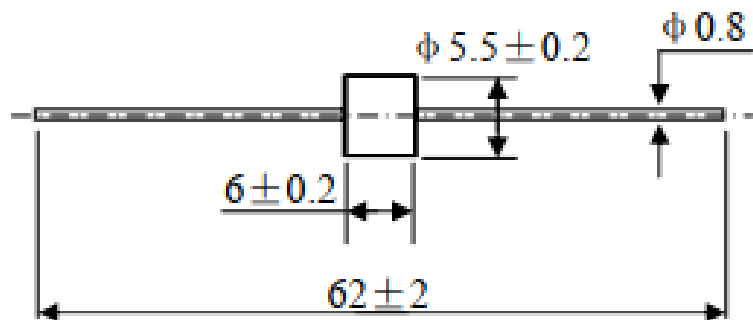
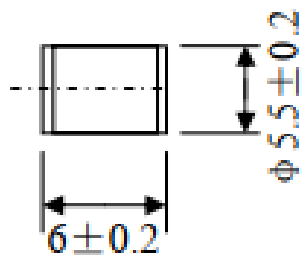


3. Marking



XXX = DC Breakdown Voltage

4. Production Dimensions (mm)



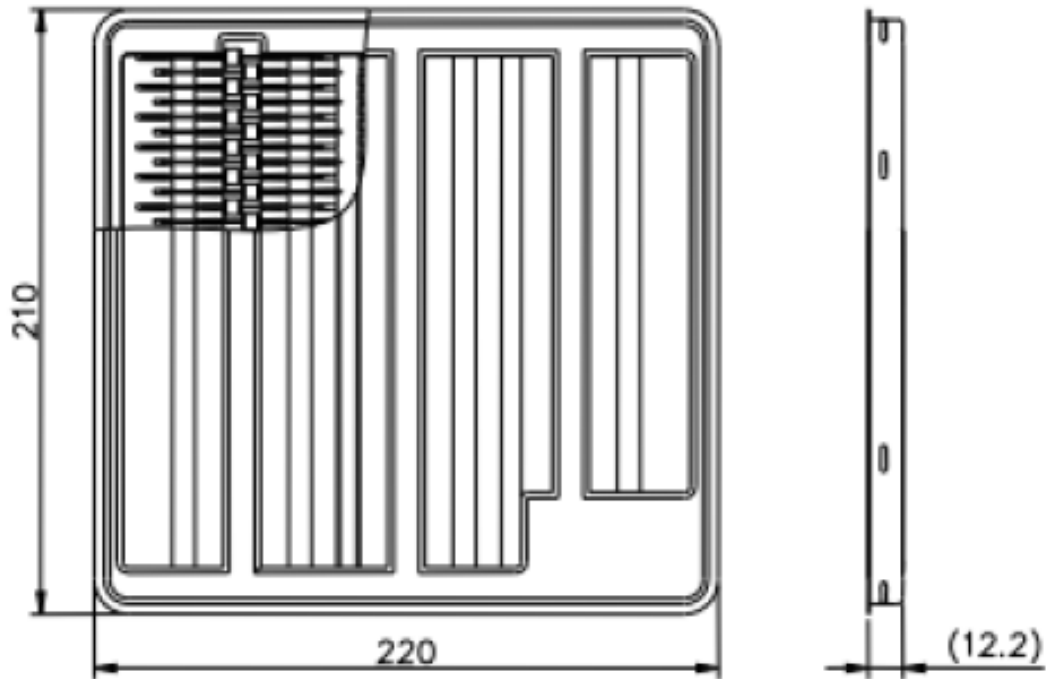
**5. Electrical Specification**

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/S)	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)	
CG2RM-075	75 \pm 20%	700	800	10	5	300 (10/1000 μ s)	5	15	52	>1	50	<1.5			
CG2RM-090	90 \pm 20%	600	700	10	5		5	15	52	>1	50	<1.5			
CG2RM-120	120 \pm 20%	600	700	10	5		5	15	52	>1	50	<1.5			
CG2RM-130	130 \pm 20%	600	700	10	5		5	15	52	>1	50	<1.5			
CG2RM-145	145 \pm 20%	600	700	10	5		5	15	52	>1	50	<1.5			
CG2RM-230	230 \pm 20%	600	700	10	5		5	15	80	>1	100	<1.5			
CG2RM-250	250 \pm 20%	600	700	10	5		5	15	80	>1	100	<1.5			
CG2RM-300	300 \pm 20%	700	900	10	5		5	15	135	>1	100	<1.5			
CG2RM-350	350 \pm 20%	700	900	10	5		5	15	135	>1	100	<1.5			
CG2RM-400	400 \pm 20%	800	1000	10	5		5	15	135	>1	100	<1.5			
CG2RM-470	470 \pm 20%	900	1100	10	5		5	15	135	>1	250	<1.5			
CG2RM-600	600 \pm 20%	1300	1500	5	2.5		2.5	5	135	>1	250	<1.5			
CG2RM-800	800 \pm 20%	1500	1700	5	2.5		2.5	5	135	>1	250	<1.5			
CG2RM-1000	1000 \pm 20%	1600	1800	3	1.5		300 (8/20 μ s)	2	4	135	>1	250	<1.5		
CG2RM-1200	1200 \pm 20%	1800	2000	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-1400	1400 \pm 20%	2200	2400	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-1600	1600 \pm 20%	2400	2600	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-2000	2000 \pm 20%	2800	3000	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-2500	2500 \pm 20%	3300	3500	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-3000	3000 \pm 20%	4400	4600	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-3500	3500 \pm 20%	5100	5300	3	1.5	2		4	135	>1	250	<1.5			
CG2RM-3600	3600 \pm 20%	5200	5400	3	1.5	2		4	135	>1	250	<1.5			

Approvals - UL 497B Recognized, File E220380 (CG2RM-070 to CG2RM-470)

UL1449 4th Recognized, File E316325 (CG2RM-600 to CG2RM-3600)

6. Packaging



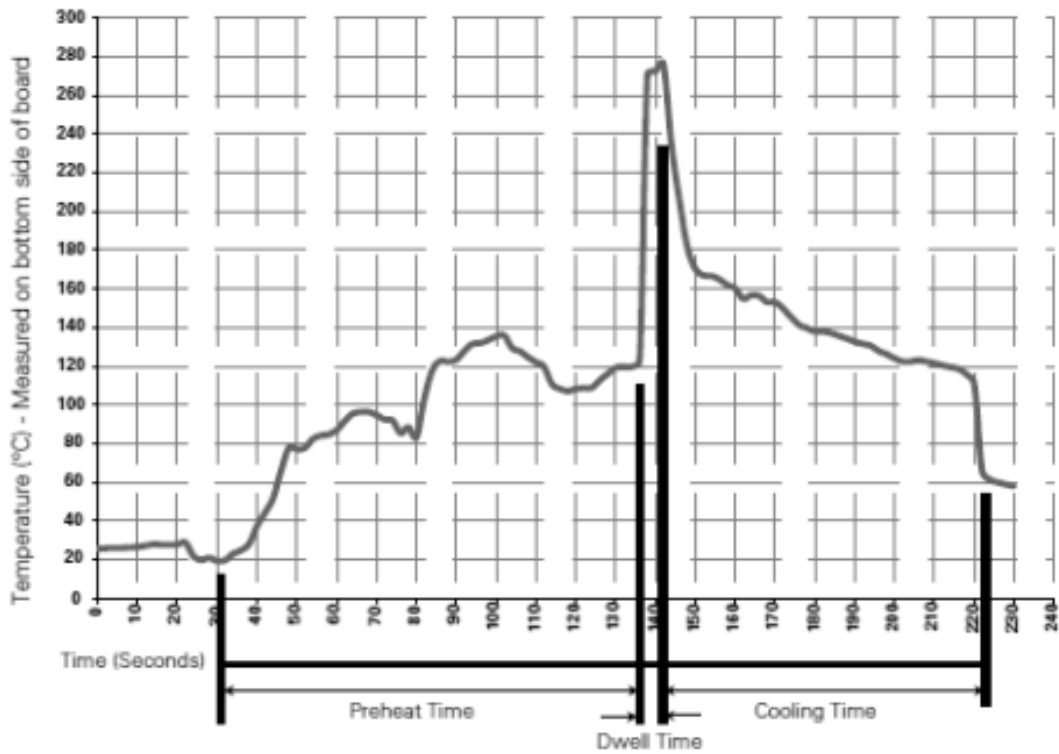
Part Number	Component Package	Quantity
CG2RM series	5.5*6	500

7. Storage Environment

1. Operate temperature: -40°C to 90°C
2. Storage temperature: -40°C to 115°C
3. Relative humidity: $\leq 75\%RH$
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.	