

OM SENI

3R-8 SERIES

Gas Discharge Tube (GDT) Datasheet

Features

- Excellent response to fast rising transients
- Stable breakdown voltage
- Low capacitance and Insertion Loss
- High insulation resistance
- Dimensions $\Phi 8 \times 10 \text{mm}$
- Storage and operating temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$
- Reliable to Protect Electrostatic Surge
- High Current Handling Capability @8/20 μs ;
- Moisture sensitivity level :Level 1

DC Spark-over Voltage
75V to 800V

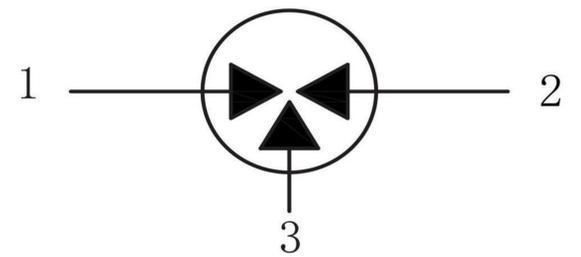
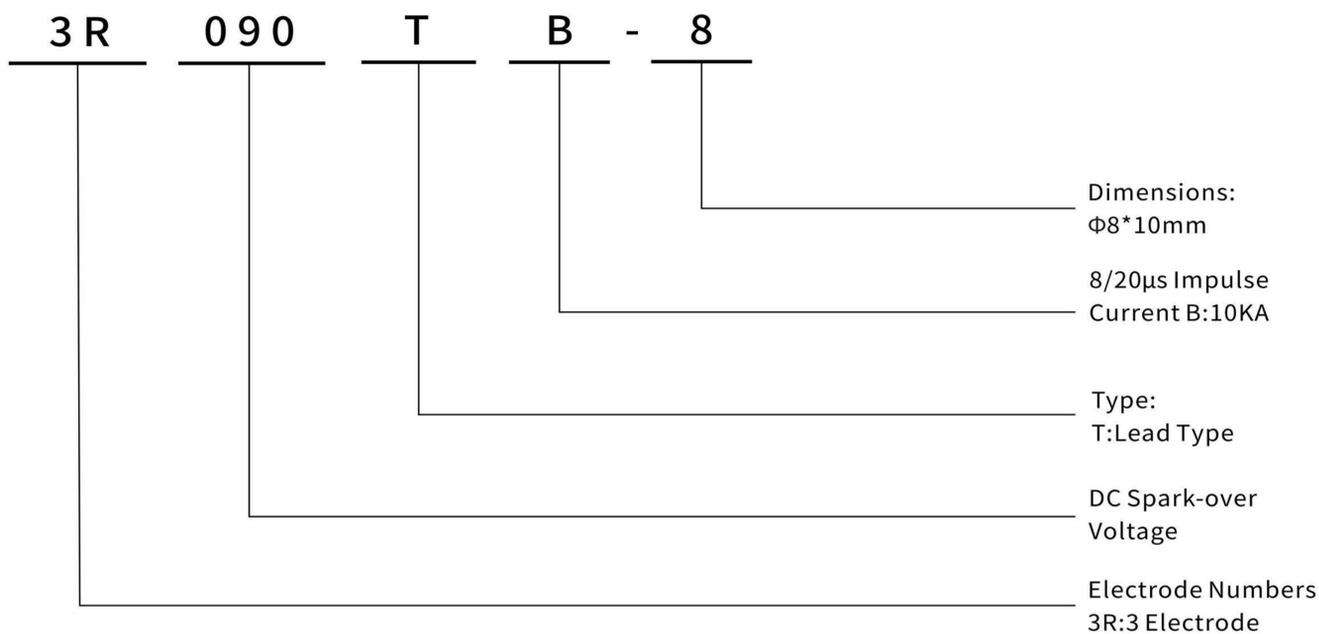
Applications

- Test equipment
- AC Power
- Power supplies
- Telephone Interface, Line cards
- General Telecommunications equipment

3R-8



Part Number Code



Safety Certification

UL: E465335

3-Electrode Gas Discharge Tubes, Model(s):

3RxxxTB-8 where xxx is 075, 090, 150, 230, 350, 400, 420, 470, or 600.

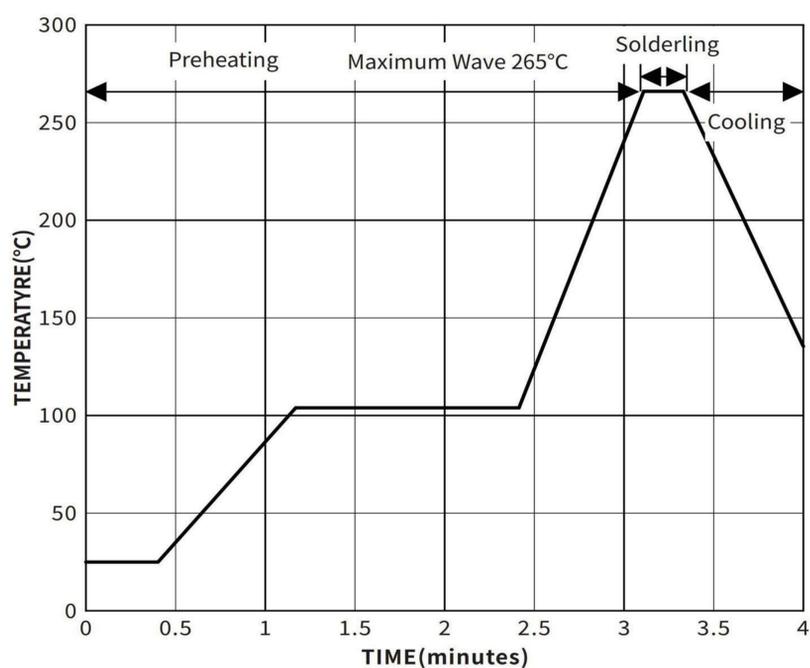
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Electrical Characteristics (Ta=25°C Unless otherwise specified)

Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current@8/20 μ s	Alternating Discharge Current @8/20 μ s	Impulse Life@ 10/1000 μ s	Minimum Insulation Resistance		Maximum Capacitance
						Test Voltage	G Ω	
						DC (V)		
	100V/S	1000V/ μ s	± 5 times	50Hz, 1sec 10 times	100A			1MHz
	(V)	(V)	(KA)	(A)	(times)			(pF)
3R075TB-8	75 \pm 20%	600	10	10	300	25	1	1.5
3R090TB-8	90 \pm 20%	600	10	10	300	50	1	1.5
3R150TB-8	150 \pm 20%	600	10	10	300	100	1	1.5
3R200TB-8	200 \pm 20%	700	10	10	300	100	1	1.5
3R230TB-8	230 \pm 20%	700	10	10	300	100	1	1.5
3R250TB-8	250 \pm 20%	700	10	10	300	100	1	1.5
3R350TB-8	350 \pm 20%	900	10	10	300	100	1	1.5
3R400TB-8	400 \pm 20%	950	10	10	300	100	1	1.5
3R420TB-8	420 \pm 20%	950	10	10	300	250	1	1.5
3R470TB-8	470 \pm 20%	1000	10	10	300	250	1	1.5
3R600TB-8	600 \pm 20%	1200	10	10	300	250	1	1.5
3R800TB-8	800 \pm 20%	1400	10	10	300	250	1	1.5

Recommended Soldering Conditions



Wave Soldering

Wave Soldering Condition	Pb-Free Assembly
Minimum pre-heat temperature	100°C
Pre-heat Time	60-180 secs.
Peak Temperature	265°C
Dipping Time	10 secs. Max
Soldering	1 time

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Electrical Ratings

Items	Test Condition/Description	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt=100V/s$	To meet the specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$.	
Impulse Discharge Current	Maximum 8/20 μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time.	
	<p>The graph shows the current percentage over time for an 8/20 microsecond surge. The y-axis is labeled 'CURRENT (%)' with values 0, 10, 50, 90, and 100. The x-axis is labeled 'Time' and 'Impulse Width'. The curve starts at 0, rises to a 'Crest value' of 100% at 8 microseconds, and then decays. A horizontal line at 50% current intersects the curve, and a vertical line is dropped from that point to the x-axis, marking a 20-microsecond interval from the 10% current level to the end of the pulse.</p>	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min.	
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	

Physical Dimensions

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
C	7.0	7.4	0.275	0.291
D	7.8	8.2	0.307	0.323
T	9.7	10.3	0.382	0.406
W	11.4	13.9	0.449	0.548
L	14.5	15.5	0.571	0.611
d	0.95	1.05	0.037	0.041
S1	4.1	4.7	0.161	0.185
S2	4.1	4.7	0.161	0.185

Ordering Information

SERIES	SIZE(mm)	DELIVERY MODE	MPQ(PCS)	BOX(PCS)
3R-8	$\Phi 8 \times 10$	PVC TRAY	100	500