

Gas Discharge Tube (GDT) Data Sheet

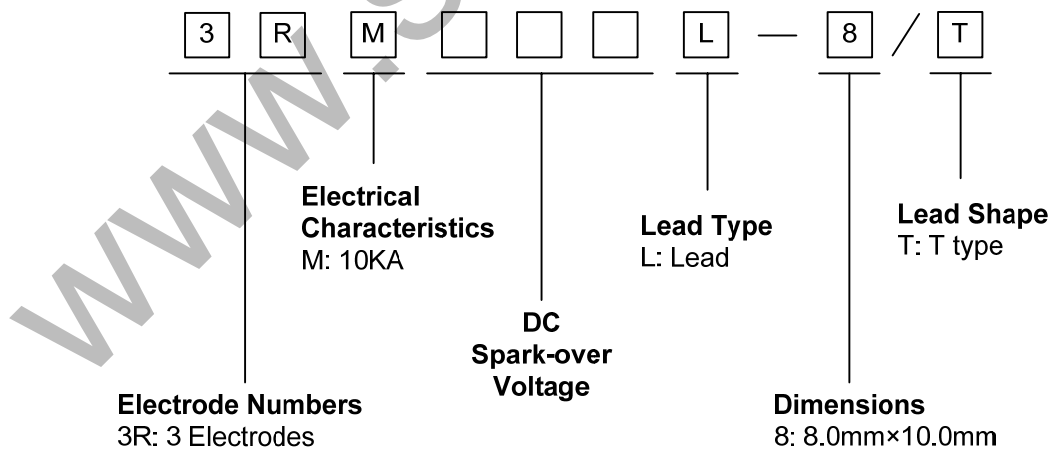
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/ μ s.
- Stable breakdown voltage.
- High insulation resistance.
- Low capacitance (≤ 2 pF)
- High holdover voltage
- Large absorbing transient current capability.
- Size: 8.0mm*10.0mm
- Storage and operating temperature: -40°C ~ +85°C
- Meets MSL level 1, per J-STD-020
- Safety certification: UL: E244458

Applications

- Repeaters, Modems.
- Telephone Interface, Line cards.
- Data communication equipment.
- Line test equipment

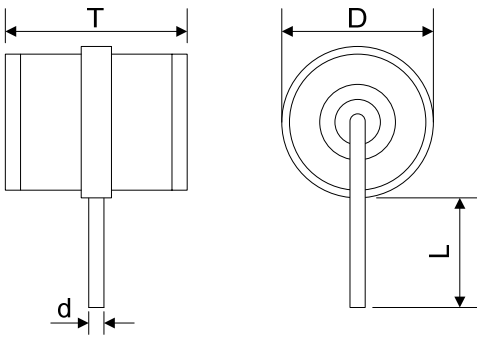
Part Number Code



Marking

B : BrightKing Logo
 3RM090-8 : Device Marking Code
 YXXX : Date Code

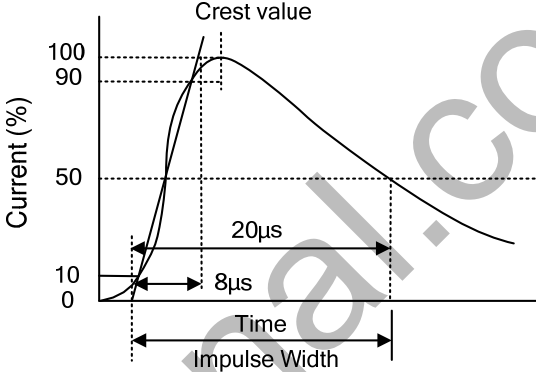
Dimensions

T Type		Dimension (mm)	
		Symbol	
		Spec.	Tolerance
	D	8.0	±0.2
	T	10.0	±0.3
	L	7.0	±0.5
	d	1.0	±0.1

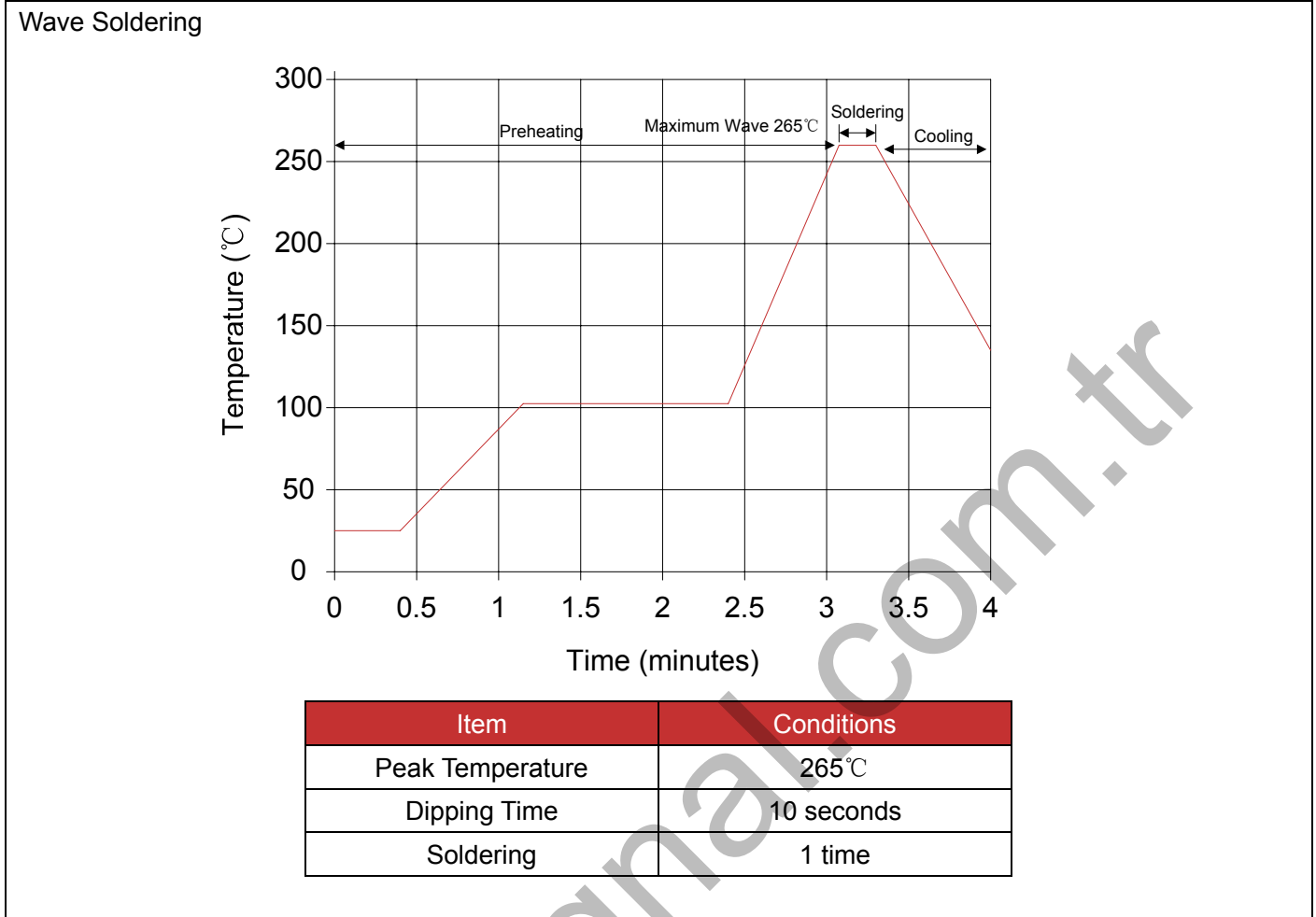
Electrical Characteristics

Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	50Hz, 1sec	10/1000μs 100A	Test Voltage	(GΩ)	1MHz	
	(V)	(V)	(KA)	(A)	(times)	DC(V)		(pF)	
3RM075L-8/T	75±20%	700	10	10	300	25	1.0	2.0	3RM075-8
3RM090L-8/T	90±20%	700	10	10	300	50	1.0	2.0	3RM090-8
3RM150L-8/T	150±20%	700	10	10	300	100	1.0	2.0	3RM150-8
3RM200L-8/T	200±20%	700	10	10	300	100	1.0	2.0	3RM200-8
3RM230L-8/T	230±20%	700	10	10	300	100	1.0	2.0	3RM230-8
3RM350L-8/T	350±20%	850	10	10	300	100	1.0	2.0	3RM350-8
3RM400L-8/T	400±20%	850	10	10	300	100	1.0	2.0	3RM400-8
3RM470L-8/T	470±20%	950	10	10	300	250	1.0	2.0	3RM470-8
3RM600L-8/T	600±20%	1300	10	10	300	250	1.0	2.0	3RM600-8
3RM800L-8/T	800±20%	1500	10	10	300	250	1.0	2.0	3RM800-8

Electrical Ratings

Items	Test Condition/Description	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt=100V/s$. Test is between each side electrode and center electrode.	
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$. Test is between each side electrode and center electrode.	
Impulse Discharge Current	<p>Maximum surge current that can be applied through center electrode with 8/20μs waveform, for 10 times with 3min interval time, which will be equally divided between each side electrode to center electrode, without causing the DC breakdown voltage to change more than 25% from its initial measured value.</p>  <p>The graph shows Current (%) on the y-axis (0, 10, 50, 90, 100) and Time on the x-axis. The waveform rises to a 'Crest value' of 100% within 8μs and then decays. The time from the start of the rise to the point where the current has fallen to 50% is labeled as 20μs. The total duration of the impulse is labeled as 'Impulse Width'.</p>	To meet the specified value
Alternating Discharge Current	<p>Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min. DC spark-over voltage shall not change more than $\pm 25\%$ from its initial value. Test is between each side electrode and center electrode.</p> <p>$IR > 10^8$ ohms (-20%, +30% for 70~90V).</p>	
Insulation Resistance	The resistance of gas tube shall be measured between each side electrodes and center electrode.	
Capacitance	<p>The capacitance of gas tube shall be measured between each side electrodes and center electrode.</p> <p>Test frequency: 1MHz</p>	

Recommended Soldering Conditions



Packaging

Skin packing	Symbol	Dimension (mm)		
		Spec.	Tolerance	
	A	217.0	±1.0	
	B	207.0	±1.0	
	H	10.3	±0.2	
Quantity: 100pcs				
Inner box		A0	338.0	±1.0
		B0	336.0	±1.0
		H0	58.0	±1.0
	Quantity: 500pcs			