

## Gas Discharge Tube (GDT) Data Sheet

### Features

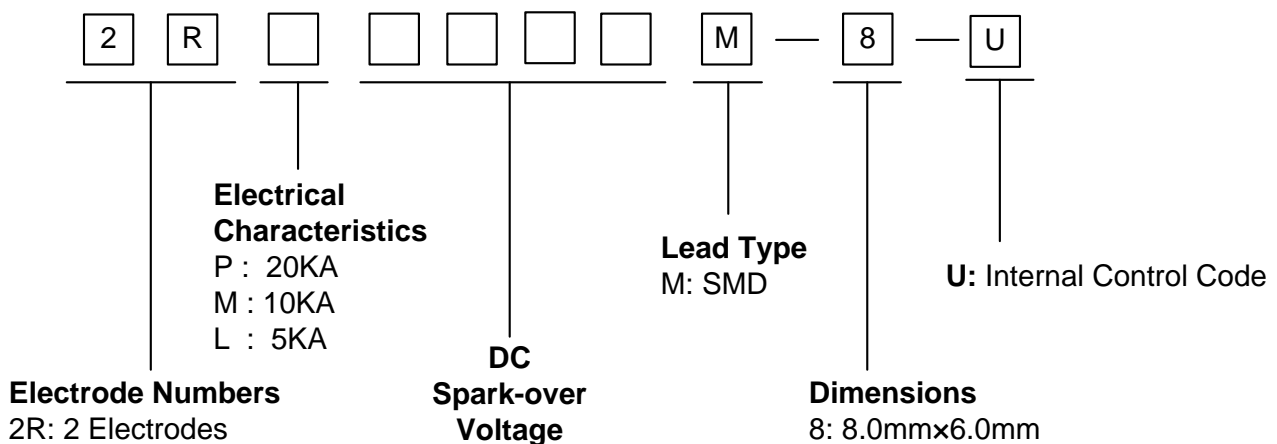
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 8.0mm\*6.0mm
- Storage and operating temperature: -40°C ~ +85°C
- Meets MSL level 1, per J-STD-020
- Safety certification: UL: E244458 & E327997



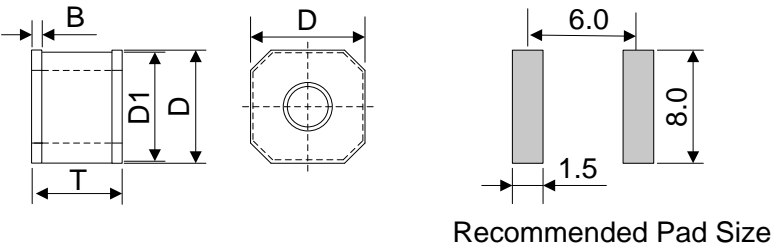
### Applications

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

### Part Number Code



**Dimensions**

<p>M Type</p> 	Symbol	Dimension (mm)	
		Spec.	Tolerance
	D	8.0	±0.2
	D1	8.0	±0.2
	T	6.0	±0.2
B	0.5	±0.2	

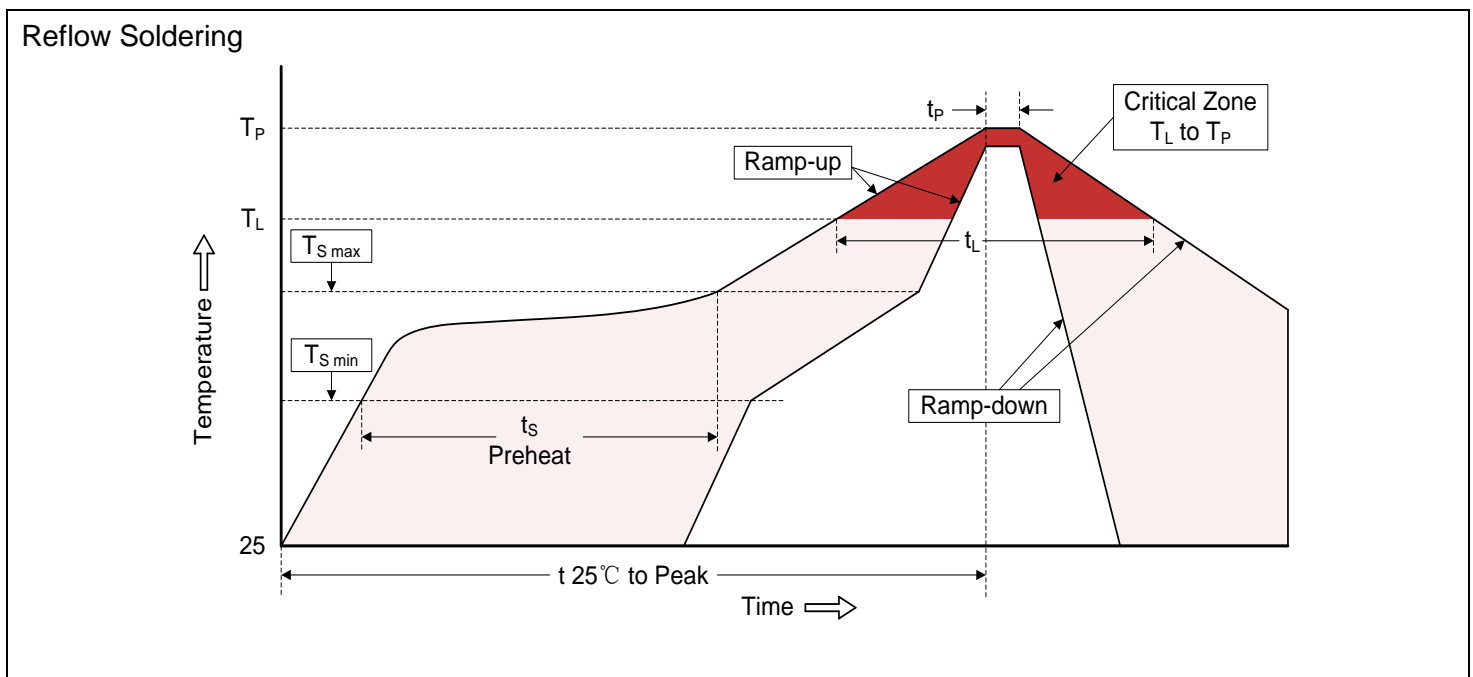
**Electrical Characteristics**

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)	
2RP075M-8-U	75±20%	600	20	20	500	25	1.0	1.5	None
2RP090M-8-U	90±20%	600	20	20	500	50	1.0	1.5	None
2RP120M-8-U	120±20%	600	20	20	500	50	1.0	1.5	None
2RP150M-8-U	150±20%	700	20	20	500	100	1.0	1.5	None
2RP230M-8-U	230±20%	700	20	20	500	100	1.0	1.5	None
2RP250M-8-U	250±20%	800	20	20	500	100	1.0	1.5	None
2RP300M-8-U	300±20%	900	20	20	500	100	1.0	1.5	None
2RP350M-8-U	350±20%	900	20	20	500	100	1.0	1.5	None
2RP400M-8-U	400±20%	1000	20	20	500	100	1.0	1.5	None
2RP470M-8-U	470±20%	1100	20	20	500	250	1.0	1.5	None
2RP600M-8-U	600±20%	1300	20	20	500	250	1.0	1.5	None
2RP800M-8-U	800±20%	1500	20	20	500	250	1.0	1.5	None
2RM1000M-8-U	1000±20%	2200	10	10	300	500	1.0	1.5	None
2RM1200M-8-U	1200±20%	2300	10	10	300	500	1.0	1.5	None
2RM1400M-8-U	1400±20%	2400	10	10	300	500	1.0	1.5	None
2RM1500M-8-U	1500±20%	2400	10	10	300	500	1.0	1.5	None
2RM1600M-8-U	1600±20%	2600	10	10	300	500	1.0	1.5	None
2RL2000M-8-U	2000±20%	3200	5	5	300	500	1.0	1.5	None
2RL2500M-8-U	2500±20%	3600	5	5	300	500	1.0	1.5	None

**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	<p>Maximum 8/20<math>\mu s</math> surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time.</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	

**Recommended Soldering Conditions**



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat -Temperature Min ( $T_{S\ min}$ ) -Temperature Max ( $T_{S\ max}$ ) -Time (min to max) (ts)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to $T_L$ -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature ( $T_L$ ) -Time ( $t_L$ )	217°C 60-150 seconds
Peak Temperature ( $T_P$ )	260°C
Time within 5°C of actual Peak Temperature ( $t_P$ )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

**Packaging**

Tape	Symbol	Dimension (mm)	
		Spec.	Tolerance
	W	16.00	±0.20
	P0	4.00	±0.10
	P1	12.00	±0.20
	P2	2.00	±0.10
	D0	1.55	±0.05
	E	1.75	±0.10
	F	7.50	±0.10
	A0	6.35	±0.10
	K0	6.55	±0.10
	B0	8.65	±0.10
	t0	0.50	±0.10
	D	330.00	±2.00
	d	13.00	±0.50
	L	20.00	±2.00
t	2.00	±0.20	
Quantity: 600pcs			

Reel	Symbol	Dimension (mm)	Tolerance
	D	330.00	±2.00
	d	13.00	±0.50
	L	20.00	±2.00
	t	2.00	±0.20
	Quantity: 600pcs		