

## Gas Discharge Tube (GDT) Data Sheet

### Features

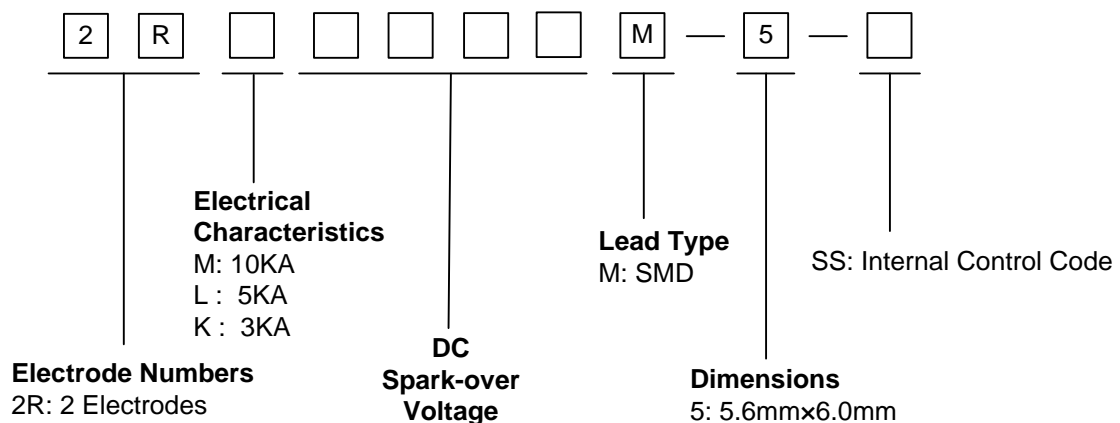
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 5.6mm\*6.0mm
- Storage and operating temperature: -40°C ~ +85°C
- Meets MSL level 1, per J-STD-020
- Safety certification: UL



### Applications

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

### Part Number Code



### Marking

**B** : BrightKing Logo  
 2RK1000-5 : Device Marking Code  
 XXXX : Internal Control Code

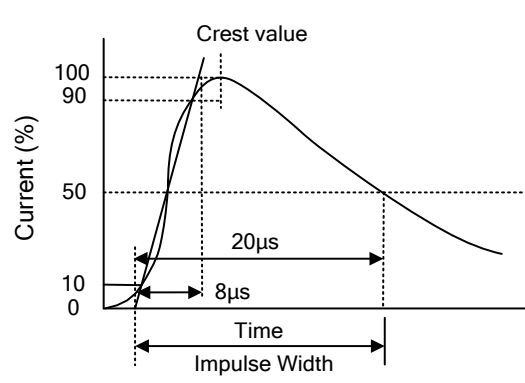
**Dimensions**

<p>M Type</p>	Symbol	Dimension (mm)	
		Spec.	Tolerance
	D	5.6	±0.2
	D1	5.4	±0.2
	T	6.0	±0.2
B	0.5	±0.2	

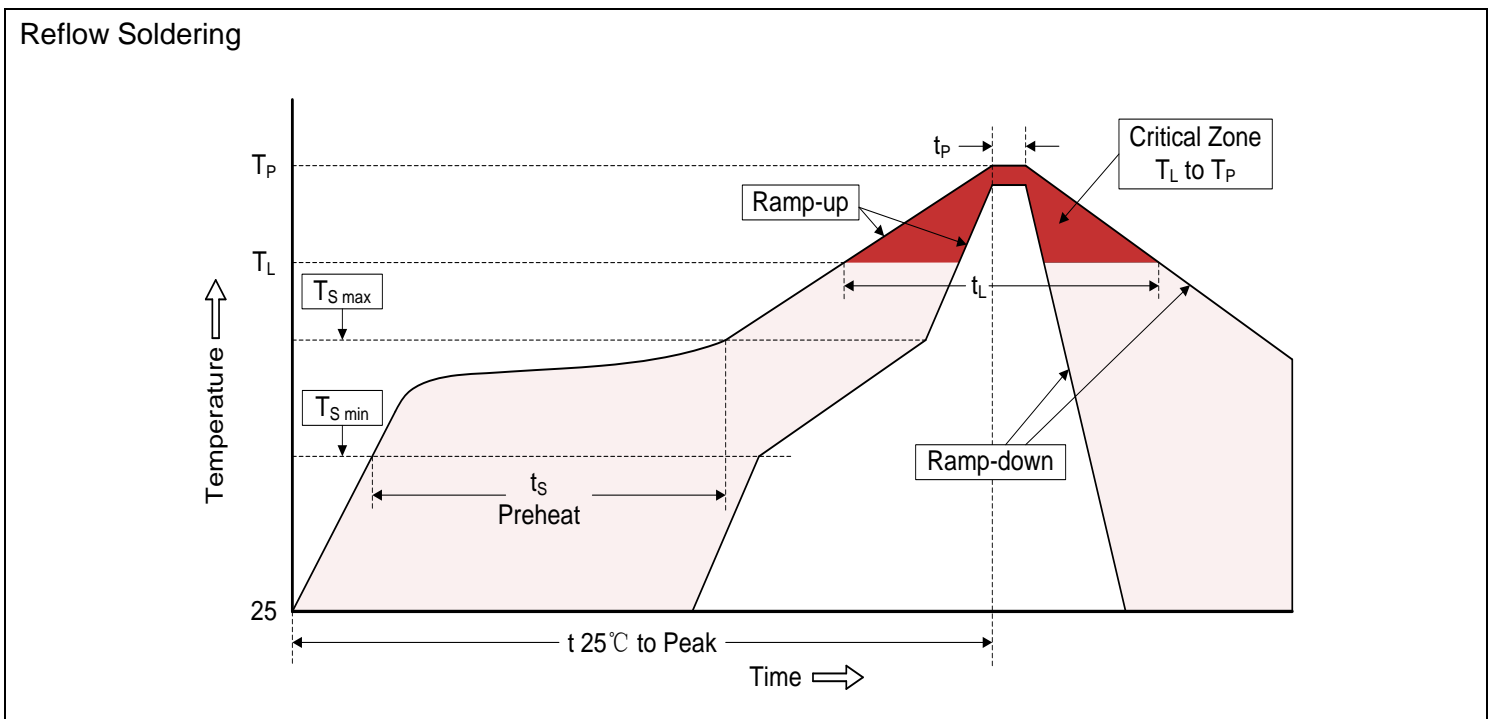
**Electrical Characteristics**

Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	8/20μs 100A	Test Voltage	(GΩ)	1MHz	
	(V)	(V)	(KA)	(times)	DC(V)		(pF)	
2RM075M-5-SS	75±20%	600	10.0	300	25	1.0	1.5	2RM075-5
2RM090M-5-SS	90±20%	600	10.0	300	50	1.0	1.5	2RM090-5
2RM120M-5-SS	120±20%	600	10.0	300	50	1.0	1.5	2RM120-5
2RM150M-5-SS	150±20%	600	10.0	300	100	1.0	1.5	2RM150-5
2RM230M-5-SS	230±20%	700	10.0	300	100	1.0	1.5	2RM230-5
2RM250M-5-SS	250±20%	700	10.0	300	100	1.0	1.5	2RM250-5
2RL300M-5-SS	300±20%	900	5.0	300	100	1.0	1.5	2RL300-5
2RL350M-5-SS	350±20%	900	5.0	300	100	1.0	1.5	2RL350-5
2RL400M-5-SS	400±20%	900	5.0	300	100	1.0	1.5	2RL400-5
2RL470M-5-SS	470±20%	1100	5.0	300	250	1.0	1.5	2RL470-5
2RL600M-5-SS	600±20%	1400	5.0	300	250	1.0	1.5	2RL600-5
2RL800M-5-SS	800±20%	1600	5.0	300	250	1.0	1.5	2RL800-5
2RK1000M-5-SS	1000±20%	1900	3.0	300	500	1.0	1.5	2RK1000-5
2RK1200M-5-SS	1200±20%	2200	3.0	300	500	1.0	1.5	2RK1200-5
2RK1400M-5-SS	1400±20%	2600	3.0	300	500	1.0	1.5	2RK1400-5
2RK1600M-5-SS	1600±20%	2800	3.0	300	500	1.0	1.5	2RK1600-5
2RK2000M-5-SS	2000±20%	3200	3.0	300	500	1.0	1.5	2RK2000-5
2RK2500M-5-SS	2500±20%	3600	3.0	300	1000	1.0	1.5	2RK2500-5

**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 $8/20\mu s$ surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time. 	
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	±0.20
	P1	12.00	±0.20
	P2	2.00	±0.20
	D0	1.55	±0.20
	E	1.75	±0.20
	F	7.50	±0.20
	A0	5.90	±0.20
	B0	6.30	±0.20
	K0	5.90	±0.20
	t0	0.50	±0.20
	D	330.00	±2.00
	d	13.00	±2.00
	L	20.00	±2.00
t	2.00	±0.50	
Quantity: 800pcs			