

## Gas Discharge Tube (GDT) Data Sheet

### Features

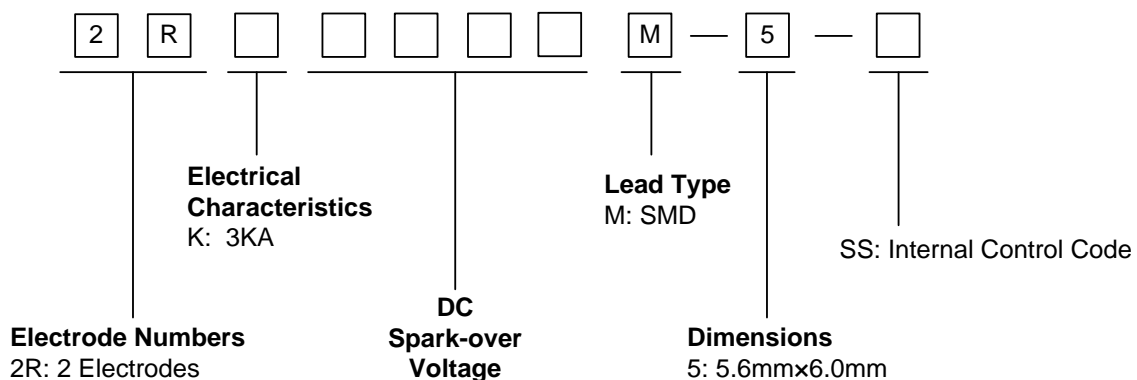
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 5.6mm\*6.0mm
- Storage and operating temperature: -40°C ~ +85°C
- Meets MSL level 1, per J-STD-020
- Safety certification: E327997



### 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  
 YXXX : Date Code

**Dimensions**

	Dimension (mm)		
	Symbol	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	AC Withstanding Voltage	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	8/20μs 100A	Test Voltage	(GΩ)	1MHz		
	(V)	(V)	(KA)	(times)	DC(V)		(pF)		
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	AC1250V,1min	2RK2500-5

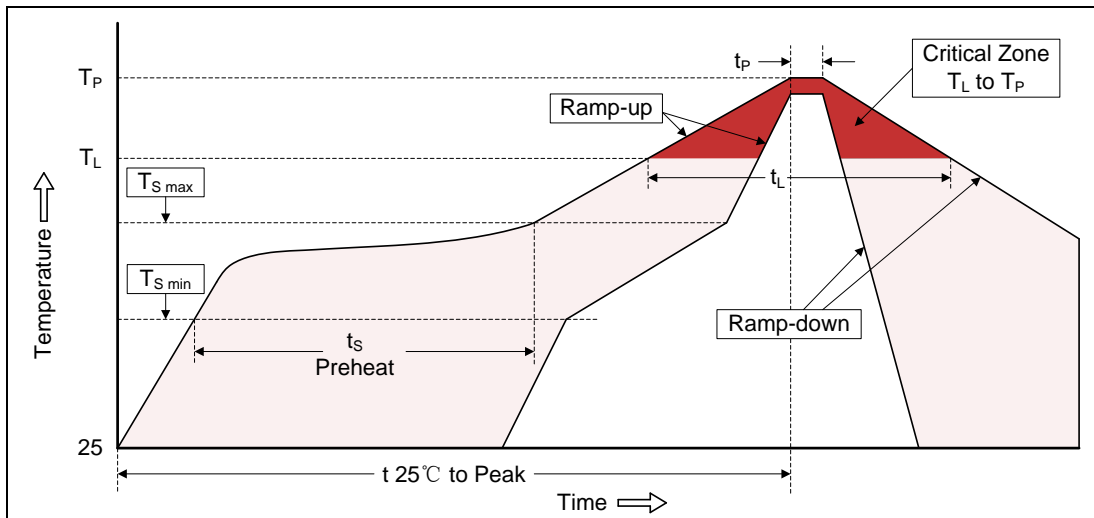
**Electrical Ratings**

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	<p>Maximum 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time, without causing the DC spark-over voltage to change more than 25% from its central value.</p>	

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**

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat	
-Temperature Min ( $T_{S\ min}$ )	150°C
-Temperature Max ( $T_{S\ max}$ )	200°C
-Time (min to max) ( $t_s$ )	60-180 seconds
$T_{S\ max}$ to $T_L$	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature ( $T_L$ )	217°C
-Time ( $t_L$ )	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	Dimension (mm)	
	Symbol	Spec. Tolerance
	W	16.00 ±0.20
	P0	4.00 ±0.10
	P1	12.00 ±0.10
	P2	2.00 ±0.10
	D0	1.55 ±0.10
	E	1.75 ±0.10
	F	7.50 ±0.10
	A0	5.90 ±0.10
	B0	6.30 ±0.10
	K0	5.90 ±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: 800pcs		

**Reel**

