

DATA SHEET

GAS DISCHARGE TUBES TELEPHONE INTERFACE

2R-5-SS series

RoHS compliant & free



Product specification— February 02, 2021 V.1



Gas Discharge Tube (GDT) Data Sheet

Features

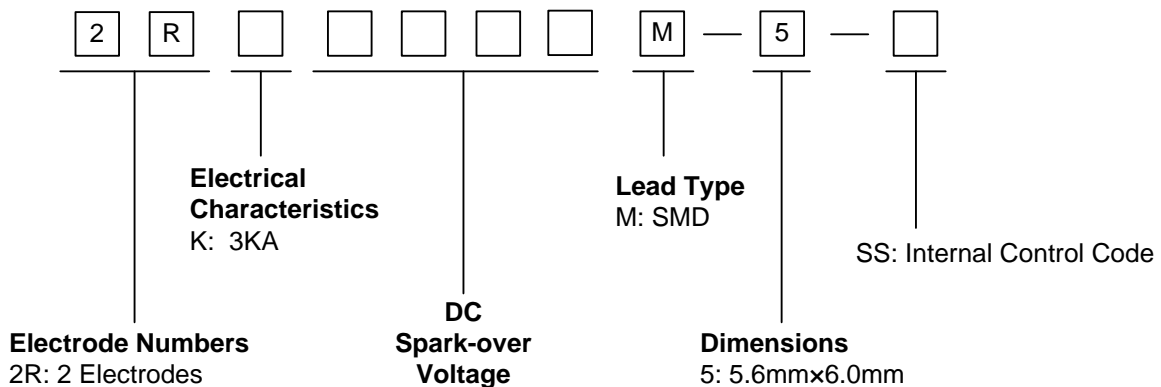
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 5.6mm*6.0mm
- 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

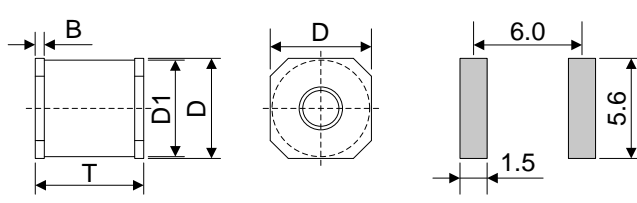
Part Number Code



Marking

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

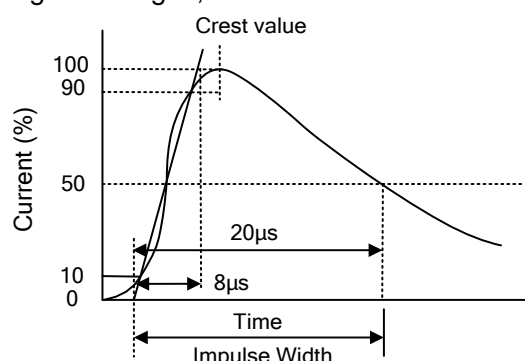
Dimensions

<p>M Type</p> 	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

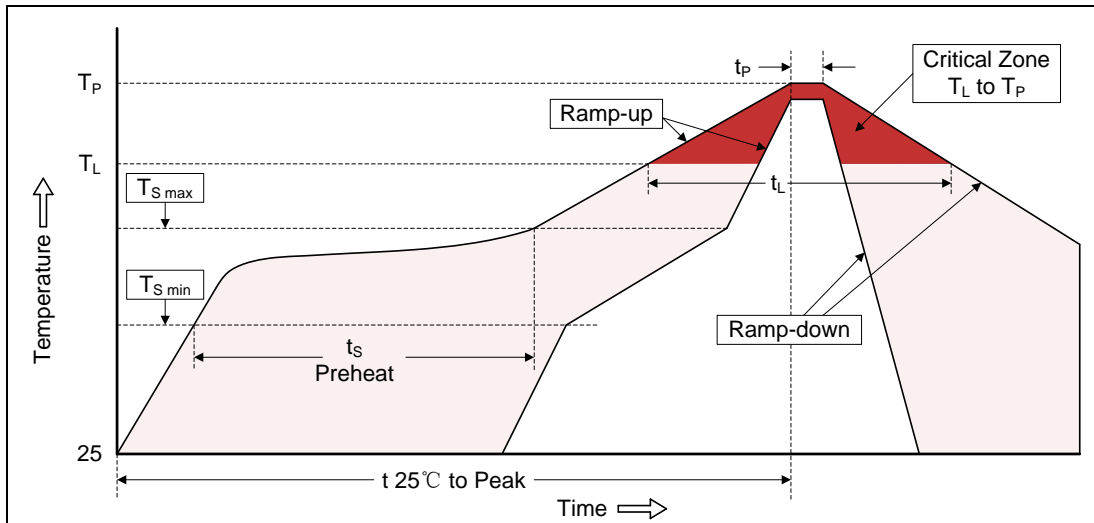
Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance	AC Withstanding Voltage	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	8/20μs 100A	Test Voltage	(GΩ)	1MHz		
	(V)	(V)	(KA)	(times)	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	Maximum 8/20μs 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

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	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	±0.10	
	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	
	<p>Reel</p>	D	330.00	±2.00
		d	13.00	±0.50
L		20.00	±2.00	
t		2.00	±0.20	
Quantity: 800pcs				