Gas Discharge Tube (GDT) Data Sheet

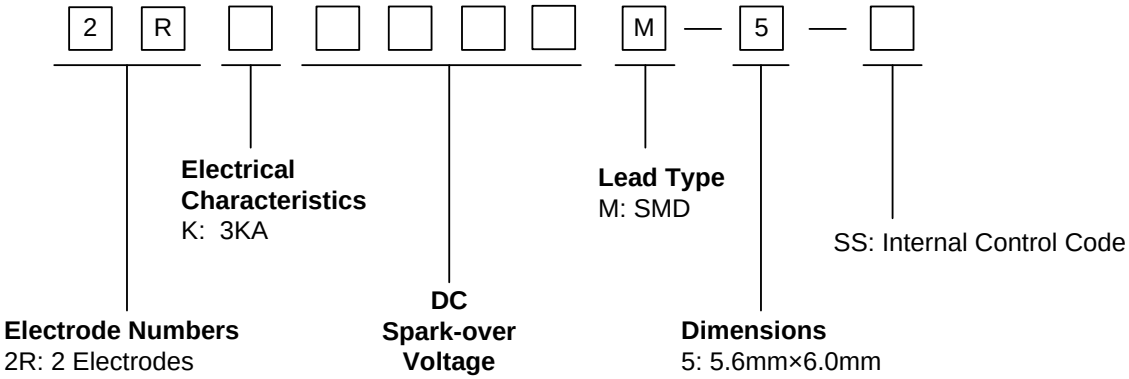
Features

- 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℃ ~ +85℃
- Meets MSL level 1, per J-STD-020
- Safety certification: E327997

Applications

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

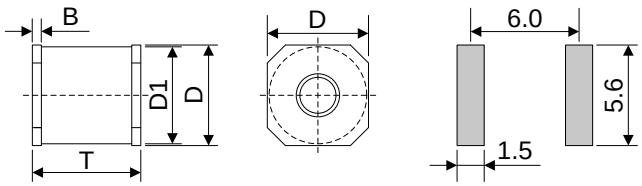
Part Number Code



Marking

B	: BrightKing Logo
2RK1000-5	: Device Marking Code
YXXX	: Date Code

Dimensions



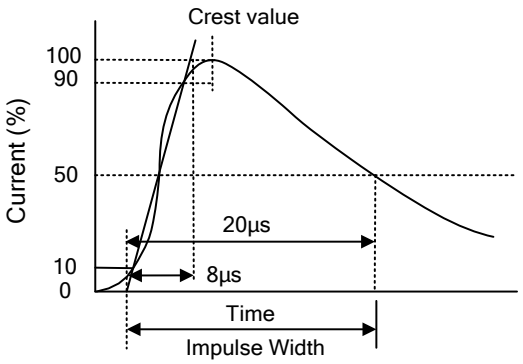
Recommended Pad Size

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	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

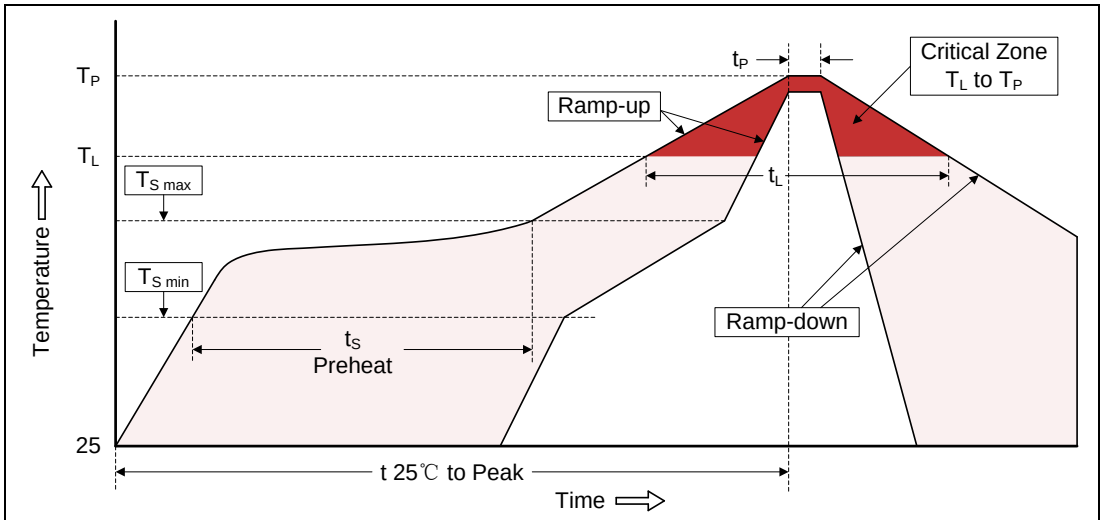
Electrical Ratings

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/μs.	
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, without causing the DC spark-over voltage to change more than 25% from its central value. 	

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

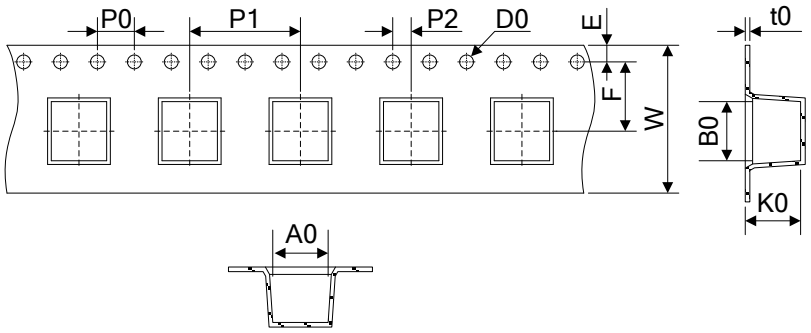
Reflow Soldering



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

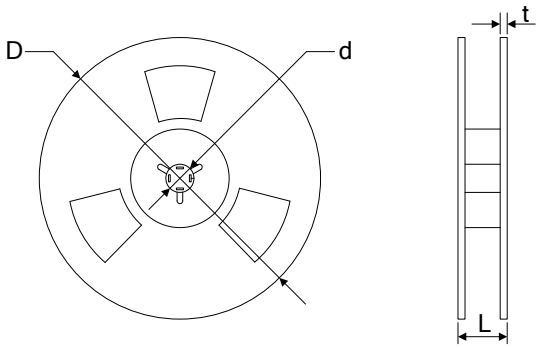
Packaging

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

Reel



D	330.00	±2.00
d	13.00	±0.50
L	20.00	±2.00
t	2.00	±0.20

Quantity: 800pcs