

Gas Discharge Tube (GDT) Data Sheet

Features

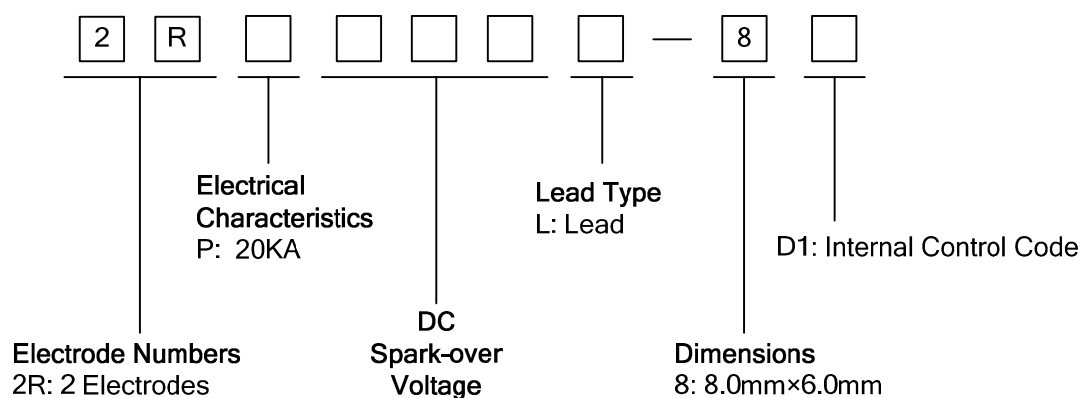
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/ μ s.
- Stable breakdown voltage.
- High insulation resistance.
- Low capacitance (≤ 1.5 pF)
- High holdover voltage
- Large absorbing transient current capability.
- Micro-Gap Design
- Size: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



Applications

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

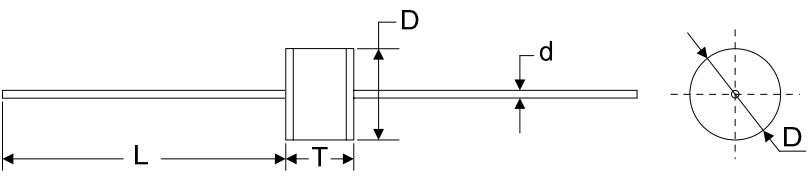
Part Number Code



Marking

 : BrightKing Logo
 2RP090-8 : Device Marking Code
 YXXX : Date Code

Dimensions

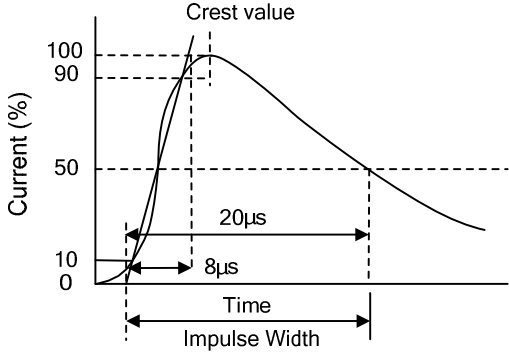
	Symbol	Dimension (mm)	
		Spec.	Tolerance
	D	8.0	+0.3, -0.5
	T	6.0	+0.3, -0.5
	d	1.0	±0.05
	L	30.0	Max.

Electrical Characteristics

Part Number	Type ①	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)	
2RP075L-8	D1	75±20%	600	20	20	500	25	1.0	1.5	2RP075-8
2RP090L-8	D1	90±20%	600	20	20	500	50	1.0	1.5	2RP090-8
2RP145L-8	D1	145±20%	700	20	20	500	100	1.0	1.5	2RP145-8
2RP150L-8	D1	150±20%	700	20	20	500	100	1.0	1.5	2RP150-8
2RP230L-8	D1	230±20%	700	20	20	500	100	1.0	1.5	2RP230-8
2RP250L-8	D1	250±20%	800	20	20	500	100	1.0	1.5	2RP250-8
2RP300L-8	D1	300±20%	900	20	20	500	100	1.0	1.5	2RP300-8
2RP350L-8	D1	350±20%	900	20	20	500	100	1.0	1.5	2RP350-8
2RP400L-8	D1	400±20%	1000	20	20	500	100	1.0	1.5	2RP400-8
2RP470L-8	D1	470±20%	1100	20	20	500	250	1.0	1.5	2RP470-8
2RP600L-8	D1	600±20%	1300	20	20	500	250	1.0	1.5	2RP600-8
2RP800L-8	D1	800±20%	1500	20	20	500	250	1.0	1.5	2RP800-8

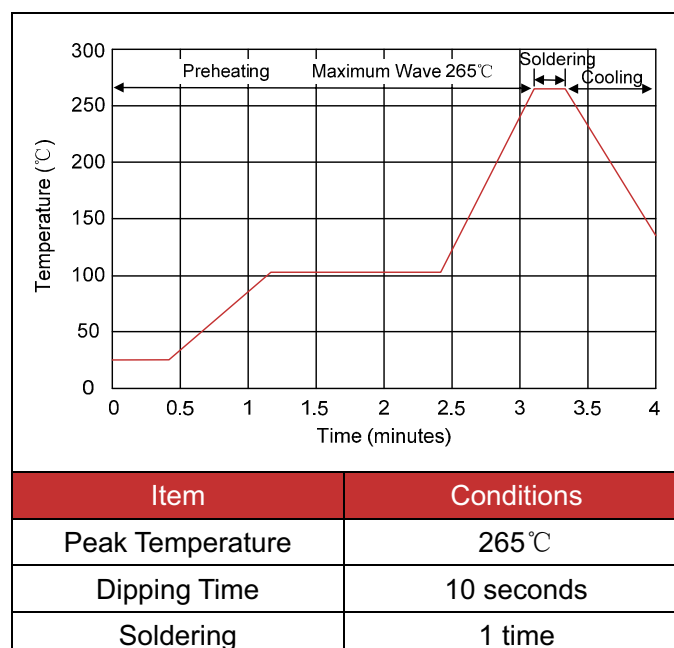
Note: ① Specific code by request.

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, without causing the DC spark-over voltage to change more than 25% from its initial value. 	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min. DC spark-over voltage shall not change more than $\pm 25\%$ from its initial value. $IR > 10^8$ ohms (-20%, $+30\%$ for 70~90V).	
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

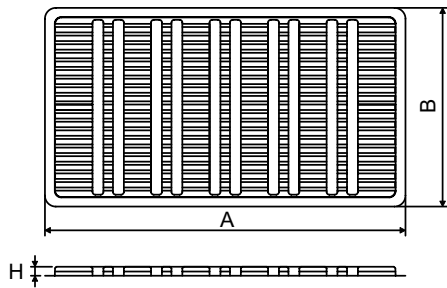
Wave Soldering



Packaging

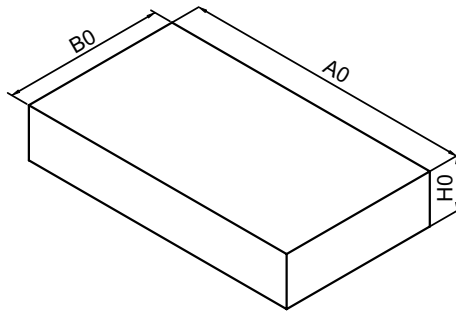
Axial Packing (Bulk)

Skin packing



Symbol	Dimension (mm)	
	Spec.	Tolerance
A	264.0	±1.0
B	145.0	±1.0
H	6.5	±0.5
Quantity: 100pcs		

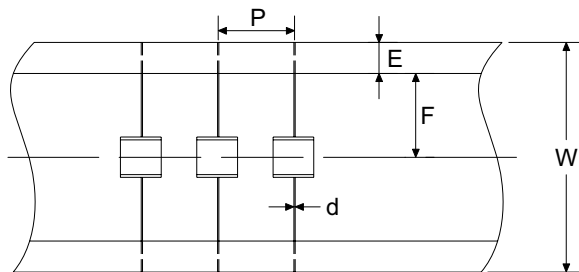
Inner box



A0	270.0	±2.0
B0	150.0	±1.0
H0	50.0	±1.0
Quantity: 500pcs		

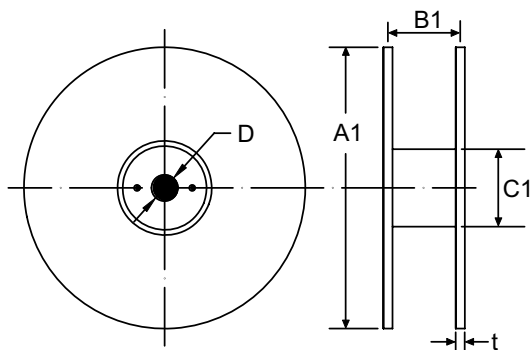
Axial Packing (Tape & Reel)

Tape



Symbol	Dimension (mm)	
	Spec.	Tolerance
P	10.0	±0.1
W	65.0	±0.1
E	6.0	±0.1
F	26.5	±0.1
d	1.0	±0.05

Reel



A1	330.0	±1.0
B1	70.0	±1.0
C1	82.0	±1.0
D	25.0	±0.2
t	2.0	±0.2
Quantity: 500pcs		