

## Gas Discharge Tube (GDT) Data Sheet

### Features

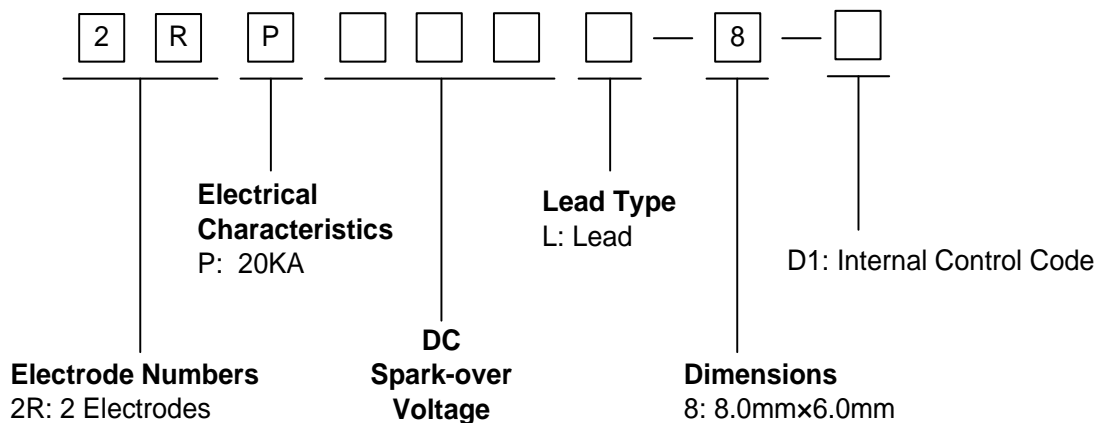
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 8.0mm\*6.0mm
- 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

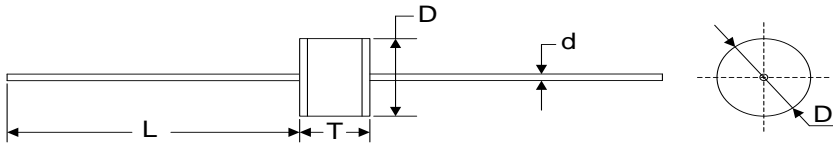
### Part Number Code



### Marking

- B** : BrightKing Logo
- 2RP090-8 : Device Marking Code
- XXXX : Internal Control Code

**Dimensions**

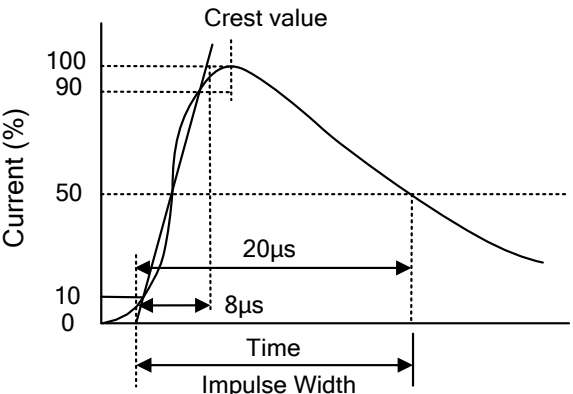
L Type  	Dimension (mm)	
	Symbol	Spec. / Tolerance
	D	8.0 / +0.3, -0.5
	T	6.0 / +0.3, -0.5
	d	1.0 / ±0.1
L	30.0 / Max.	

**Electrical Characteristics**

Part Number	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

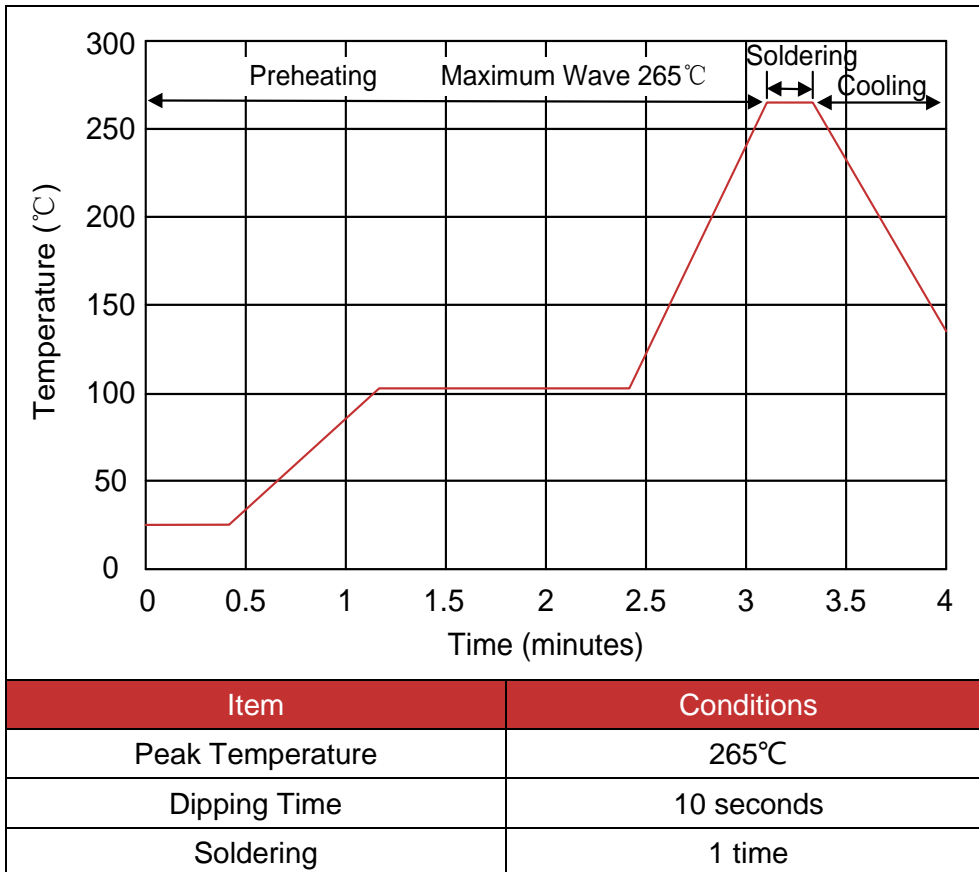
**Electrical Ratings**

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 $dv/dt=1000V/\mu s$ .	

<p>Impulse Discharge Current</p>	<p>Maximum 8/20<math>\mu</math>s surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time.</p> 	
<p>Alternating Discharge Current</p>	<p>Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min. <math>IR &gt; 10^8</math> ohms</p>	
<p>Insulation Resistance</p>	<p>The resistance of gas tube shall be measured between two electrodes.</p>	
<p>Capacitance</p>	<p>The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz</p>	

**Recommended Soldering Conditions**

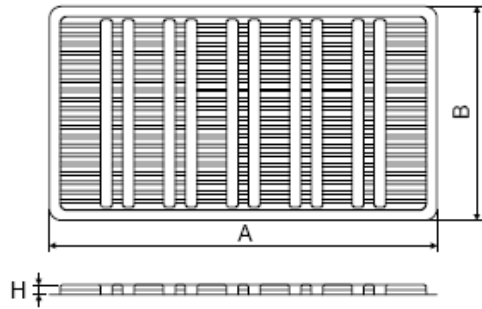
Wave Soldering



**Packaging**

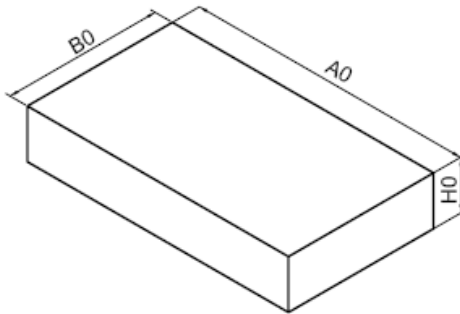
**Axial Packing (Bulk)**

**Skin packing**



Symbol	Dimension (mm)	
	Spec.	Tolerance
A	267.0	±2.0
B	146.0	±2.0
H	8.5	±1.0
Quantity: 100pcs		

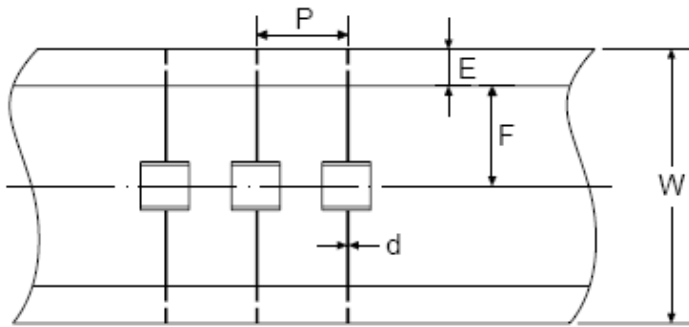
**Inner box**



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

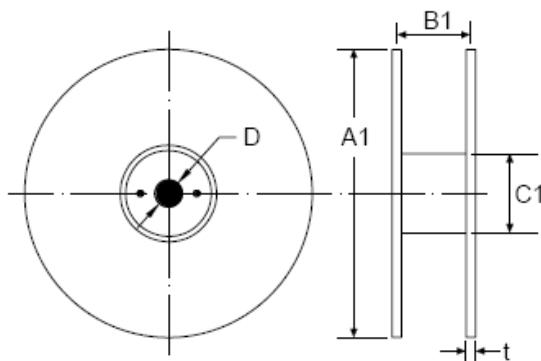
**Axial Packing (Tape & Reel)**

**Tape**



Symbol	Dimension (mm)	
	Spec.	Tolerance
P	10.0	±0.5
W	65.0	±1.0
E	6.0	±0.5
F	26.5	±0.5
d	1.0	±0.1

**Reel**



A1	330.0	±2.0
B1	70.0	±2.0
C1	82.0	±2.0
D	25.0	±0.5
t	3.0	±0.2
Quantity: 800pcs		