

DATA SHEET

GAS DISCHARGE TUBES TELEPHONE INTERFACE

2R-8x6(D1) series

RoHS compliant & free



Product specification— March 16, 2021 V.1



Gas Discharge Tube (GDT) Data Sheet

Features

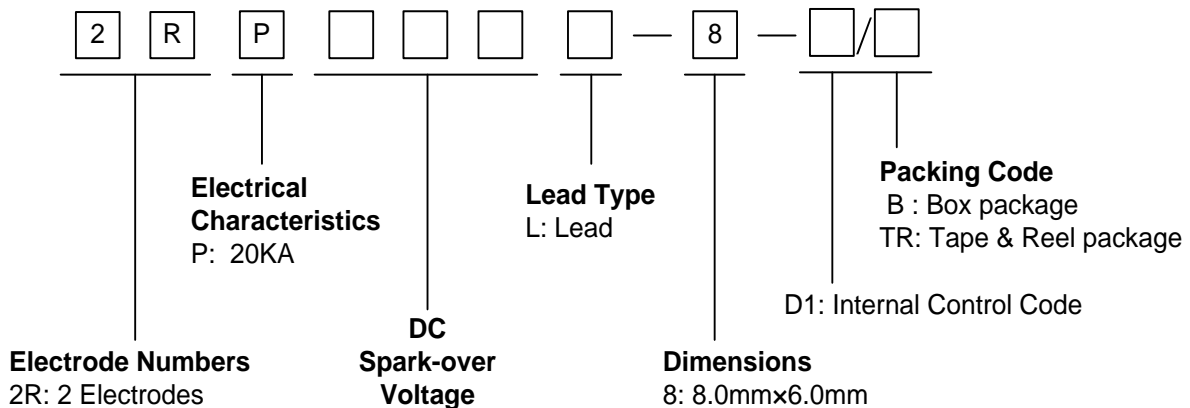
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 8.0mm*6.0mm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



Ordering Code for different package in 2RPxxxL-8-D1 series

Box package: Add suffix “/B” at the end of the part number, such as 2RP075L-8-D1/B

Tape & Reel package: Add suffix “/TR” at the end of the part number, such as 2RP075L-8-D1/TR

Marking

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

Dimensions

L Type	Symbol	Dimension (mm)	
		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	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 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time. 	

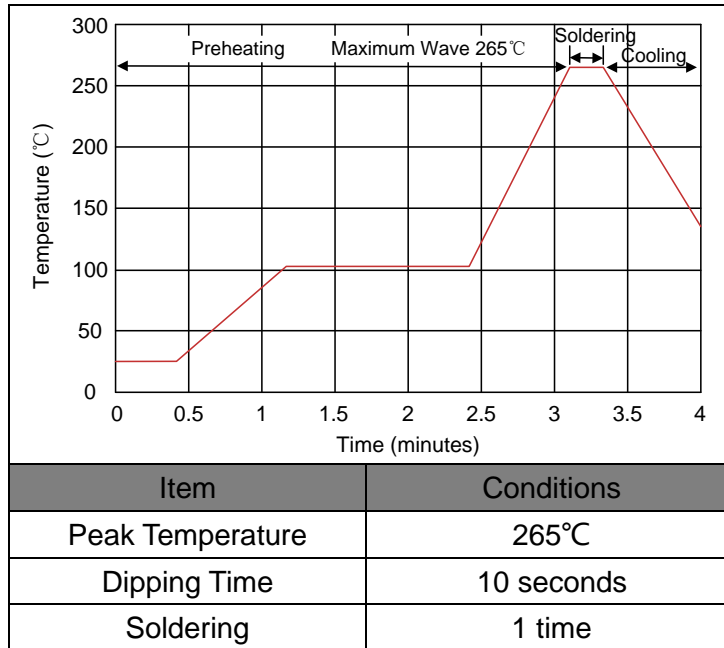
GAS DISCHARGE TUBS

2R-8x6(D1) series

Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min.	
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	

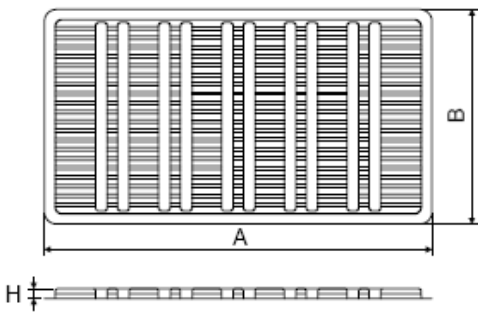
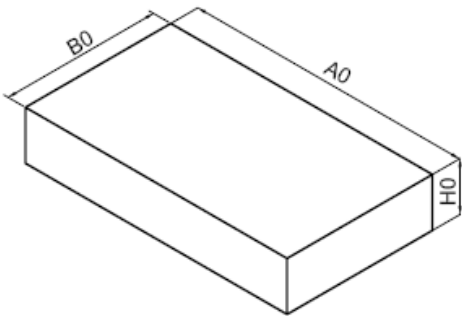
Recommended Soldering Conditions

Wave Soldering



Packaging

Axial Packing (Box)

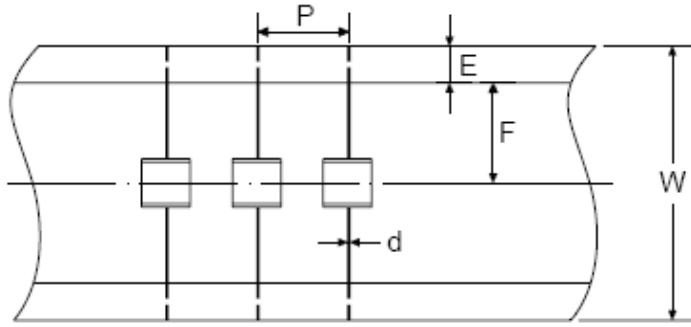
<p>Skin packing</p> 	<table border="1" style="width: 100%;"> <thead> <tr> <th rowspan="2">Symbol</th> <th colspan="2">Dimension (mm)</th> </tr> <tr> <th>Spec.</th> <th>Tolerance</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>267.0</td> <td>±2.0</td> </tr> <tr> <td>B</td> <td>146.0</td> <td>±2.0</td> </tr> <tr> <td>H</td> <td>9.5</td> <td>±1.0</td> </tr> </tbody> </table> <p>Quantity: 100pcs</p>	Symbol	Dimension (mm)		Spec.	Tolerance	A	267.0	±2.0	B	146.0	±2.0	H	9.5	±1.0
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<p>Inner box</p> 	<table border="1" style="width: 100%;"> <tbody> <tr> <td>A0</td> <td>270.0</td> <td>±2.0</td> </tr> <tr> <td>B0</td> <td>150.0</td> <td>±2.0</td> </tr> <tr> <td>H0</td> <td>50.0</td> <td>±2.0</td> </tr> </tbody> </table> <p>Quantity: 500pcs</p>	A0	270.0	±2.0	B0	150.0	±2.0	H0	50.0	±2.0					
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Axial Packing (Tape & Reel)

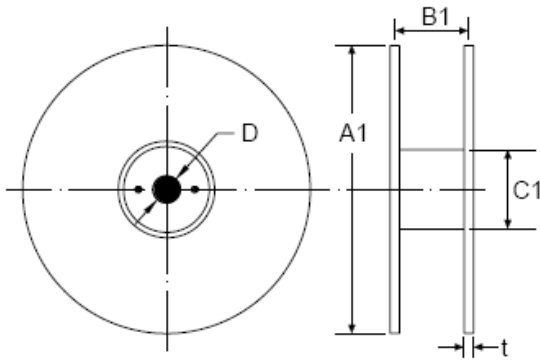
GAS DISCHARGE TUBS

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Tape



Reel



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
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: 500pcs		