

# DATA SHEET

## GAS DISCHARGE TUBES TELEPHONE INTERFACE

2R-8x6(D1) series

RoHS compliant & free



Product specification— September 17, 2021 V.1



## Gas Discharge Tube (GDT) Data Sheet

### Features

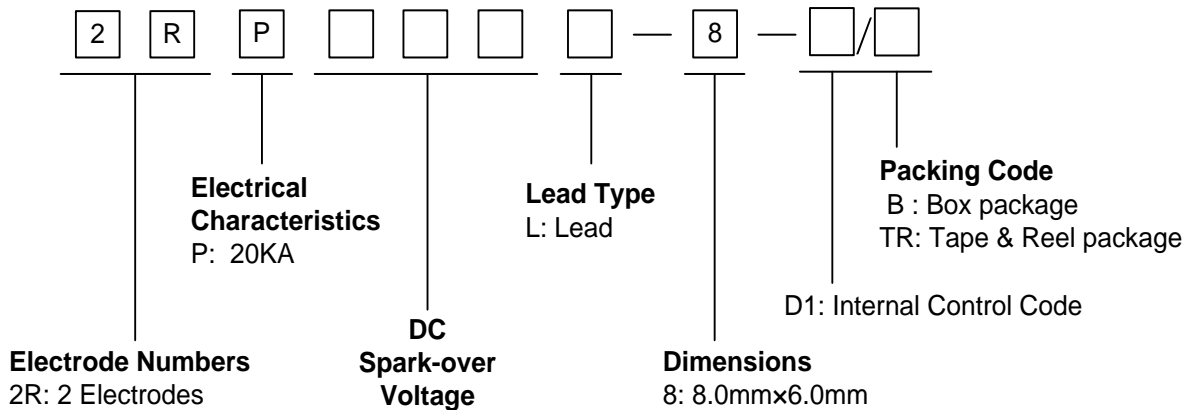
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤1.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 8.0mm\*6.0mm
- 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	Lead type	Package
2RPXXXL-8-D1/B	Lead	Box(Tray)
2RPXXXL-8-D1/TR	Lead	Tape & Reel

**Marking**

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

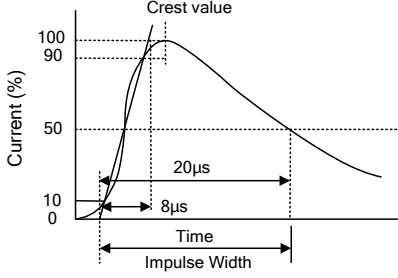
**Dimensions**

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.

**Characteristics**

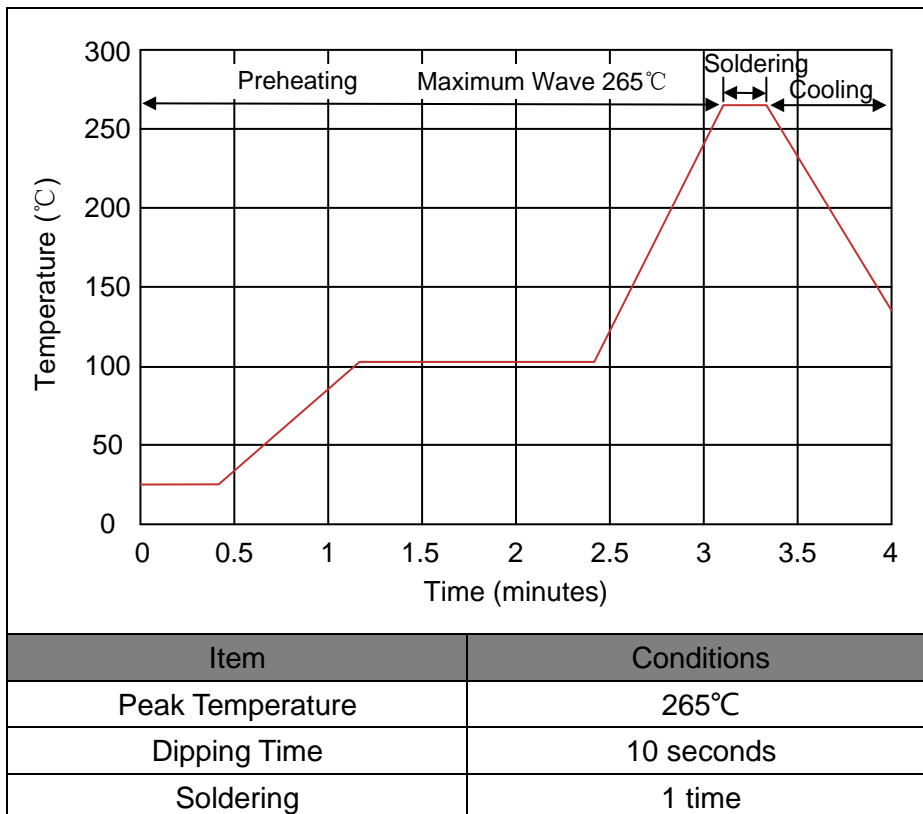
Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	50Hz, 1sec	10/1000μs 100A	Test Voltage	(GΩ)	1MHz	
	(V)	(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 $dv/dt=1000V/\mu s$ .	
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. 	
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	

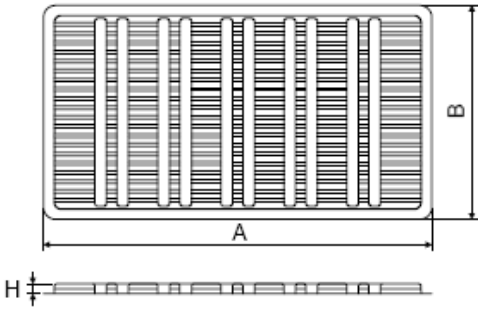
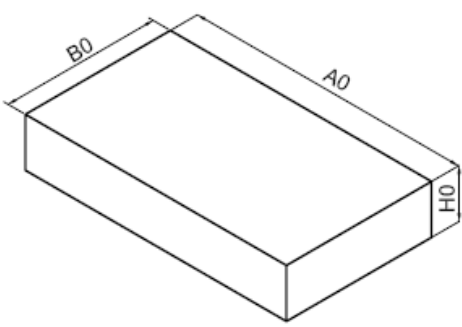
**Recommended Soldering Conditions**

Wave Soldering

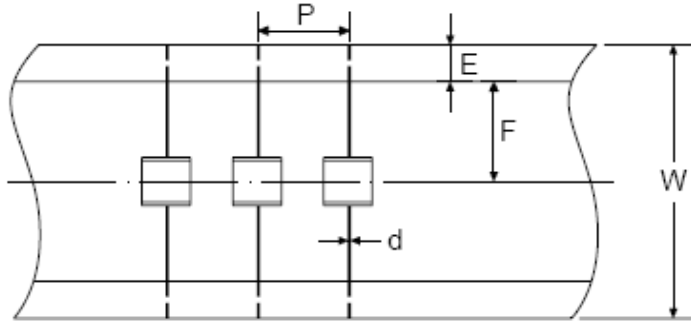
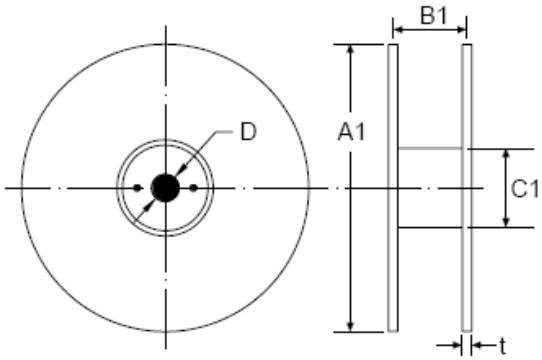


**Packaging**

Axial Packing (Box)

Skin packing		Dimension (mm)		
		Symbol	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		Dimension (mm)		
		Symbol	Spec.	Tolerance
		P	10.0	±0.5
		W	65.0	±1.0
		E	6.0	±0.5
		F	26.5	±0.5
Reel		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: 800pcs		