

DATA SHEET

GAS DISCHARGE TUBES
TELEPHONE INTERFACE
2R-8x6(T6) series

RoHS compliant & free



Product specification— July 12, 2023 V.1



Gas Discharge Tube (GDT) Data Sheet

Features

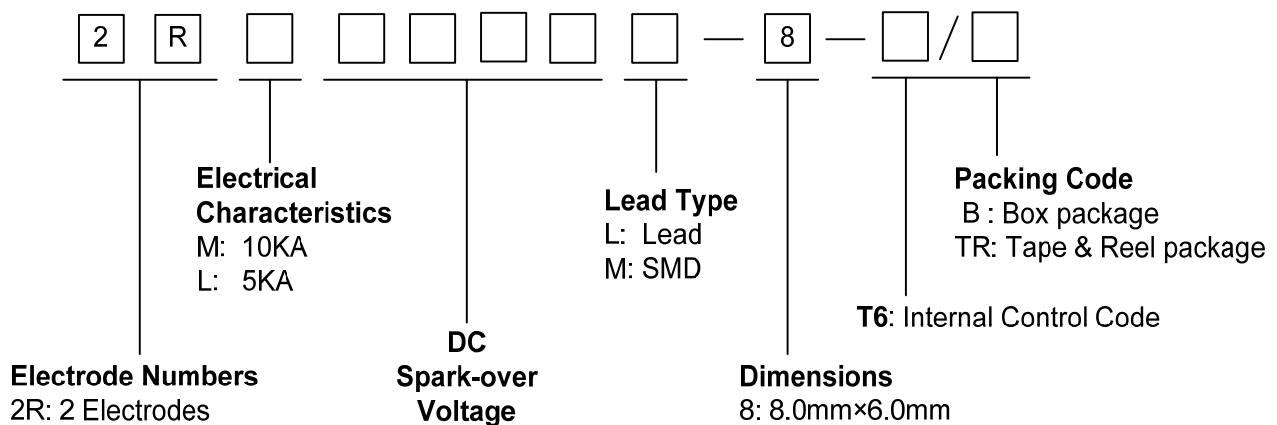
- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/ μ s
- Stable breakdown voltage
- High insulation resistance
- Low capacitance (≤ 1.5 pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 8.0mm*6.0mm
- Storage and 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
2RMXXXL8-T6//B 2RLXXXL8-T6/B	Lead	Box(Tray)
2RMXXXL8-T6/TR 2RLXXXL8-T6/TR	Lead	Tape & Reel
2RMXXXM8-T6 2RLXXXM8-T6	SMD	Tape & Reel

Marking



: BrightKing Logo

2RM1000-8 : 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	0.8	±0.1
	L	30.0	Max.
M Type	D	8.0	+0.3, -0.5
	T	6.0	+0.3, -0.5
	B	0.5	±0.1

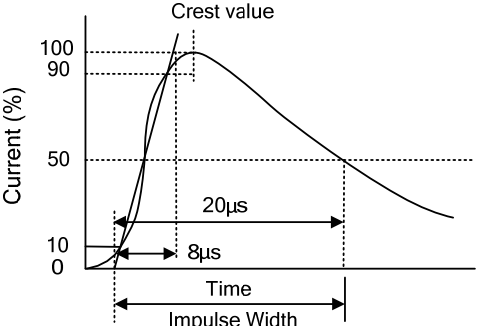
Recommended Pad Size

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	AC Withstanding Voltage	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	50Hz, 1sec	8/20μs 100A	Test Voltage	(GΩ)	1MHz		
	(V)	(V)	(KA)	(A)	(times)	DC(V)		(pF)		
2RM1000X-8-T6	1000±20%	1900	10.0	5.0	300	500	1.0	1.5	-	2RM1000-8
2RM1200X-8-T6	1200±20%	2000	10.0	5.0	300	500	1.0	1.5	-	2RM1200-8
2RM1400X-8-T6	1400±20%	2200	10.0	5.0	300	500	1.0	1.5	-	2RM1400-8
2RM1500X-8-T6	1500±20%	2300	10.0	5.0	300	500	1.0	1.5	-	2RM1500-8
2RM1600X-8-T6	1600±20%	2400	10.0	5.0	300	500	1.0	1.5	-	2RM1600-8
2RL2000X-8-T6	2000±20%	3200	5.0	5.0	300	500	1.0	1.5	-	2RL2000-8
2RL2500X-8-T6	2500±20%	3800	5.0	5.0	300	500	1.0	1.5	AC1250V, 1min	2RL2500-8
2RL2700X-8-T6	2700±20%	4000	5.0	5.0	300	1000	1.0	1.5	AC1250V, 1min	2RL2700-8
2RL3000X-8-T6	3000±20%	4200	5.0	5.0	300	1000	1.0	1.5	AC1500V, 1min	2RL3000-8
2RL3600X-8-T6	3600±20%	5500	5.0	5.0	300	1000	1.0	1.5	AC1800V, 1min	2RL3600-8
2RL4000X-8-T6	4000±20%	6000	5.0	5.0	300	1000	1.0	1.5	AC2000V, 1min	2RL4000-8

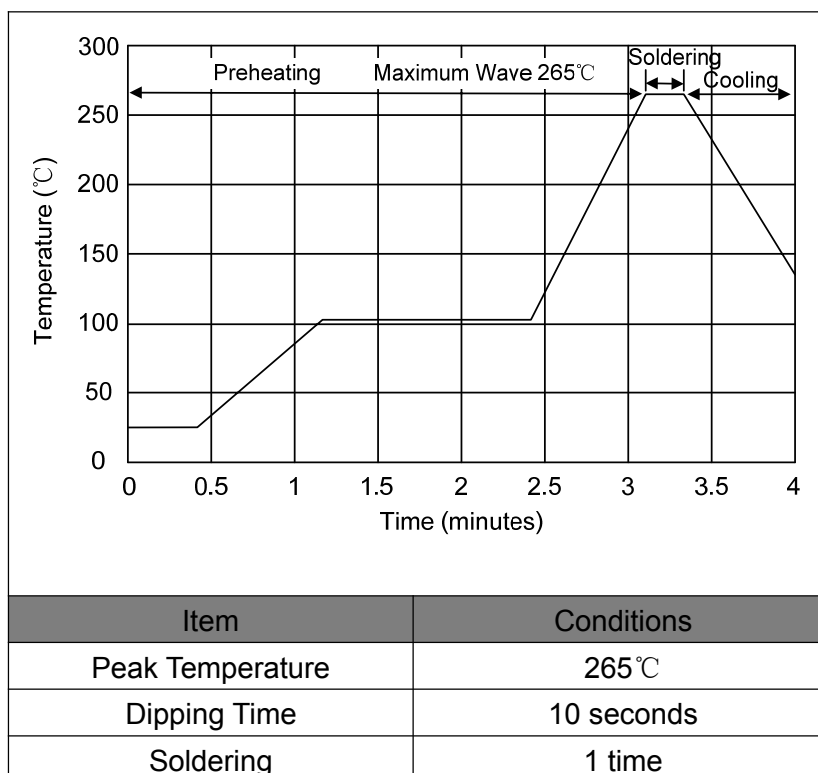
Note: X may be L(Lead type) or M(SMD type)

Electrical Ratings

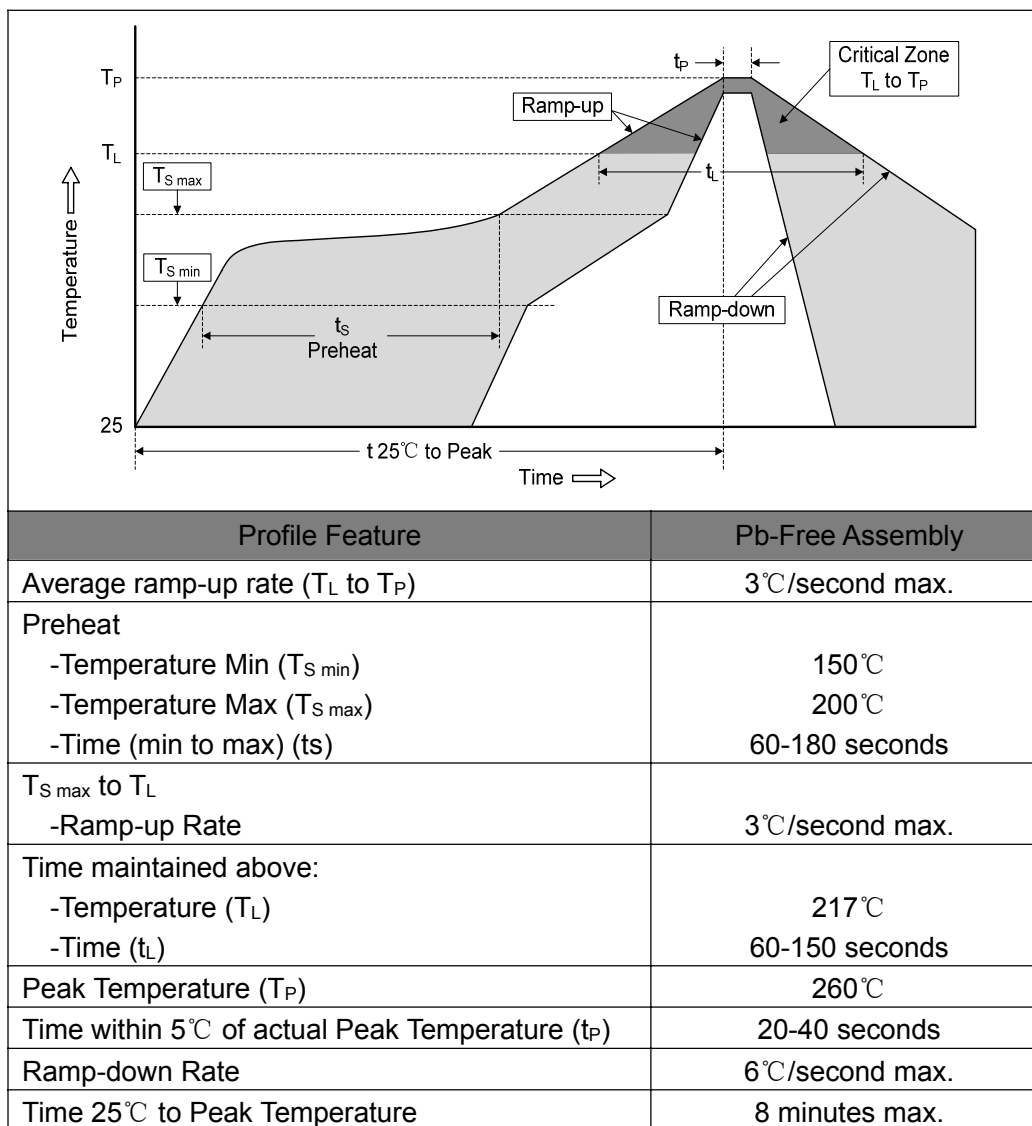
Items	Test Condition/Description	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt=100V/s$.	To meet the specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$.	
Impulse Discharge Current	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



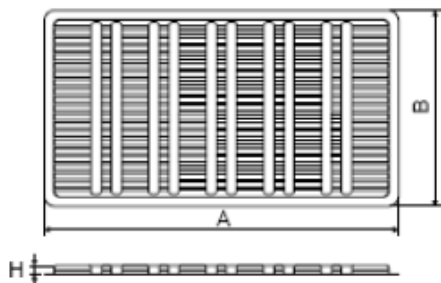
Reflow Soldering



Packaging

Axial Packing (Box)

Skin packing



Symbol

Dimension (mm)

Spec.

Tolerance

A

267.0

±2.0

B

146.0

±2.0

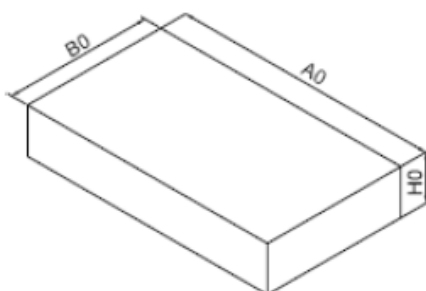
H

8.5

±1.0

Quantity: 100pcs

Inner box



A0

270.0

±2.0

B0

150.0

±2.0

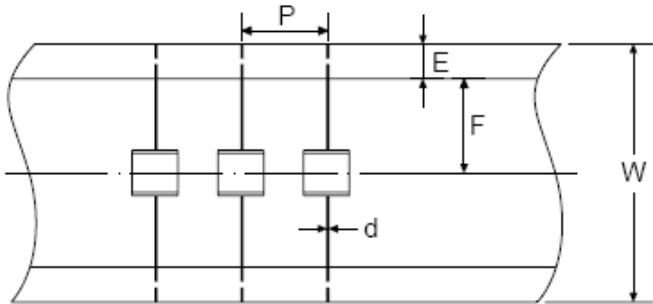
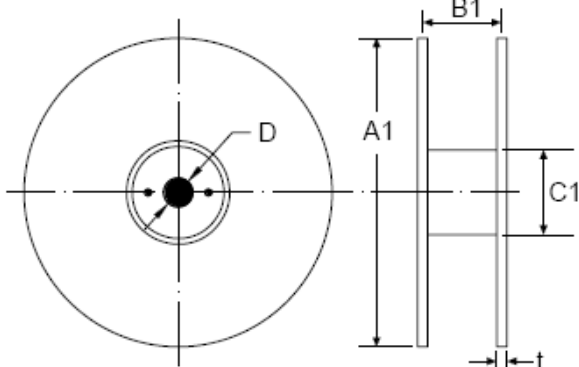
H0

50.0

±2.0

Quantity: 500pcs

Axial Packing (Tape & Reel)

Tape		Symbol	Dimension (mm)	
			Spec.	Tolerance
Reel		P	10.0	±0.5
		W	65.0	±1.0
		E	6.0	±0.5
		F	26.5	±0.5
		d	0.8	±0.1
		A1	330.0	±2.0
		B1	70.0	±2.0
		C1	82.0	±2.0
		D	25.0	±0.5
		t	2.0	±0.2
Quantity: 800pcs				

SMD Packing (Tape & Reel)

Tape

Technical drawing of a carrier tape. The top view shows a series of components held in a tape with dimensions: W (width), P0 (pitch from edge to first hole), P2 (pitch between holes), P1 (pitch between components), D0 (hole diameter), E (edge thickness), F (height), A0 (bottom hole diameter), K0 (bottom hole width), B0 (bottom hole depth), and t0 (tape thickness). A side view shows the tape's profile with dimensions B0 and K0.

Symbol	Dimension (mm)	
	Spec.	Tolerance
W	16.00	±0.20
P0	4.00	±0.10
P1	12.00	±0.20
P2	2.00	±0.10
D0	1.55	±0.05
E	1.75	±0.10
F	7.50	±0.10
A0	8.20	±0.10
K0	8.50	±0.10
B0	7.50	±0.10
t0	0.50	±0.10
D	330.00	±2.00
d	13.00	±0.50
L	20.00	±2.00
t	2.00	±0.20

Reel

Technical drawing of a reel. The top view shows a circular reel with dimensions: D (outer diameter), d (inner diameter), and L (length). A side view shows the reel's profile with dimensions L and t (thickness).

Quantity: 500pcs

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