

Gas Discharge Tube (GDT) Data Sheet

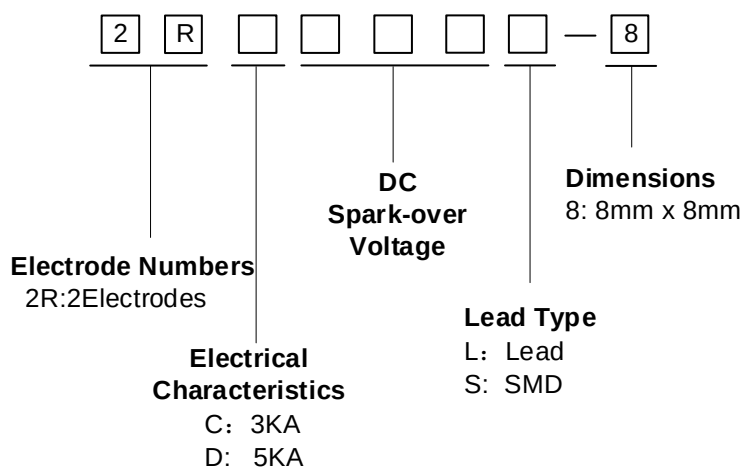
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Low capacitance ($\leq 1.5\text{pF}$)
- High holdover voltage
- Stable breakdown voltage
- Large absorbing transient current capability
- Surface mounted gas arrester
- Size: 8x8mm
- Micro-Gap Design
- Operating and Storage Temperature : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Meets MSL Level 1, per J-STD-020

Applications

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

Part Number Code



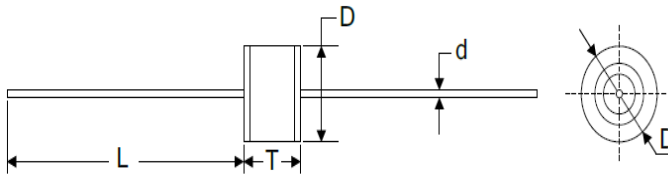
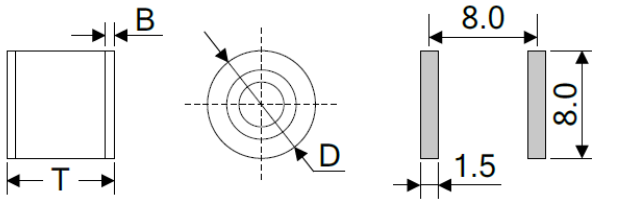
Electrical Characteristics

Part Number		DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Impulse Life Test	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Alternating Discharge Current	Device Marking Code
		100V/S	1KV/us	8/20us 100A	Test Voltage	(GΩ)	(1MHz 1V)	8/20us	50Hz,1S	
		±20%(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
2RC2700L-8	2RC2700S-8	2700	4000	100	1000	1	1.5	3	3	2RC1400-8
2RC3000L-8	2RC3000S-8	3000	4200	100	1000	1	1.5	3	3	2RC3000-8
2RC3500L-8	2RC3500S-8	3500	5000	100	1000	1	1.5	3	3	2RC3500-8
2RC3600L-8	2RC3600S-8	3600	5200	100	1000	1	1.5	3	3	2RC3600-8
2RC4000L-8	2RC4000S-8	4000	5500	100	1000	1	1.5	3	3	2RC4000-8

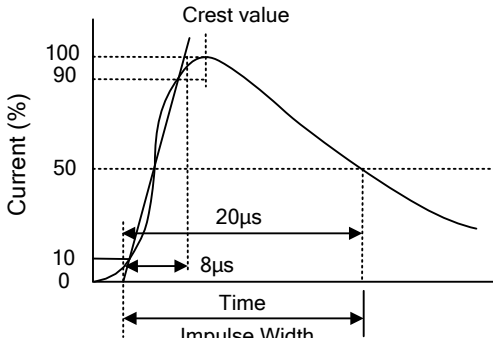
Electrical Characteristics

Part Number		DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Impulse Life Test	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Alternating Discharge Current	Device Marking Code
		100V/S	1KV/us	8/20us 100A	Test Voltage	(GΩ)	(1MHz 1V)	8/20us	50Hz,1S	
		±20%(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
2RD1000L-8	2RD1000S-8	1000	1400	100	500	1	1.5	5	5	2RD1000-8
2RD1400L-8	2RD1400S-8	1400	2200	100	500	1	1.5	5	5	2RD1400-8
2RD1600L-8	2RD1600S-8	1600	2400	100	500	1	1.5	5	5	2RD1600-8
2RD2000L-8	2RD2000S-8	2000	3000	100	500	1	1.5	5	5	2RD2000-8
2RD2500L-8	2RD2500S-8	2500	3600	100	1000	1	1.5	5	5	2RD2500-8

Dimensions

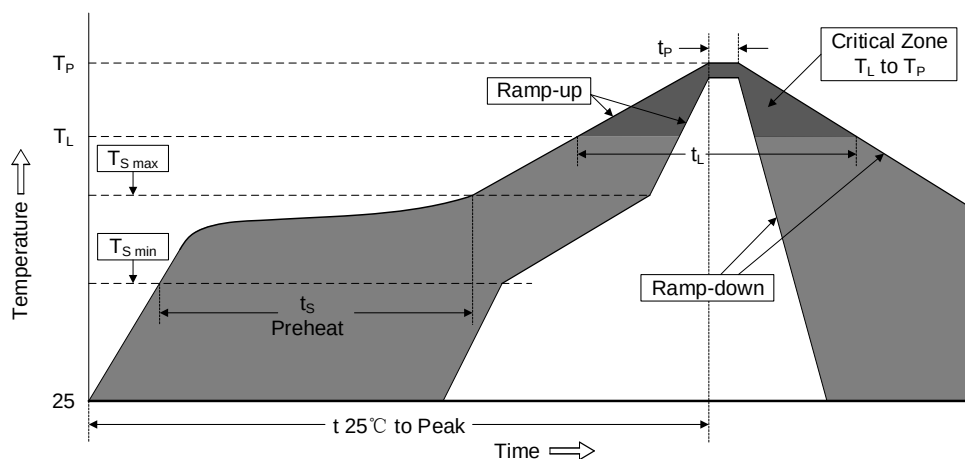
L Type	Symbol	Dimension (mm)
	D	8.00±0.50
	T	8.00±0.50
	d	0.80±0.10
	L	30 max.
		
S Type	D	8.00±0.50
	T	8.00±0.50
	B	0.50±0.40
 Recommended Pad Size		

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 $dv/dt=1000V/\mu s$.	
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	
Impulse Discharge Current	Maximum 8/20 μs 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 ±25% from its initial value. $IR > 10^8$ ohms	

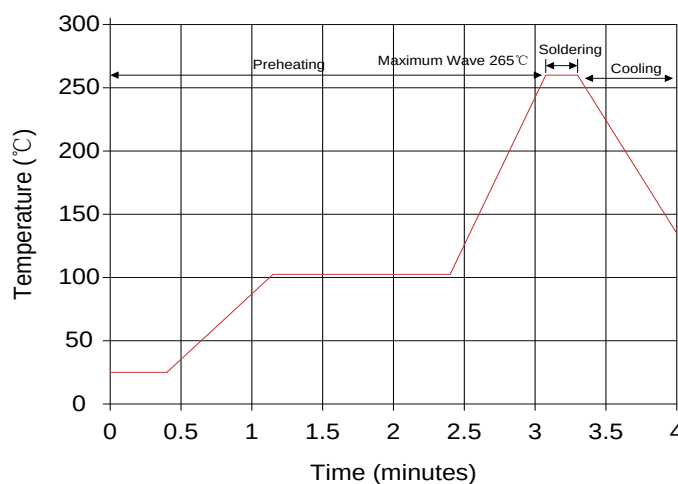
Soldering Recommendation

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max)(t _S)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Wave Soldering

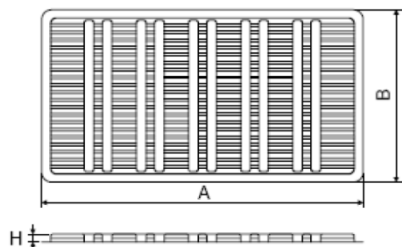


Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds(max.)
Soldering	1 time

Packaging

Axial Packing

Skiving packing



Symbol	Dimension (mm)
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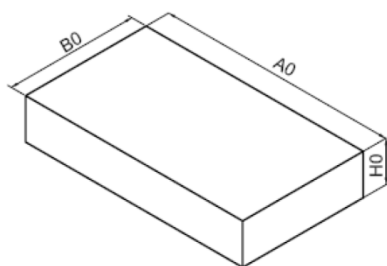
A	265 ± 5.0
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B	146 ± 5.0
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H	8.5 ± 0.5
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Quantity: 100pcs

Inner box



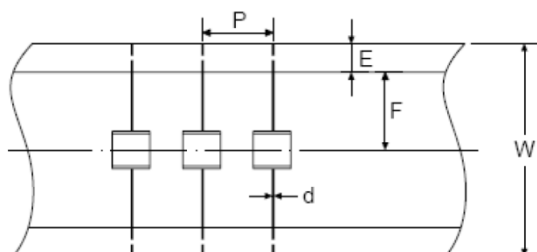
A0	270 ± 2.0
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B0	150 ± 2.0
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H0	50 ± 2.0
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Quantity: 500pcs

Tape



P	10.0 ± 0.5
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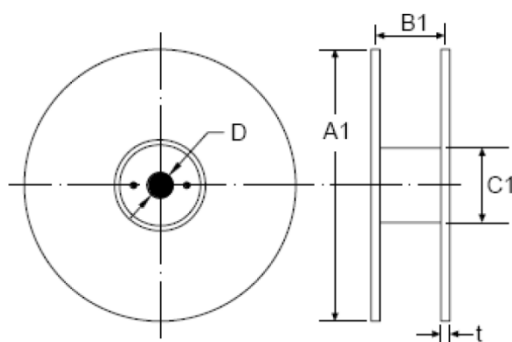
W	65.0 ± 1.0
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E	6.0 ± 0.5
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F	26.5 ± 0.5
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d	0.8 ± 0.1
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Reel



A1	330.0 ± 2.0
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B1	70.0 ± 2.0
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C1	82.0 ± 2.0
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D	25.0 ± 0.5
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t	2.0 ± 0.2
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Quantity: 500pcs

SMD packing

Tape	Symbol	Dimension (mm)
	W	16.00±0.20
	P0	4.00±0.10
	P1	12.00±0.20
	P2	4.00±0.10
	D0	Φ1.55±0.05
	E	1.75±0.10
	F	7.50±0.10
	A0	8.80±0.1
	B0	8.30±0.1
	K0	8.30±0.1
	T	0.50±0.1
Reel	D	330.0±2.0
	d	13.0±0.5
	L	20.0±2.0
	t	2.0±0.2
	Quantity: 500PCS	

Tape

