

Gas Discharge Tube (GDT) Data Sheet

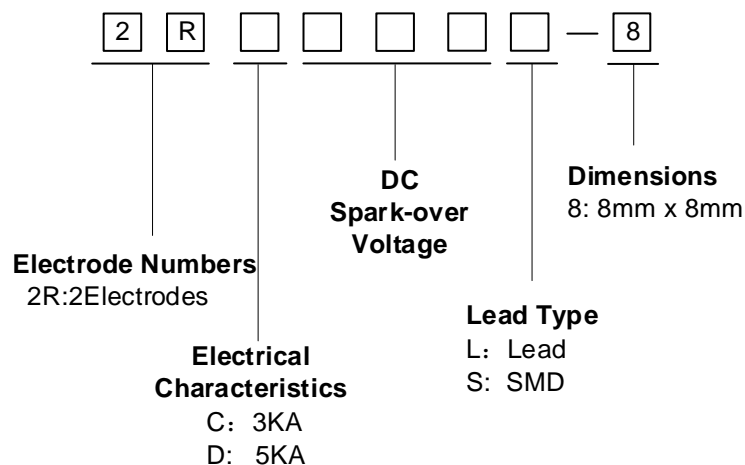
Features

- 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



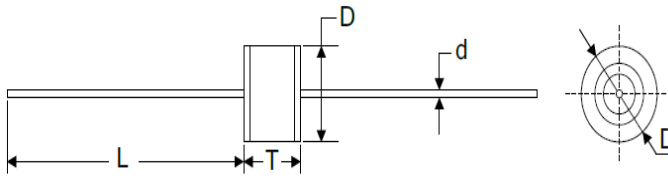
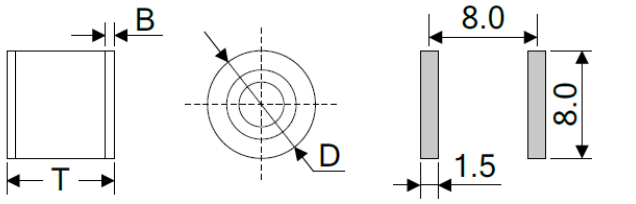
Electrical Characteristics

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
					Test Voltage	(GΩ)				
					DC(V)	(pF)				
		100V/S	1KV/us	10/1000us 100A			(1MHz 1V)	8/20us	50Hz,1S	
		±20%(v)	(v)	(times)			(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

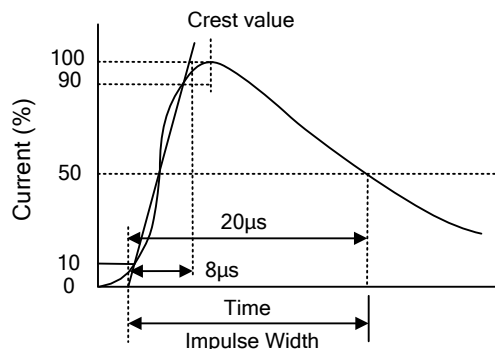
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					DC(V)	(pF)				
		100V/S	1KV/us	10/1000us 100A			(1MHz 1V)	8/20us	50Hz,1S	
		±20%(v)	(v)	(times)			(pF)	(KA)	(A)	
2RD1000L-8	2RD1000S-8	1000	1400	100	500	1	1.5	5	5	2RD1000-8
2RD1400L-8	2RD1400S-8	1400	2200	100	500	1	1.5	5	5	2RD1400-8
2RD1600L-8	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	
 <p style="text-align: center;">Recommended Pad Size</p>		D	8.00±0.50
		T	8.00±0.50
		B	0.50±0.40

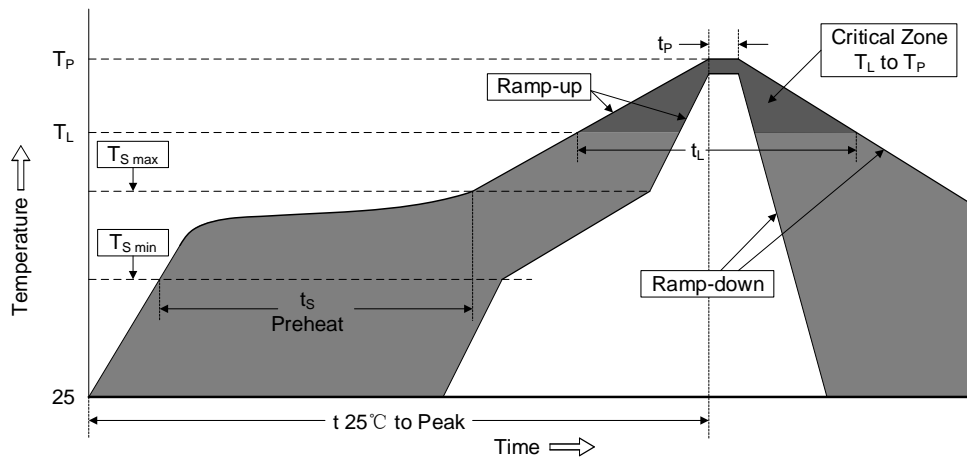
Electrical Ratings

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 $\pm 25\%$ from its initial value. $IR > 10^8$ ohms	



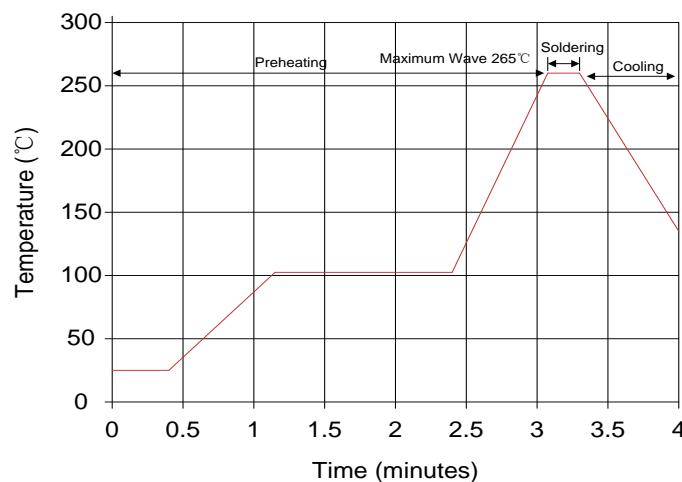
Soldering Recommendation

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.

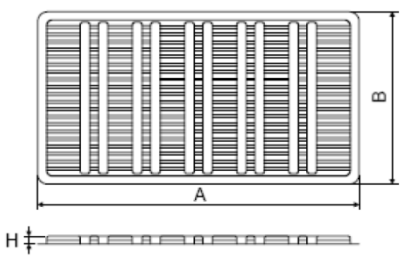
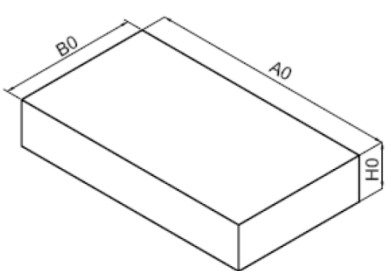
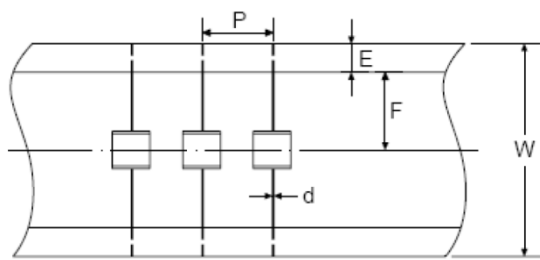
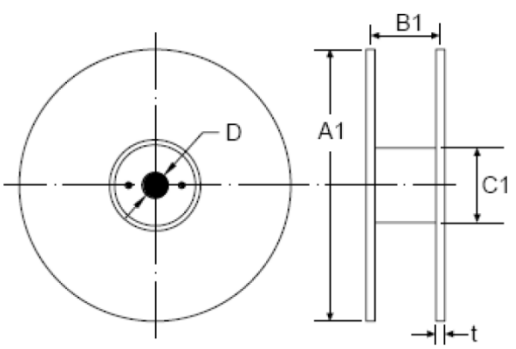
Wave Soldering



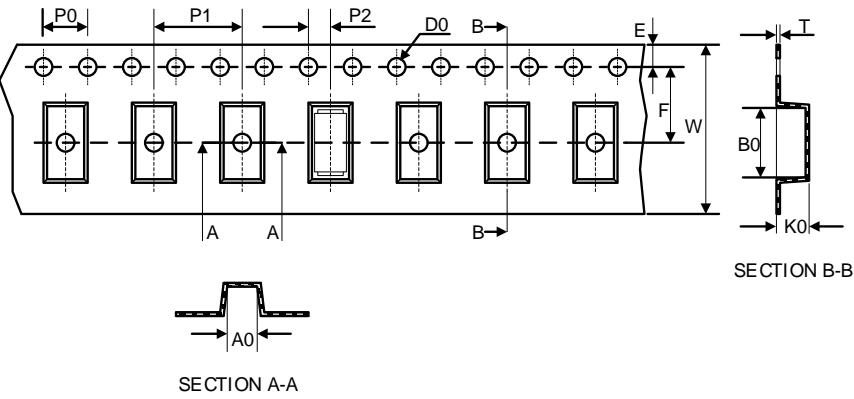
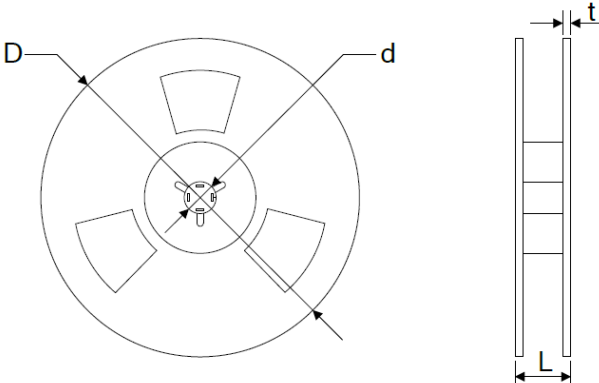
Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds(max.)
Soldering	1 time

Packaging

Axial Packing

Skinning packing		Symbol	Dimension (mm)
		A	265 ± 5.0
		B	146 ± 5.0
		H	8.5 ± 0.5
		Quantity: 100pcs	
Inner box 		A0	270 ± 2.0
		B0	150 ± 2.0
		H0	50 ± 2.0
		Quantity: 500pcs	
Tape 		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
		Quantity: 500pcs	
Reel 		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: 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		
				D	330.0±2.0
				d	13.0±0.5
L	20.0±2.0				
t	2.0±0.2				
Quantity: 500PCS					