Gas Discharge Tube (GDT) Data Sheet

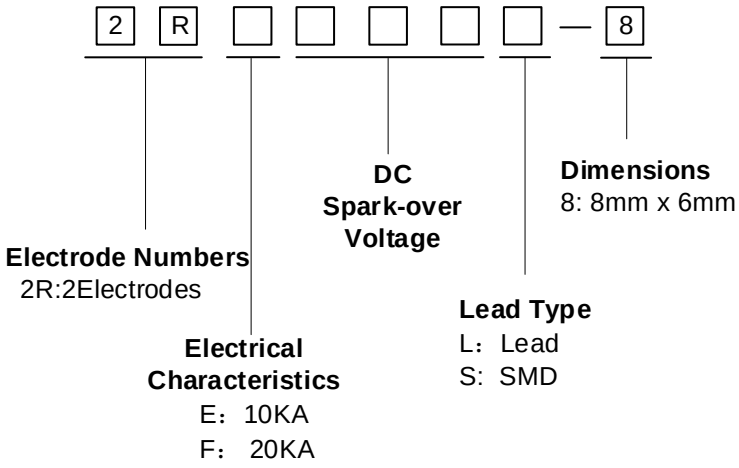
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Low capacitance（≤1.5pF）
- High holdover voltage
- Stable breakdown voltage
- Large absorbing transient current capability
- Surface mounted gas arrester
- Micro-Gap Design
- Operating and Storage Temperature ：-40℃ ~ +125℃
- Meets MSL Level 1，per J-STD-020

Applications

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

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	10/1000us 100A	Test Voltage	（GΩ）	(1MHz 1V)	8/20us	50Hz,1S	
		(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
2RE075L-8	2RE075S-8	75±20%	600	500	25	1	1.5	10	10	2RE075-8
2RE090L-8	2RE090S-8	90±20%	600	500	50	1	1.5	10	10	2RE090-8
2RE120L-8	2RE120S-8	120±20%	600	500	50	1	1.5	10	10	2RE120-8
2RE150L-8	2RE150S-8	150±20%	700	500	100	1	1.5	10	10	2RE150-8
2RE230L-8	2RE230S-8	230±20%	700	500	100	1	1.5	10	10	2RE230-8
2RE250L-8	2RE250S-8	250±20%	800	500	100	1	1.5	10	10	2RE250-8
2RE300L-8	2RE300S-8	300±20%	900	500	100	1	1.5	10	10	2RE300-8
2RE350L-8	2RE350S-8	350±20%	900	500	100	1	1.5	10	10	2RE350-8
2RE400L-8	2RE400S-8	400±20%	1000	500	100	1	1.5	10	10	2RE400-8
2RE470L-8	2RE470S-8	470±20%	1100	500	250	1	1.5	10	10	2RE470-8
2RE600L-8	2RE600S-8	600±20%	1300	500	250	1	1.5	10	10	2RE600-8
2RE800L-8	2RE800S-8	800±20%	1500	500	250	1	1.5	10	10	2RE800-8

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	10/1000us 100A	Test Voltage	（GΩ）	(1MHz 1V)	8/20us	50Hz,1S	
		(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
2RF075L-8	2RF075S-8	75±20%	600	500	25	1	1.5	20	20	2RF075-8
2RF090L-8	2RF090S-8	90±20%	600	500	50	1	1.5	20	20	2RF090-8
2RF120L-8	2RF120S-8	120±20%	600	500	50	1	1.5	20	20	2RF120-8
2RF150L-8	2RF150S-8	150±20%	700	500	100	1	1.5	20	20	2RF150-8
2RF230L-8	2RF230S-8	230±20%	700	500	100	1	1.5	20	20	2RF230-8
2RF250L-8	2RF250S-8	250±20%	800	500	100	1	1.5	20	20	2RF250-8
2RF300L-8	2RF300S-8	300±20%	900	500	100	1	1.5	20	20	2RF300-8
2RF350L-8	2RF350S-8	350±20%	900	500	100	1	1.5	20	20	2RF350-8
2RF400L-8	2RF400S-8	400±20%	1000	500	100	1	1.5	20	20	2RF400-8
2RF470L-8	2RF470S-8	470±20%	1100	500	250	1	1.5	20	20	2RF470-8
2RF600L-8	2RF600S-8	600±20%	1300	500	250	1	1.5	20	20	2RF600-8
2RF800L-8	2RF800S-8	800±20%	1500	500	250	1	1.5	20	20	2RF800-8

Electrical Characteristics

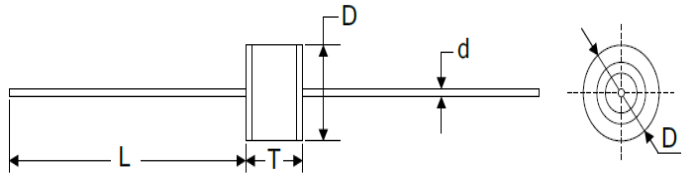
Part Number		DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Impulse Life Test	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Alternating Discharge Current	Device Marking Code
		100V/S	1KV/us	10/1000us 100A	Test Voltage	（GΩ）	(1MHz 1V)	8/20us	50Hz,1S	
		±20%(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
2RC2500L-8	2RC2500S-8	2500	4000	100	1000	1	1.5	3	3	2RC2500-8
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	10/1000us 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

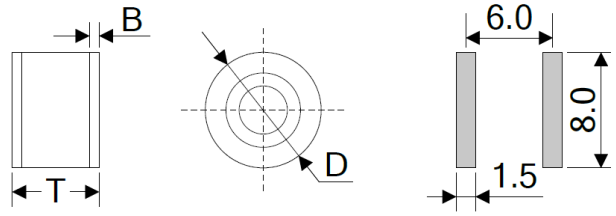
Dimensions

L Type



Symbol	Dimension (mm)
D	8.00±0.50
T	6.00±0.50
d	0.80±0.10
L	30 max.

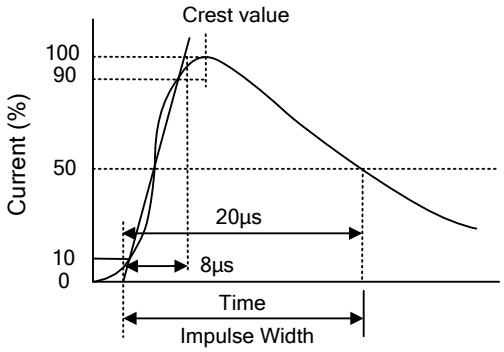
S Type



Recommended Pad Size

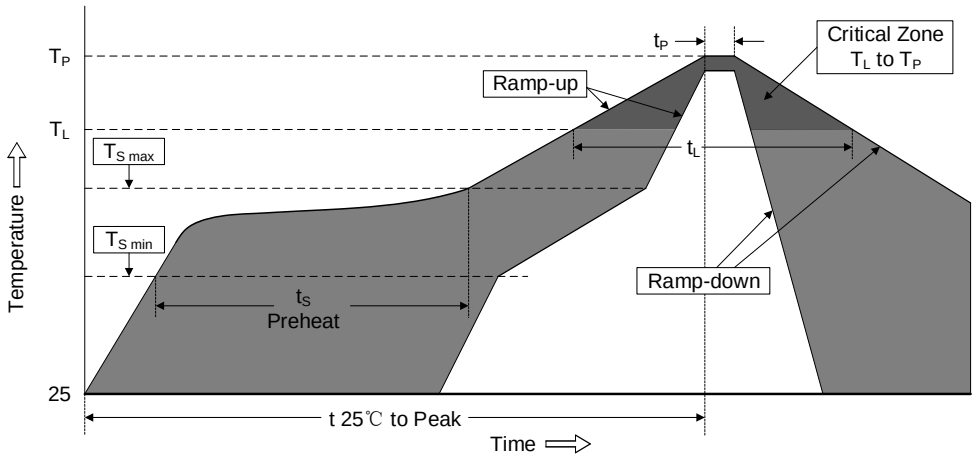
D	8.00±0.50
T	6.00±0.50
B	0.50±0.10

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/μs.	
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 8/20μs 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 (-20%, +30% for 70~90V).	

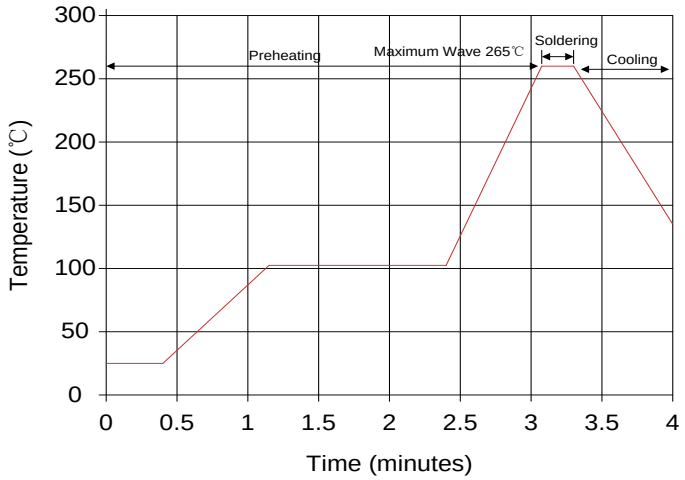
Soldering Recommendation

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate ($T_L$to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max)(t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual PeakTemperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.

Wave Soldering

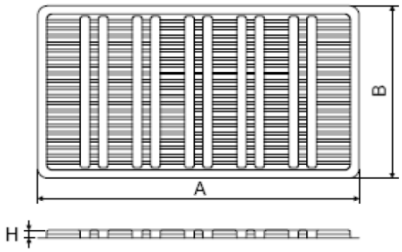


Item	Conditions
Peak Temperature	265℃
Dipping Time	10 seconds(max.)
Soldering	1 time

Packaging

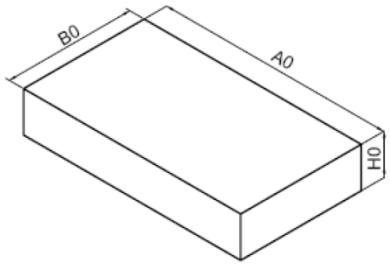
Axial Packing

Sking packing



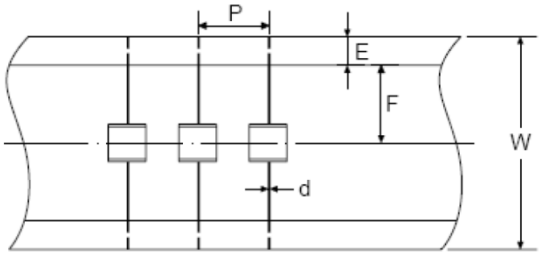
Symbol	Dimension (mm)
A	265 ± 5.0
B	146 ± 5.0
H	8.5 ± 0.5
Quantity:100pcs	

Inner box



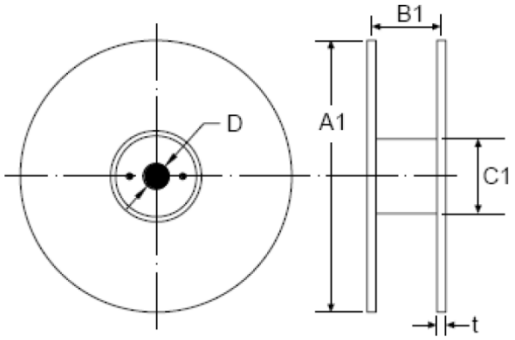
A0	270 ± 2.0
B0	150 ± 2.0
H0	50 ± 2.0
Quantity: 500pcs	

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

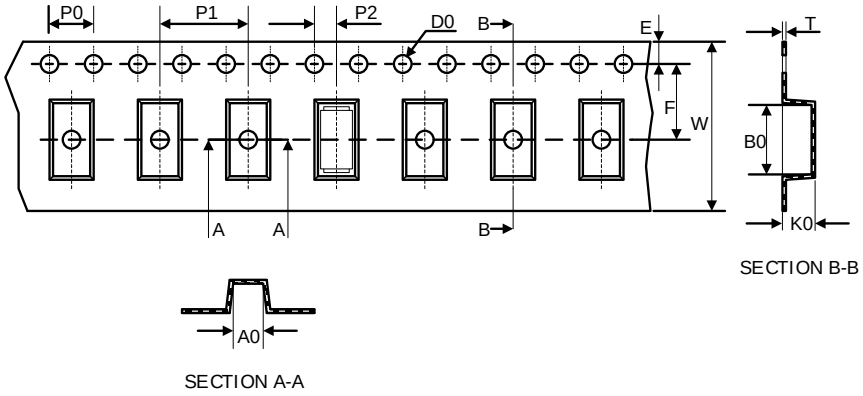
Reel



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	

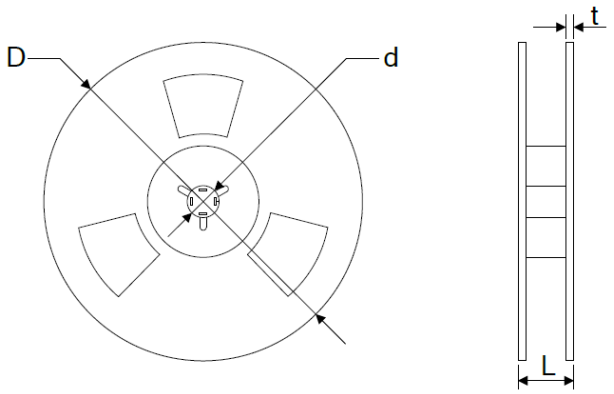
SMD packing

Tape



Symbol	Dimension (mm)
W	16.00±0.20
P0	4.00±0.10
P1	12.00±0.20
P2	2.00±0.10
D0	Φ1.55±0.05
E	1.75±0.10
F	7.50±0.10
A0	8.20±0.1
B0	7.50±0.1
K0	8.50±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	

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