



Gas Discharge Tubes

2RA-5 Series

Gas Discharge Tubes - 2RA-5 Series

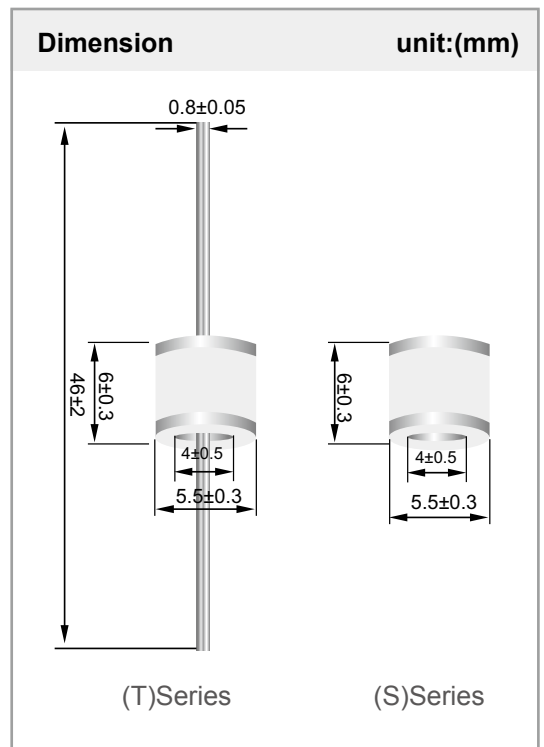
Gas discharge tubes (GDT) use noble gasses enclosed in ceramic tubes to provide an alternate circuit path for voltage spikes. The ceramic envelope and with nickel connectors allow for high loads and Ruilon offers products that function at 20KA,40KA,50KA,60KA,100KA&150KA. The breakdown voltages of the devices have a wide range (up to 20% tolerance). Major applications are high frequency telecommunication lines, stations, security systems, HID and high quality Surge Protection Devices (SPD).

Features

- RoHS & HF compliant
- Size:5.5mm*6.0mm
- DC Spark-over voltage: 75~6000V
- Stable breakdown voltage.
- High insulation resistance.
- Low capacitance (<1pF)
- High holdover voltage.
- Large absorbing transient current capability.
- Low Capacitance
- RoHS & HF compliant,UL:E465335.

Recommended Applications

- Cable Modem
- xDSL
- Set-Top Box
- Satellite and CATV equipment
- Power supplier
- Consumer electronics
- General telecom equipment



Product Name

2	R	X	X	X	X	A	-	5
↓		↓		↓		↓	↓	
2R : 2 Electrodes		DC Spark-over Voltage		Lead Type		Electrical Characteristics	Dimensions	
				T:Thrust		A=5kA	5.5mm*6.0mm	
				S:SMD				

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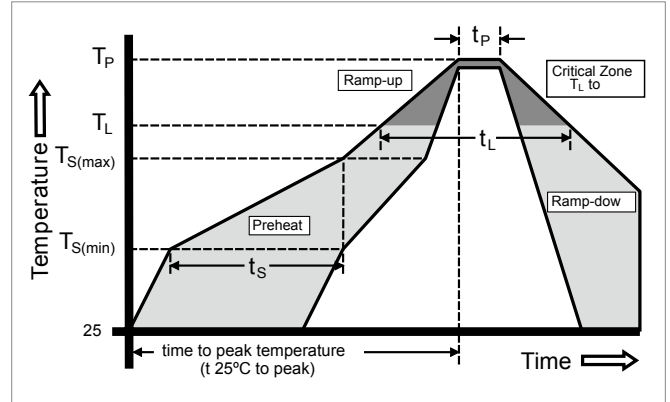
Electrical Characteristics

Type Number		DC Spark-over Voltage	Impulse Spark-over Voltage	Impulse Discharge Current		AC Discharge Current	DC Holdover Voltage	Minimum Insulation Resistance	Maximum Capacitance
		100V/s	1kV/ μ s	10/1000 μ s 100A	8/20 μ s 10Times	1s 5Times			@1MHz
DIP	SMD	V	V	Times	kA	A	V	G Ω	pF
2R075TA-5	2R075SA-5	75 \pm 20%	<700	300	5	5	25	1	1.0
2R090TA-5	2R090SA-5	90 \pm 20%	<700	300	5	5	50	1	1.0
2R150TA-5	2R150SA-5	150 \pm 20%	<700	300	5	5	50	1	1.0
2R230TA-5	2R230SA-5	230 \pm 20%	<700	300	5	5	100	1	1.0
2R300TA-5	2R300SA-5	300 \pm 20%	<900	300	5	5	100	1	1.0
2R350TA-5	2R350SA-5	350 \pm 20%	<900	300	5	5	100	1	1.0
2R470TA-5	2R470SA-5	470 \pm 20%	<1100	300	5	5	250	1	1.0
2R600TA-5	2R600SA-5	600 \pm 20%	<1500	300	5	5	250	1	1.0
2R800TA-5	2R800SA-5	800 \pm 20%	<1700	300	5	5	250	1	1.0
2R1000T-5	2R1000S-5	1000 \pm 20%	<2000	100	3	3	500	1	1.5
2R1400T-5	2R1400S-5	1400 \pm 20%	<2200	100	3	3	500	1	1.5
2R1600T-5	2R1600S-5	1600 \pm 20%	<2400	100	3	3	500	1	1.5
2R2000T-5	2R2000S-5	2000 \pm 20%	<2800	100	3	3	500	1	1.5
2R2500T-5	2R2500S-5	2500 \pm 20%	<3600	100	3	3	500	1	1.5
2R2700T-5	2R2700S-5	2700 \pm 20%	<3800	100	3	3	1000	1	1.5
2R3000T-5	2R3000S-5	3000 \pm 20%	<4200	100	3	3	1000	1	1.5
2R3500T-5	2R3500S-5	3500 \pm 20%	<5000	100	3	3	1000	1	1.5
2R3600T-5	2R3600S-5	3600 \pm 20%	<5000	100	3	3	1000	1	1.5
2R4000T-5	2R4000S-5	4000 \pm 20%	<5500	100	3	3	1000	1	1.5
2R5000T-5	2R5000S-5	5000 \pm 20%	<6400	100	3	3	1000	1	1.5
2R6000T-5	2R6000S-5	6000 \pm 20%	<7800	100	3	3	1000	1	1.5

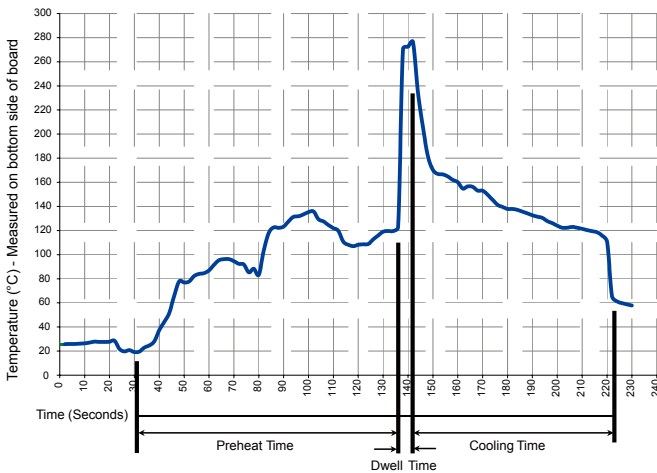
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Soldering parameters reflow soldering(surface mount devices)

Reflow Condition		Pb – Free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (Min to Max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		5°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		10 – 30 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Soldering parameters -wave soldering



Recommended process parameters

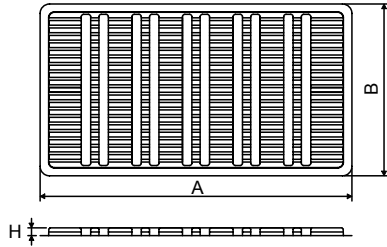
Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flux Activation Temperature) (Typical Industry Recommendation)	
Temperature Minimum:	100° C
Temperature Maximum:	150° C
Preheat Time:	60-180 seconds
Solder Pot Temperature:	280° C Maximum
Solder Dwell Time:	2-5 seconds

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Packaging Taping

Axial Packing (Bulk)

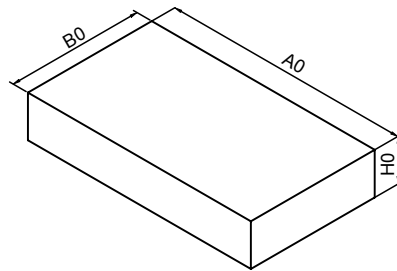
Skin packing



Symbol	Dimension (mm)	
	Spec.	Tolerance
A	264.0	±1.0
B	145.0	±1.0
H	6.5	±0.5

Quantity: 100pcs

Inner box

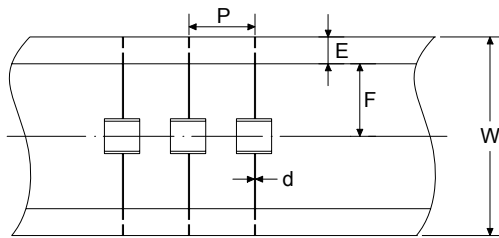


A0	270.0	±2.0
B0	150.0	±1.0
H0	50.0	±1.0

Quantity: 500pcs

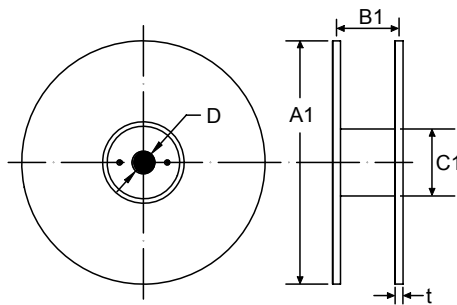
Axial Packing (Tape & Reel)

Tape



Symbol	Dimension (mm)	
	Spec.	Tolerance
P	10.0	±0.1
W	65.0	±0.3
E	6.0	±0.5
F	26.5	±0.1
d	0.8	±0.05

Reel



A1	330.0	±1.0
B1	70.0	±1.0
C1	82.0	±1.0
D	25.0	±0.2
t	3.0	±0.2

Quantity: 1000pcs

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