Innovative Service Around the Globe YAGEO

DATA SHEET

GAS DISCHARGE TUBES
TELEPHONE INTERFACE

2R-4 series

RoHS compliant & Halogen free

Product specification– November 05, 2018 V.0

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Gas Discharge Tube (GDT) Data Sheet

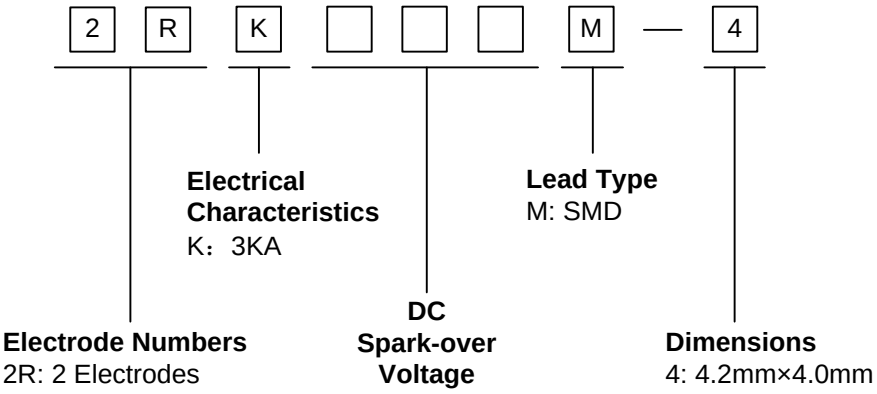
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs.
- Stable breakdown voltage.
- High insulation resistance.
- Low capacitance (≤1pF)
- High holdover voltage
- Large absorbing transient current capability.
- Micro-Gap Design
- Size: 4.2mm*4.0mm
- Storage and operating temperature: -40℃ ~ +85℃
- Meets MSL level 1, per J-STD-020
- Safety certification: E244458 & E327997

Applications

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

Part Number Code



Marking

090 : Device Marking Code
YXXX : Date Code

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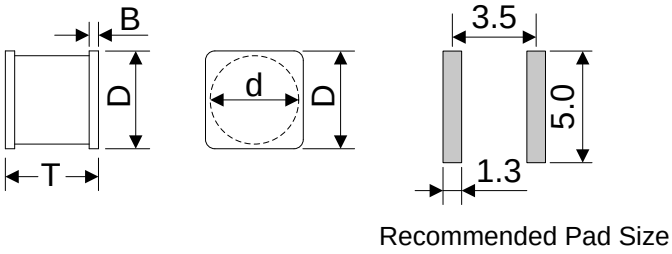
Dimensions



Recommended Pad Size

Symbol	Dimension (mm)	
	Spec.	Tolerance
D	4.2	±0.5
T	4.0	±0.4
B	0.4	±0.1
d	3.9	±0.1

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	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	50Hz,1sec	10/1000μs 100A	Test Voltage	(GΩ)	1MHz	
	(V)	(V)	(KA)	(A)	(times)	DC(V)		(pF)	
2RK075M-4	75±20%	800	3	3	300	25	1	1.0	075
2RK090M-4	90±20%	800	3	3	300	50	1	1.0	090
2RK145M-4	145±20%	800	3	3	300	100	1	1.0	145
2RK230M-4	230±20%	700	3	3	300	100	1	1.0	230
2RK250M-4	250±20%	700	3	3	300	100	1	1.0	250
2RK300M-4	300±20%	800	3	3	300	100	1	1.0	300
2RK350M-4	350±20%	850	3	3	300	100	1	1.0	350
2RK400M-4	400±20%	900	3	3	300	100	1	1.0	400
2RK470M-4	470±20%	800	3	3	300	250	1	1.0	470
2RK600M-4	600±20%	1100	3	3	300	250	1	1.0	600
2RK800M-4	800±20%	1200	3	3	300	250	1	1.0	800
2RK1000M-4	1000±20%	1500	3	3	300	500	1	1.0	1000
2RK1200M-4	1200±20%	1900	3	3	300	500	1	1.0	1200

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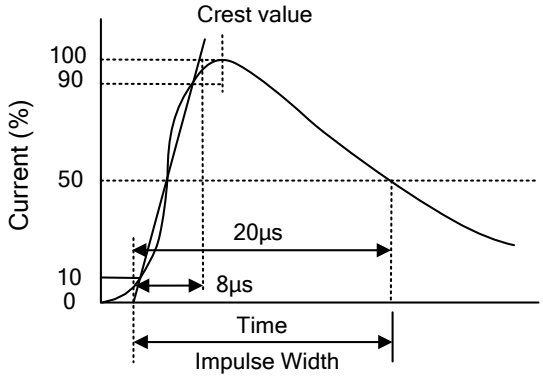
Electrical Ratings

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.	
Impulse Discharge Current	Maximum 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges. 	
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	

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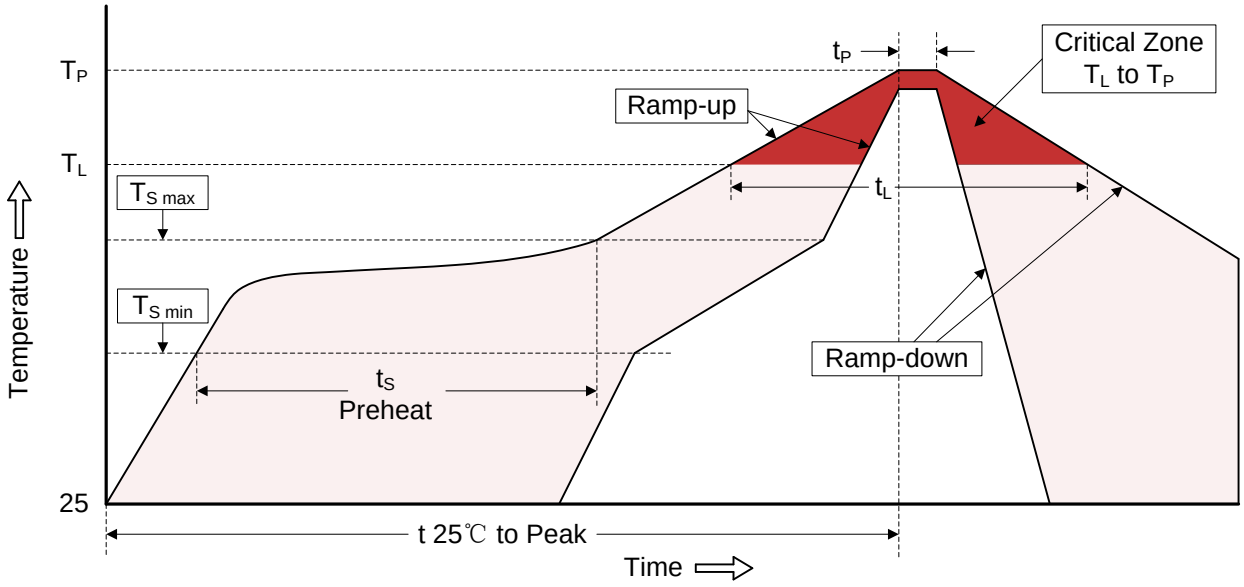
Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

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) (ts)	 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 Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.

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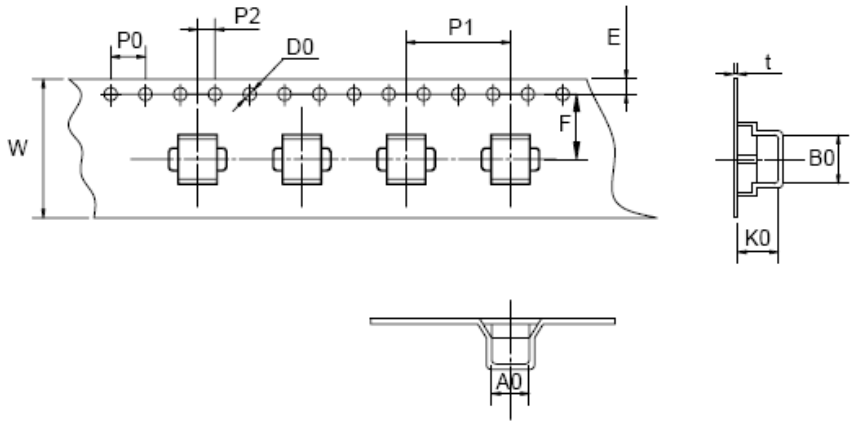
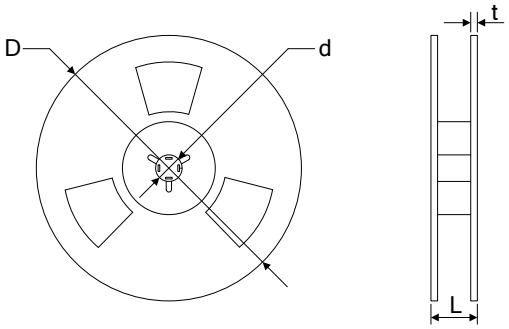
Packaging

Tape



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	4.27	±0.10
K0	5.20	±0.10
B0	4.45	±0.10
t	0.50	±0.10

Reel



D	330.00	±1.00
d	13.00	±0.50
L	20.00	±0.50
t	2.00	±0.20

Quantity: 900pcs

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