Innovative Service Around the Globe YAGEO

DATA SHEET

GAS DISCHARGE TUBES
TELEPHONE INTERFACE

2RE-3 series

RoHS compliant & free

Product specification– July 12, 2023 V.1

Gas Discharge Tube (GDT) Data Sheet

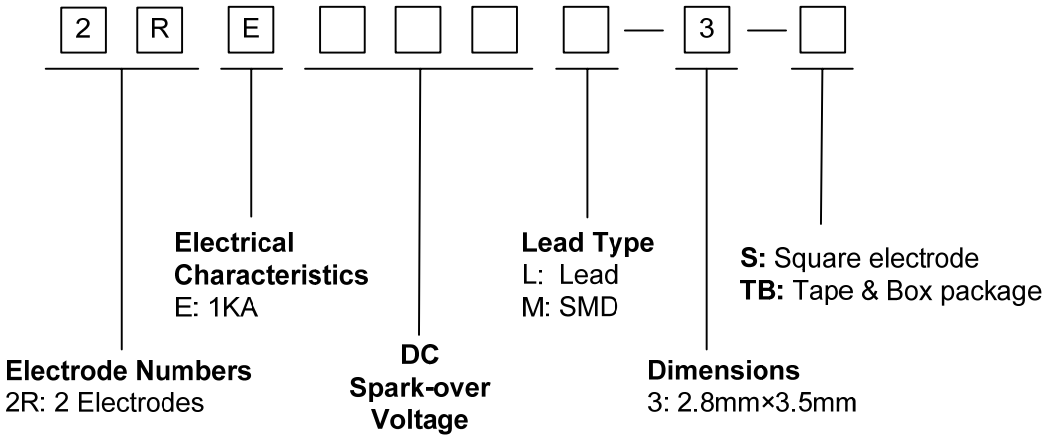
Features

- 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 (≤0.5pF)
- High holdover voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Size: 2.8mm*3.5mm
- Storage and operational temperature: -40℃ ~ +85℃
- Meets MSL level 1, per J-STD-020
- Safety certification: UL

Applications

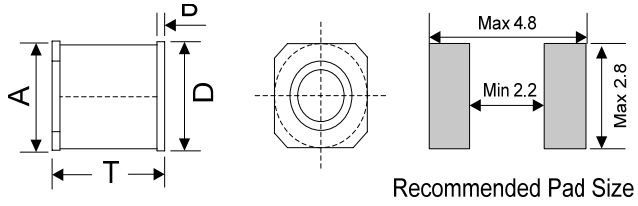
- Repeaters, Modems.
- Telephone Interface, Line cards.
- Data communication equipment.
- Line test equipment

Part Number Code



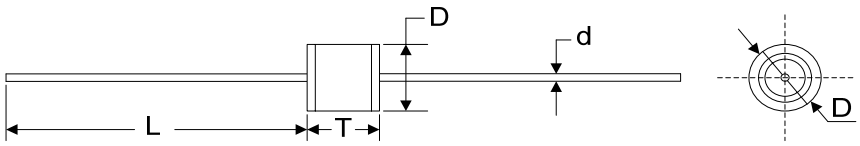
Dimensions

M Type



Symbol	Dimension (mm)	
	Spec.	Tolerance
A	2.80	±0.20
B	0.50	±0.10
D	2.80	±0.20
T	3.50	±0.20

L Type

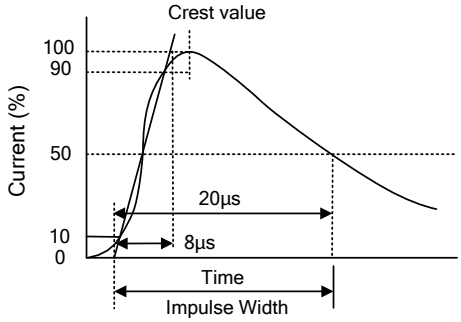


D	2.8	±0.3
T	3.5	±0.3
d	0.5	±0.05
L	30.0	Max.

Electrical Characteristics

Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance	Device Marking Code
	100V/s	1000V/μs	8/20μs 10times	8/20μs 100A	Test Voltage	(GΩ)	1MHz	
	(V)	(V)	(KA)	(times)	DC(V)		(pF)	
2RE090M-3-S	90±20%	650	1	300	50	1.0	0.5	None
2RE150M-3-S	150±20%	700	1	300	50	1.0	0.5	None
2RE200M-3-S	200±20%	700	1	300	100	1.0	0.5	None
2RE300M-3-S	300±20%	900	1	300	100	1.0	0.5	None
2RE350M-3-S	350±20%	1000	1	300	100	1.0	0.5	None
2RE400M-3-S	400±20%	1100	1	300	100	1.0	0.5	None
2RE500M-3-S	500±30%	1300	1	300	100	1.0	0.5	None
2RE090L-3/TB	90±20%	650	1	300	50	1.0	0.5	None
2RE150L-3/TB	150±20%	700	1	300	50	1.0	0.5	None
2RE200L-3/TB	200±20%	700	1	300	100	1.0	0.5	None
2RE300L-3/TB	300±20%	900	1	300	100	1.0	0.5	None
2RE350L-3/TB	350±20%	1000	1	300	100	1.0	0.5	None
2RE400L-3/TB	400±20%	1100	1	300	100	1.0	0.5	None
2RE500L-3/TB	500±30%	1300	1	300	100	1.0	0.5	None

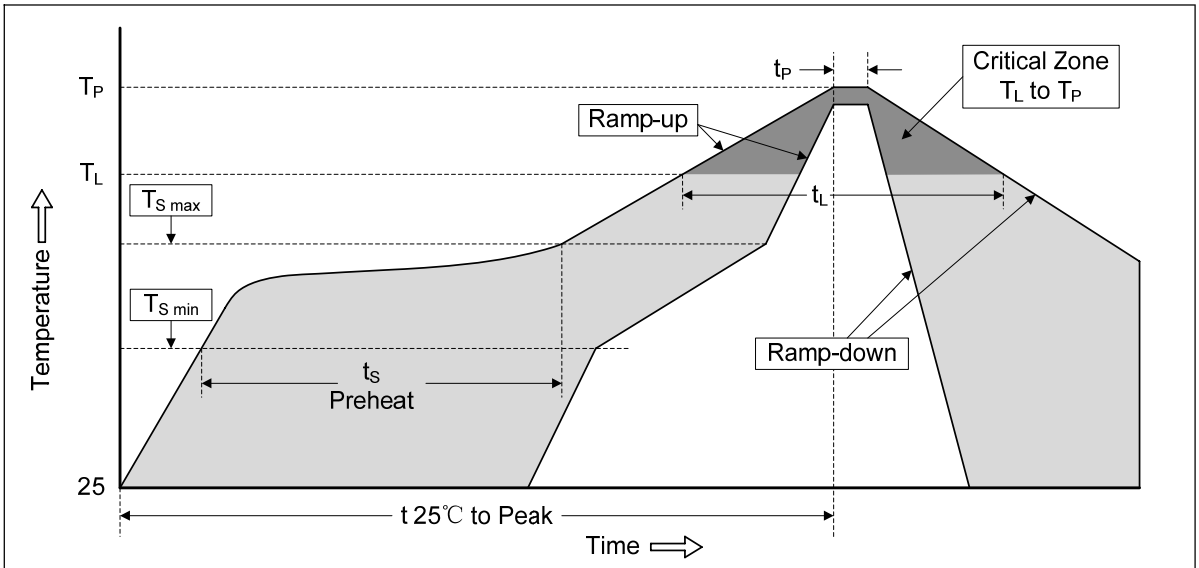
Electrical Ratings

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, with 3 minutes interval time. 	

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	

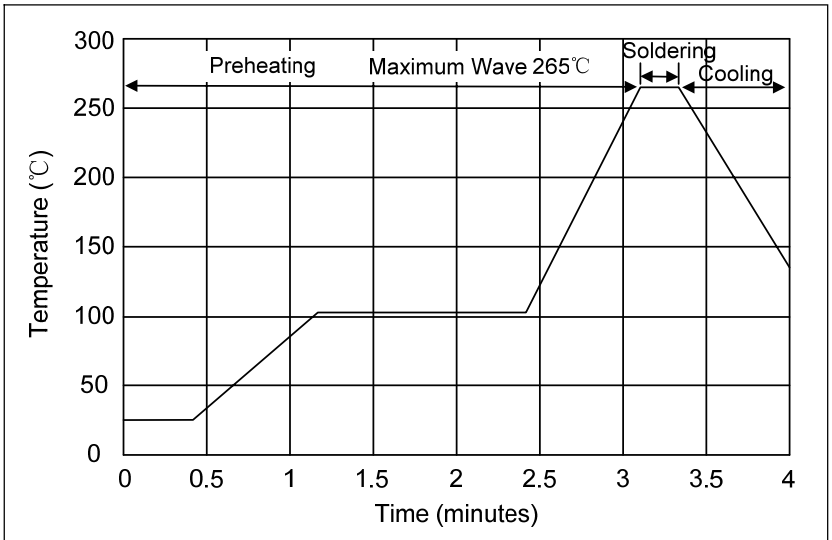
Recommended Soldering Conditions

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) (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.

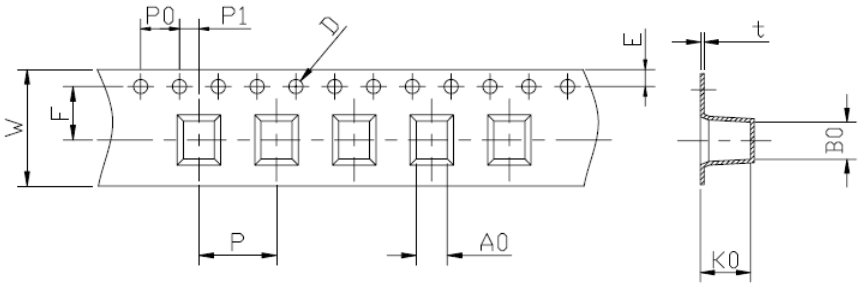
Wave Soldering



Item	Conditions
Peak Temperature	265℃
Dipping Time	10 seconds
Soldering	1 time

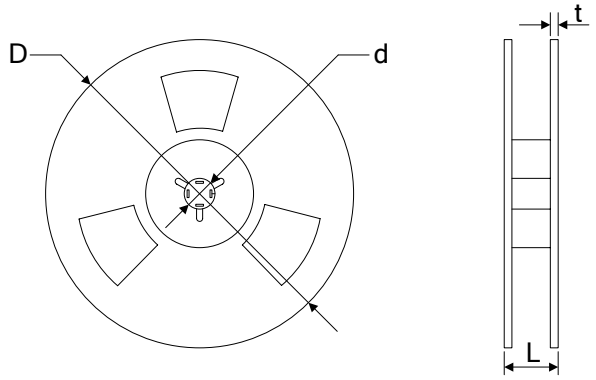
Packaging

Tape



Symbol	Dimension (mm)	
	Spec.	Tolerance
W	12.00	±0.20
P0	4.00	±0.10
P	8.00	±0.10
P1	2.00	±0.10
D	1.50	±0.10
E	1.75	±0.10
F	5.50	±0.10
A0	3.20	±0.10
B0	3.90	±0.10
K0	3.20	±0.10
t	0.40	±0.10

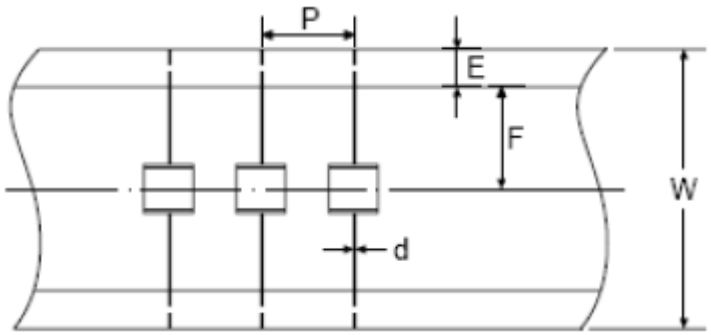
Reel



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

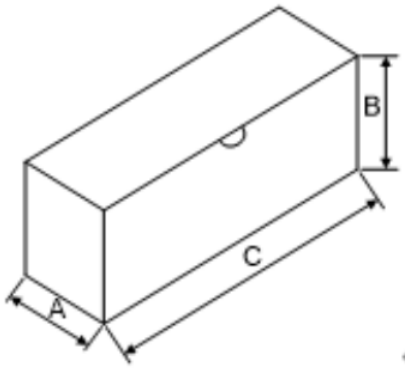
Quantity: 2500pcs

Tape



Symbol	Dimension (mm)	
	Spec.	Tolerance
P	5.0	±0.5
W	65.0	±2.0
E	6.0	±1.0
F	26.5	±1.0
d	0.5	±0.05

Inner Box



A	74.0	±5.0
B	77.0	±5.0
C	252.0	±5.0

Quantity: 2000pcs

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