

Gas Discharge Tube (GDT) Datasheet

Features

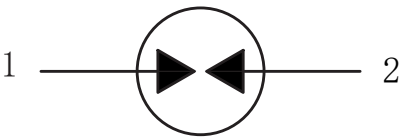
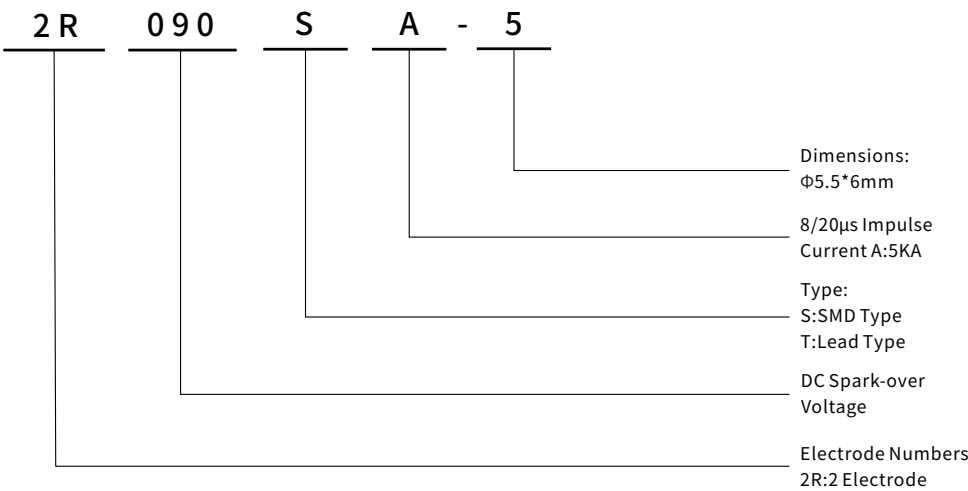
- Excellent response to fast rising transients
- Stable breakdown voltage
- Low capacitance and Insertion Loss
- High insulation resistance
- Dimensions $\Phi 5.5 \times 6\text{mm}$
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Reliable to Protect Electrostatic Surge
- High Current Handling Capability @8/20 μs ;
- Moisture sensitivity level :Level 1

DC Spark-over Voltage
75V to 800V

Applications

- Test equipment
- AC Power
- Power supplies
- Telephone Interface, Line cards
- General Telecommunications equipment

Part Number Code



Safety Certification

UL: E465335

2-Electrode Gas Discharge Tubes, Model(s):

2RxxxSA-5 where xxx is 090, 150, 230, 300, 350, 400, 420, 470, or 600.

2RxxxSB-5 where xxx is 090, 150, 230, 350, or 470.

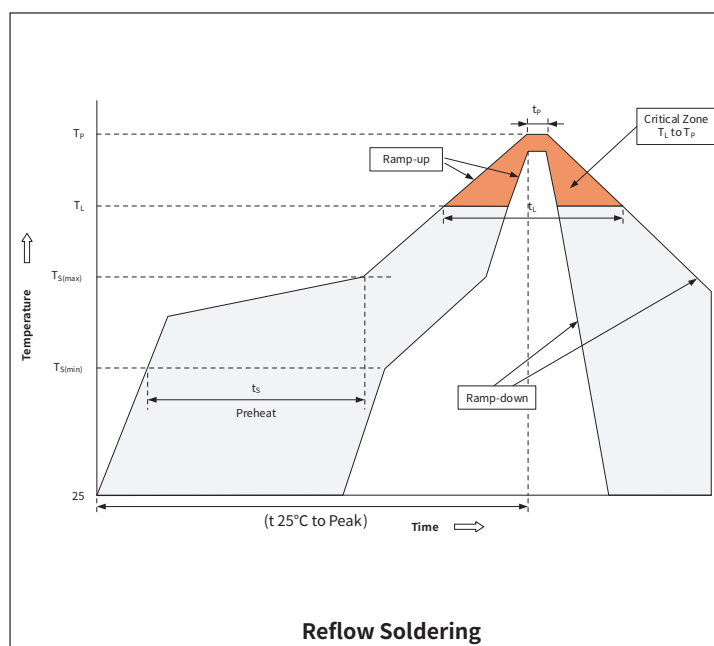
2RxxxTA-5 where xxx is 090, 150, 230, 300, 350, 400, 420, 470, or 600.

2RxxxTB-5 where xxx is 090, 150, 230, 350, or 470.

● Electrical Characteristics (Ta=25°C Unless otherwise specified)

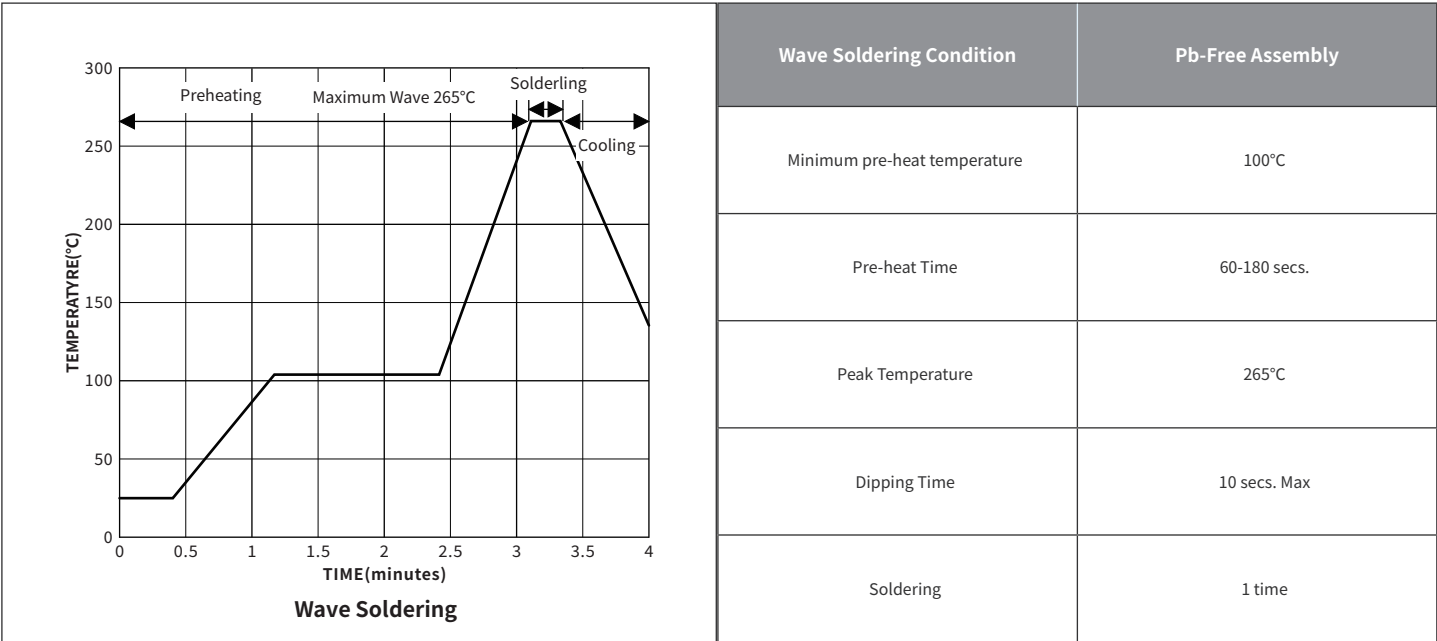
Part Number		Marking	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current@8/20μs	Alternating Discharge Current @8/20μs	Impulse Life@ 10/1000μs	Minimum Insulation Resistance		Maximum Capacitance
			100V/S	1000V/μs	±5times	50Hz, 1sec 10 times	100A	Test Voltage	GΩ	1MHz
			(V)	(V)	(KA)	(A)	(times)	DC(V)		(pF)
2R075SA-5	2R075TA-5	R+O 075A-5	75±20%	600	5	5	300	25	1	1.5
2R090SA-5	2R090TA-5	R+O 090A-5	90±20%	600	5	5	300	50	1	1.5
2R150SA-5	2R150TA-5	R+O 150A-5	150±20%	600	5	5	300	100	1	1.5
2R230SA-5	2R230TA-5	R+O 230A-5	230±20%	700	5	5	300	100	1	1.5
2R250SA-5	2R250TA-5	R+O 250A-5	250±20%	700	5	5	300	100	1	1.5
2R300SA-5	2R300TA-5	R+O 300A-5	300±20%	850	5	5	300	100	1	1.5
2R350SA-5	2R350TA-5	R+O 350A-5	350±20%	900	5	5	300	100	1	1.5
2R400SA-5	2R400TA-5	R+O 400A-5	400±20%	950	5	5	300	100	1	1.5
2R420SA-5	2R420TA-5	R+O 420A-5	420±20%	950	5	5	300	100	1	1.5
2R470SA-5	2R470TA-5	R+O 470A-5	470±20%	1000	5	5	300	250	1	1.5
2R600SA-5	2R600TA-5	R+O 600A-5	600±20%	1200	5	5	300	250	1	1.5
2R800SA-5	2R800TA-5	R+O 800A-5	800±20%	1400	5	5	300	250	1	1.5
2R075SB-5	2R075TB-5	R+O 075B-5	75±20%	600	10	5	300	25	1	1.5
2R090SB-5	2R090TB-5	R+O 090B-5	90±20%	600	10	10	300	50	1	1.5
2R120SB-5	2R120TB-5	R+O 120B-5	120±20%	600	10	10	300	50	1	1.5
2R150SB-5	2R150TB-5	R+O 150B-5	150±20%	600	10	10	300	100	1	1.5
2R230SB-5	2R230TB-5	R+O 230B-5	230±20%	700	10	10	300	100	1	1.5
2R350SB-5	2R350TB-5	R+O 350B-5	350±20%	900	10	10	300	100	1	1.5
2R470SB-5	2R470TB-5	R+O 470B-5	470±20%	1000	10	10	300	250	1	1.5

● Recommended Soldering Conditions



Profile Feature		Pb-Free Assembly
Pre-heat	Temperature Min (Ts(min))	+150°C
	Temperature Max(Ts(max))	+200°C
	Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T _L) to peak)		3°C /sec. Max
T _{S(max)} to T _L - Ramp-up Rate		3°C /sec. Max
Reflow	Temperature(T _L)(Liquid us)	+217°C
	Temperature(t _L)	60-150 secs.
Peak Temp (T _P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t _p)		20-40secs
Ramp-down Rate		6°C /sec. Max
Time 25°C to Peak Temp (T _P)		8 min. Max
Do not exceed		+260°C

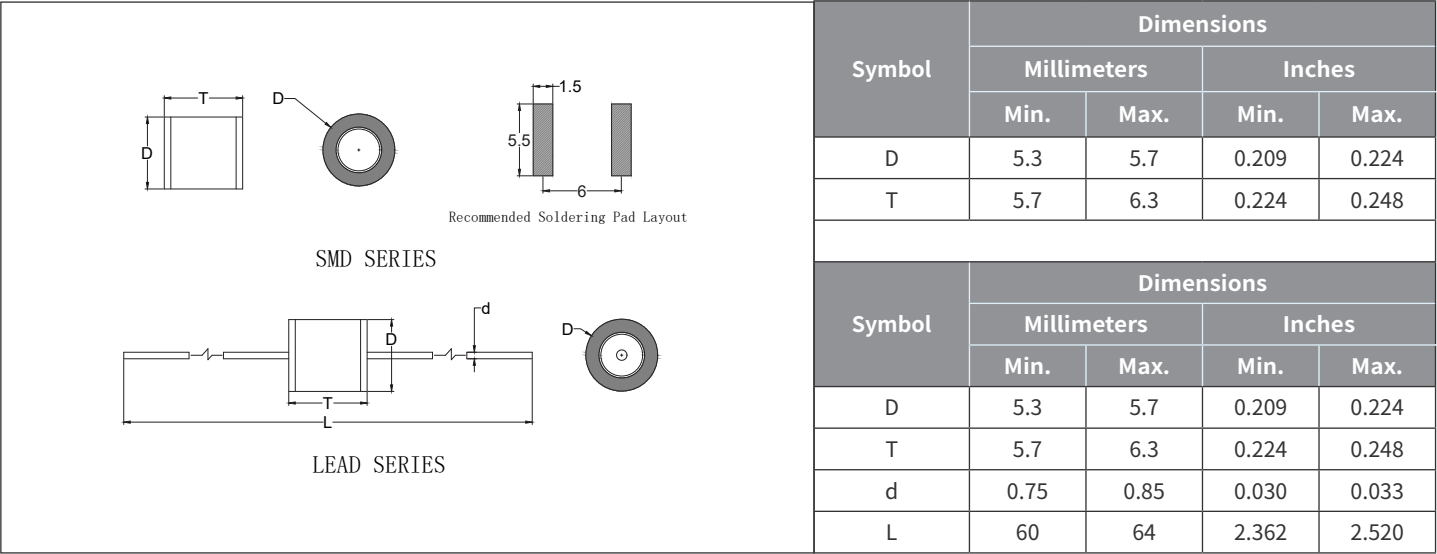
● Recommended Soldering Conditions



● 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 $dv/dt=1000V/\mu s$.	
Impulse Discharge Current	Maximum $8/20\mu s$ surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time.	
	The graph shows the current percentage over time for an 8/20 microsecond surge. The y-axis is Current (%) from 0 to 100, and the x-axis is Time from 0 to 20 microseconds. The curve rises to a crest value of 100% at approximately 8 microseconds and then decays. Key time points marked are 8μs (time to crest) and 20μs (time to 50% decay).	
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.	To meet the specified value
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	

Physical Dimensions & Recommended Pad Layout



Ordering Information

SERIES	SIZE(mm)	DELIVERY MODE	MPQ(PCS)	BOX(PCS)
2R-5 SMD TYPE	Φ5.5×6	13"REEL	1,000	3,000
2R-5 LEAD TYPE	Φ5.5×6-62	13"REEL	1,000	1,000

Packaging Information

