

Gas Discharge Tube (GDT) Data Sheet

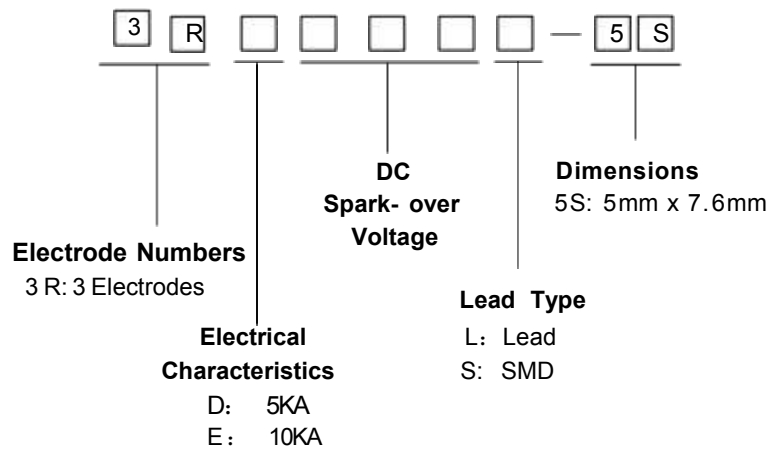
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Low capacitance ($\leq 2\text{pF}$)
- High holdover voltage
- High insulation resistance
- Stable breakdown voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Operating and Storage Temperature : $-40\text{C} \sim +125\text{C}$
- Meets MSL Level 1 , per J-STD-020

Applications

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

Part Number Code



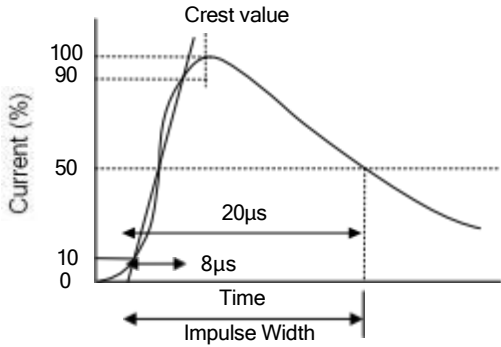
Electrical Characteristics

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)	
3RD075S-5S	75 ± 20%	600	300	25	1	1.5	5	5	3RD075-5
3RD090S-5S	90 ± 20%	600	300	50	1	1.5	5	5	3RD090-5
3RD120S-5S	120 ± 20%	600	300	50	1	1.5	5	5	3RD120-5
3RD150S-5S	150 ± 20%	600	300	100	1	1.5	5	5	3RD150-5
3RD200S-5S	200 ± 20%	650	300	100	1	1.5	5	5	3RD200-5
3RD230S-5S	230 ± 20%	700	300	100	1	1.5	5	5	3RD230-5
3RD250S-5S	250 ± 20%	700	300	100	1	1.5	5	5	3RD250-5
3RD300S-5S	300 ± 20%	800	300	100	1	1.5	5	5	3RD300-5
3RD350S-5S	350 ± 20%	900	300	100	1	1.5	5	5	3RD350-5
3RD400S-5S	400 ± 20%	950	300	100	1	1.5	5	5	3RD400-5
3RD420S-5S	420 ± 20%	950	300	250	1	1.5	5	5	3RD420-5
3RD470S-5S	470 ± 20%	1000	300	250	1	1.5	5	5	3RD470-5
3RD600S-5S	600 ± 20%	1200	300	250	1	1.5	5	5	3RD600-5

Dimensions

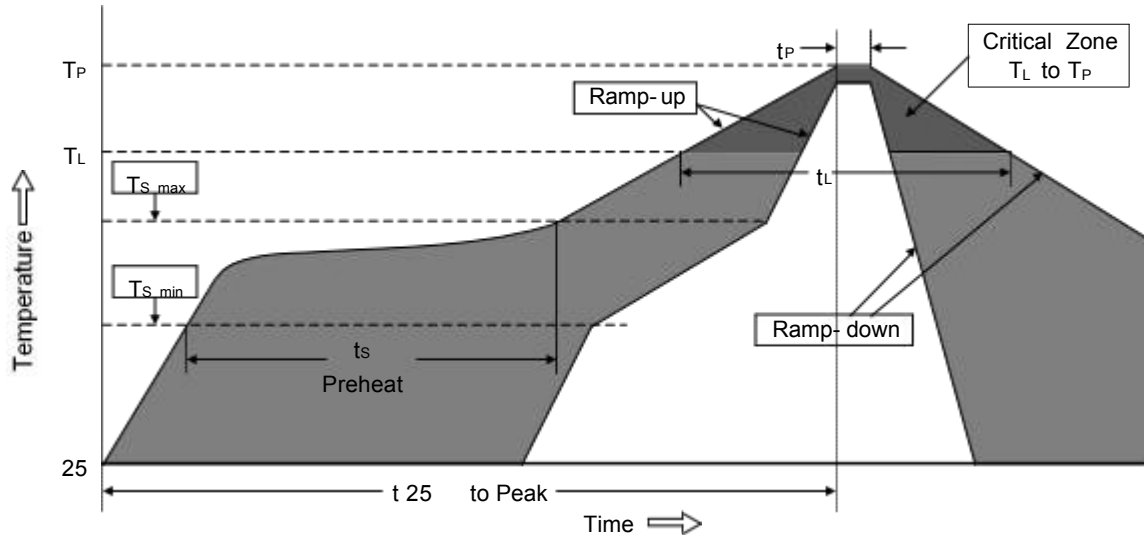
		Symbol	Dimension (mm)
		D	5.00 ± 0.20
		T	7.60 ± 0.30
		B	0.40 ± 0.10
		B1	1.50 ± 0.20
		d	4.80 ± 0.10

ESeetricaS Ratings

Items	Test Condition/ Description	Requirement
DC spark-over voStage	The voStage is measured with voStage ramp $dv/dt=100V/s$.	
Maximum ImpuSse Spark-over VoStage	The maximum impuSse spark-over voStage is measured with voStage ramp $dv/dt=1000V/\mu s$.	
InsuSation Resistance	The resistance of gas tube shaSS be measured between two eSectrodes.	
Capacitance	The capacitance of gas tube shaSS be measured between two eSectrodes. Test frequency: 1MHz	
ImpuSse Discharge Current	<p>Maximum 8/20μs surge current that can be appSied between two eSectrodes, 5 positive and 5 negative surges, with 3 minutes intervaS time, without causing the DC spark-over voStage to change more than 25% from its initiaS vaSue.</p> 	To meet the Specified vaSue
ASternating Discharge Current	Rated RMS vaSue of AC current at 50Hz, 1 sec. for 10 times with intervaS time 3 min. DC spark-over voStage shaSS not change more than $\pm 25\%$ from its initiaS vaSue. $IR > 10^8$ ohms (-20%, +30% for 70~90V).	

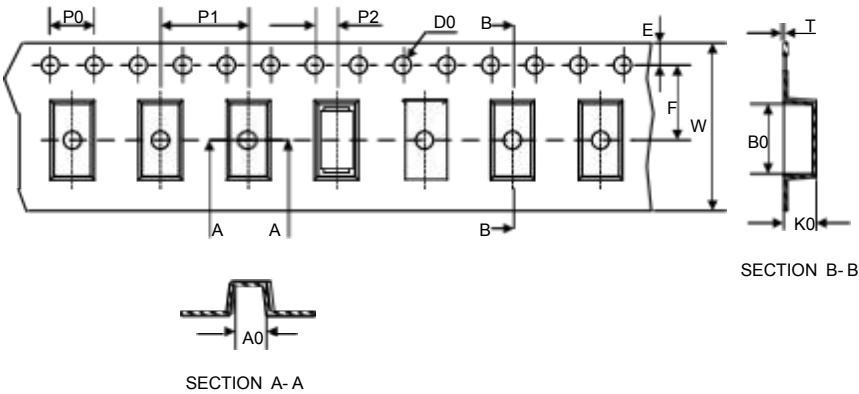
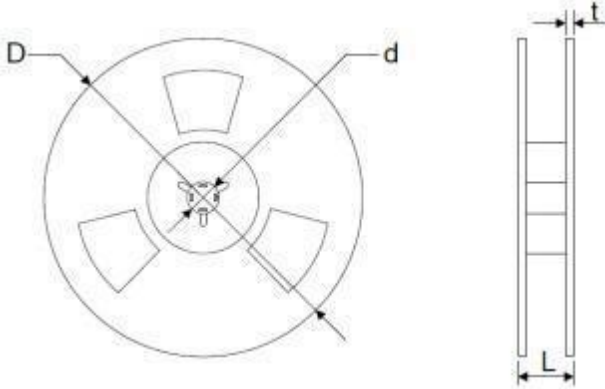
SoSdering Recommendation

RefSow SoSdering



Average ramp-up rate (T_s to T_P)	3 C/ second max.
Preheat	
- Temperature Min ($T_{s \text{ min}}$)	150 C
- Temperature Max ($T_{s \text{ max}}$)	200 C
- Time (min to max) (t_s)	60- 180 seconds
$T_{s \text{ max}}$ to T_s	
- Ramp-up Rate	3 C/ second max.
Time maintained above:	
- Temperature (T_s)	217 C
- Time (t_s)	60- 150 seconds
Peak Temperature (T_P)	260 C
Time within 5 C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6 C/ second max.
Time 25 C to Peak Temperature	8 minutes max.

Packaging

Tape	Symbol	Dimension (mm)
 <p>SECTION A-A</p> <p>SECTION B-B</p>	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	7.40±0.1
	B0	5.40±0.1
	K0	5.50±0.1
T	0.50±0.1	
	D	330.0±2.0
	d	13.0±0.5
	S	20.0±2.0
	t	2.0±0.2
	Quantity: 1000PCS	