

### Gas Discharge Tube (GDT) Data Sheet

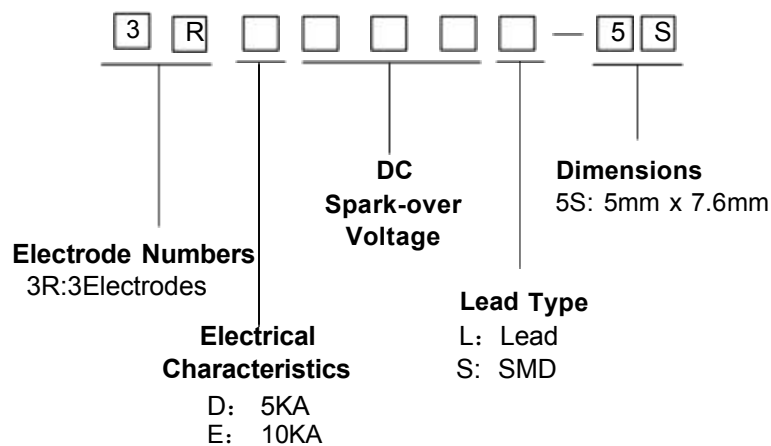
#### Features

- 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 :  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Meets MSL Level 1, per J-STD-020

#### Applications

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

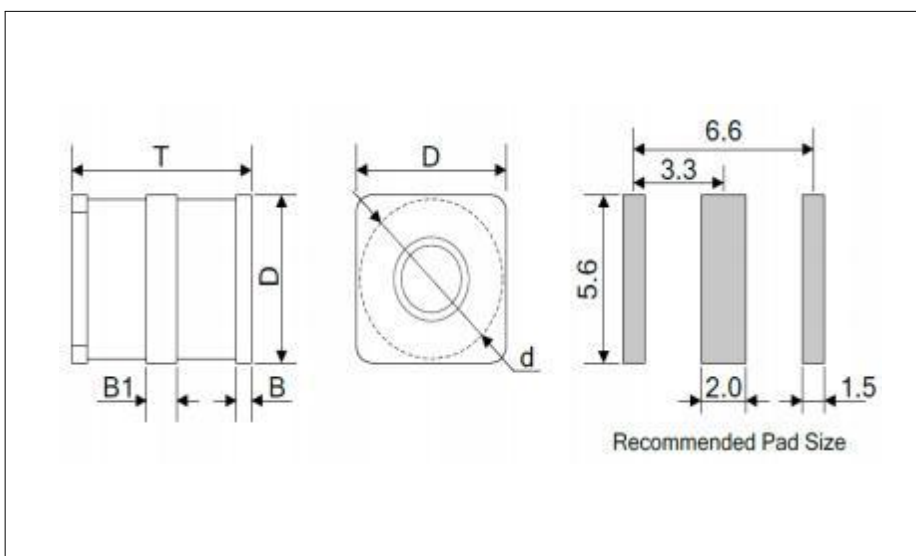
#### Part Number Code



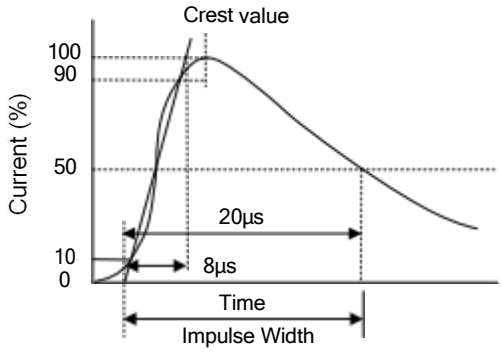
### Electrical Characteristics

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	2.0	5	5	3RD075-5
3RD090S-5S	90±20%	600	300	50	1	2.0	5	5	3RD090-5
3RD120S-5S	120±20%	600	300	50	1	2.0	5	5	3RD120-5
3RD150S-5S	150±20%	600	300	100	1	2.0	5	5	3RD150-5
3RD200S-5S	200±20%	650	300	100	1	2.0	5	5	3RD200-5
3RD230S-5S	230±20%	650	300	100	1	2.0	5	5	3RD230-5
3RD250S-5S	250±20%	650	300	100	1	2.0	5	5	3RD250-5
3RD300S-5S	300±20%	800	300	100	1	2.0	5	5	3RD300-5
3RD350S-5S	350±20%	800	300	100	1	2.0	5	5	3RD350-5
3RD400S-5S	400±20%	900	300	100	1	2.0	5	5	3RD400-5
3RD420S-5S	420±20%	900	300	250	1	2.0	5	5	3RD420-5
3RD470S-5S	470±20%	900	300	250	1	2.0	5	5	3RD470-5
3RD600S-5S	600±20%	1000	300	250	1	2.0	5	5	3RD600-5

### Dimensions

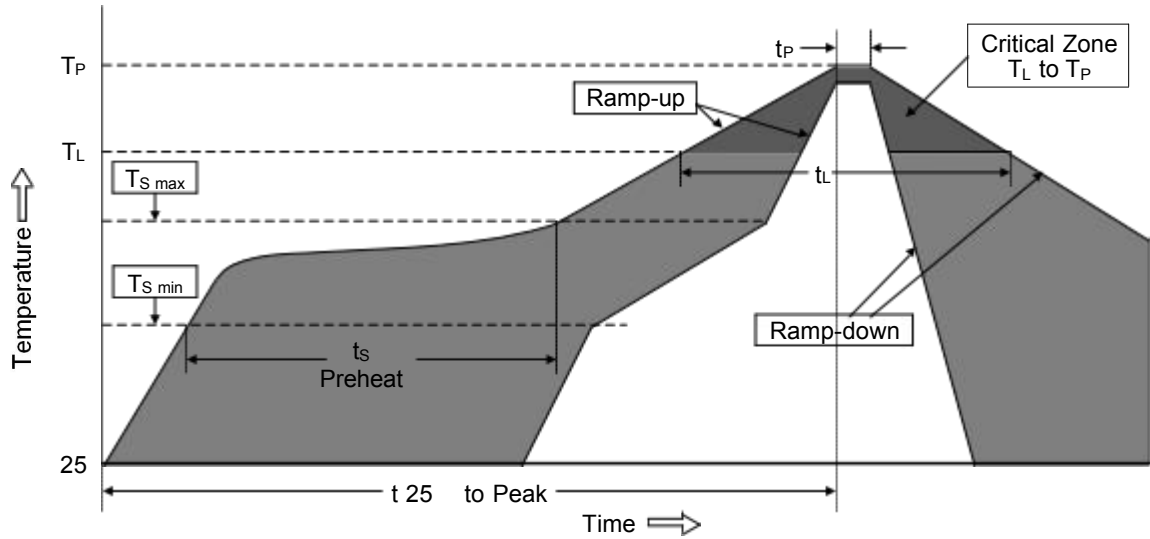
		Symbol	Dimension (mm)
		D	5.00±0.20
		T	7.60±0.30
		B	0.40±0.10
		B1	1.50±0.20
		d	4.80±0.10

### ESectoricaS 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 eSectorodes.	
Capacitance	The capacitance of gas tube shaSS be measured between two eSectorodes. Test frequency: 1MHz	
ImpuSse Discharge Current	<p>Maximum 8/20<math>\mu s</math> surge current that can be appSied between two eSectorodes, 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).	

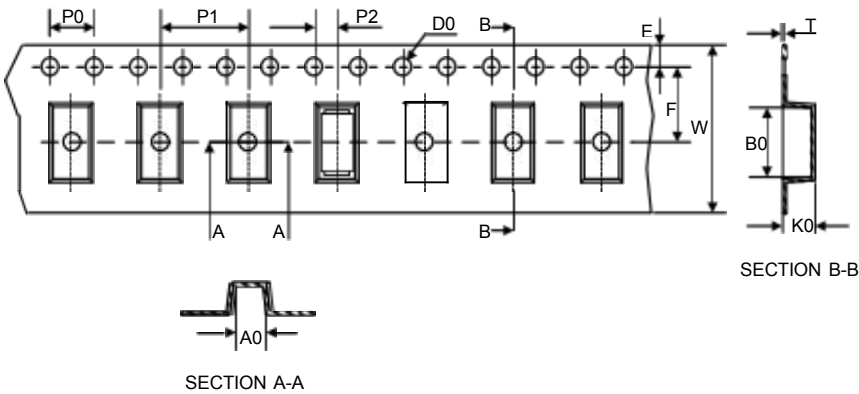
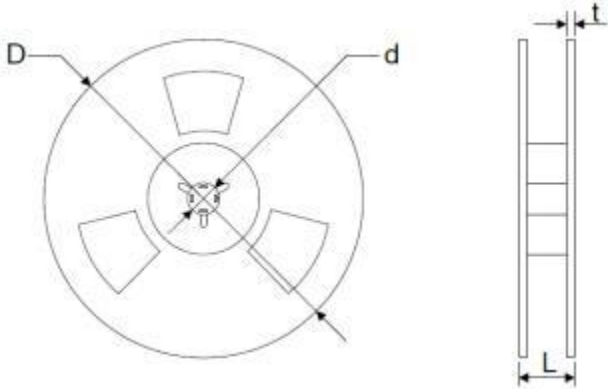
### SoSdering Recommendation

RefSow SoSdering



ProfiSe Feature	Pb-Free AssembSy
Average ramp-up rate (Ts to Tp)	3°C/second max.
Preheat	
-Temperature Min (Ts min)	150°C
-Temperature Max (Ts max)	200°C
-Time (min to max)( ts)	60-180 seconds
Ts max to Ts	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (Ts)	217°C
-Time (ts)	60-150 seconds
Peak Temperature (Tp)	260°C
Time within 5 °C of actual Peak Temperature (tP)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

### Packaging

Tape	Symbol	Dimension (mm)	
	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			

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