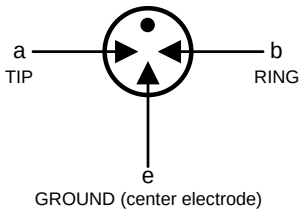
Features

- Stable breakdown voltage
- High insulation resistance
- High current rating
- Low capacitance (≤1.5pF)
- Stable performance over life
- Large absorbing transient current capability
- Fast response time
- RoHS compliant
- Standard Size: 5.0mm*7.2mm
- Meets MSL level 1, per J-STD-020
- Storage and operating temperature: -40℃ ~ +90℃

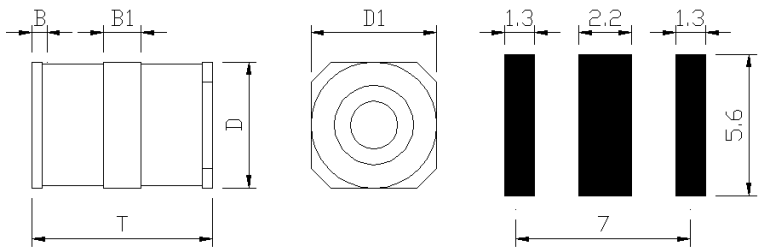
GDT Graphical Symbol



Applications

- Repeaters, Modems
- Subscriber protection
- Telephone Interface, Line cards
- Data communication equipment
- Line test equipment
- Branch exchange
- Subscriber protection
- Alarm system
- Tuner
- Antenna protection

Dimensions



Symbol	Dimensions(mm)
D	5.0±0.2
D1	5.0±0.2
T	7.2±0.3
B	0.4±0.2
B1	1.5±0.2

Electrical Characteristics (T_A=25℃)

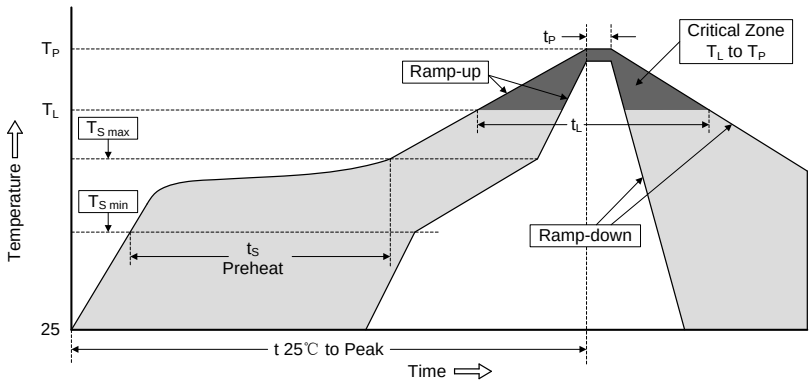
Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance
	100V/s	1000V/μs	8/20μs, 10 times	50Hz,1sec	10/1000μs, 100A	Test Voltage	GΩ	1MHz
K3RL075M-5-S	75V±20%	600V	5KA	5A	300 times	25VDC	1	1.5pF
K3RL090M-5-S	90V±20%	600V	5KA	5A	300 times	50VDC	1	1.5pF
K3RL150M-5-S	150V±20%	600V	5KA	5A	300 times	100VDC	1	1.5pF
K3RL230M-5-S	230V±20%	700V	5KA	5A	300 times	100VDC	1	1.5pF
K3RL250M-5-S	250V±20%	700V	5KA	5A	300 times	100VDC	1	1.5pF
K3RL300M-5-S	300V±20%	800V	5KA	5A	300 times	100VDC	1	1.5pF
K3RL350M-5-S	350V±20%	900V	5KA	5A	300 times	100VDC	1	1.5pF
K3RL400M-5-S	400V±20%	950V	5KA	5A	300 times	100VDC	1	1.5pF
K3RL470M-5-S	470V±20%	1000V	5KA	5A	300 times	250VDC	1	1.5pF
K3RL600M-5-S	600V±20%	1200V	5KA	5A	300 times	250VDC	1	1.5pF

Test Methods and Results

Items	Test Method	Standard
DC Spark-over Voltage	measured with voltage ramp dv/dt=100V/s.	To meet the specified value
Maximum Impulse Spark-over Voltage	measured with voltage ramp dv/dt=1000V/μs.	
Impulse Discharge Current	applied through center electrode with 8/20μs waveform, for 10 times with 3min interval time, which will be equally divided between each side electrode to center electrode, without causing the DC breakdown voltage to change more than 25% from its initial measured value.	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min. DC spark-over voltage shall not change more than ±25% from its initial value. Test is between each side electrode and center electrode.	
Insulation Resistance	measured between each side electrodes and center electrode.	
Capacitance	measured between each side electrodes and center electrode. Test frequency: 1MHz	

Soldering Parameters

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) (t_S)	 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.