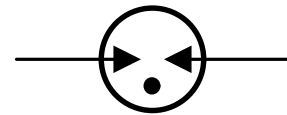


Features

- Stable breakdown voltage
- High insulation resistance
- High current rating
- Low capacitance ($\leq 1.5\text{pF}$)
- Stable performance over life
- Large absorbing transient current capability
- Fast response time
- RoHS compliant
- Standard Size: 8.0mm*8.0mm
- Meets MSL level 1, per J-STD-020
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$

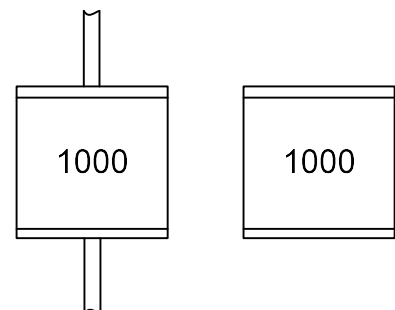
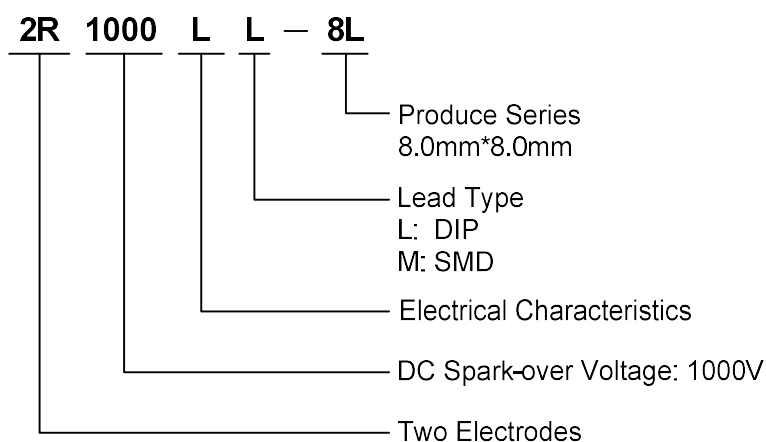
GDT Graphical Symbol



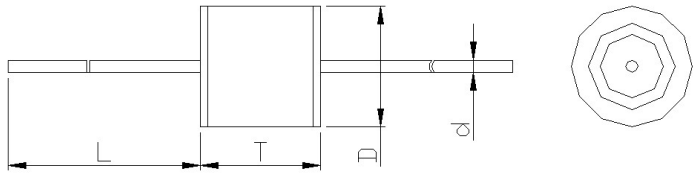
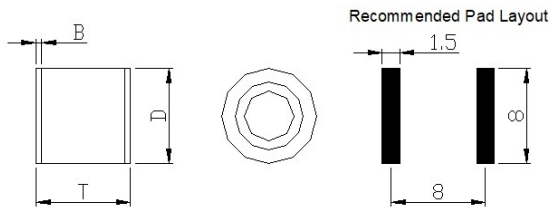
Applications

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

Part Number Code and Marking



Dimensions

L Type  M Type 	Item	Dimensions(mm)
	D	8.0±0.3
	T	8.0+0.6/-0.1
	d	0.8±0.1
	L	30.0 Max.
	B	0.5±0.1

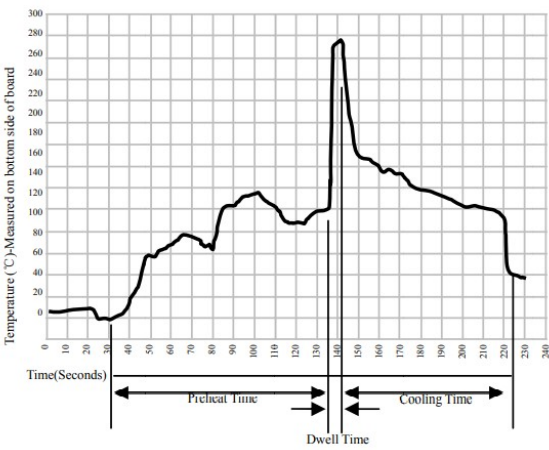
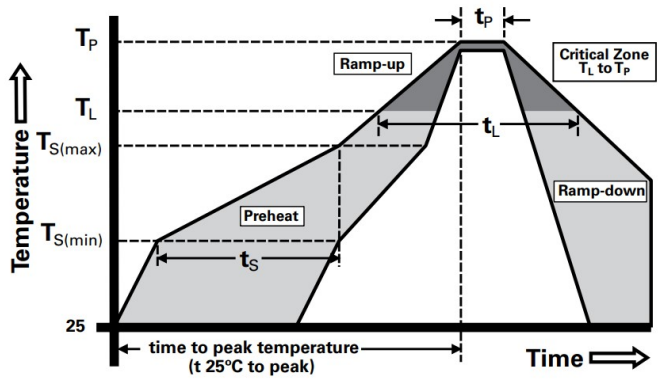
Electrical Characteristics (T_A=25°C)

Part Number		Marking	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance	AC Withstanding Voltage
			100V/s	1000V/μs	8/20μs, 10 times	50Hz, 1sec	10/1000μs, 100A	Test Voltage	GΩ	1MHz	
2R1000LL-8L	2R1000LM-8L	1000	1000V±20%	2200V	5KA	5A	100 times	500VDC	1	1.5pF	-
2R1200LL-8L	2R1000LM-8L	1200	1200V±20%	2200V	5KA	5A	100 times	500VDC	1	1.5pF	-
2R1400LL-8L	2R1400LM-8L	1400	1400V±20%	2200V	5KA	5A	100 times	500VDC	1	1.5pF	-
2R1500LL-8L	2R1500LM-8L	1500	1500V±20%	2300V	5KA	5A	100 times	500VDC	1	1.5pF	-
2R1600LL-8L	2R1600LM-8L	1600	1600V±20%	2300V	5KA	5A	100 times	500VDC	1	1.5pF	-
2R2000LL-8L	2R2000LM-8L	2000	2000V±20%	3000V	5KA	5A	100 times	500VDC	1	1.5pF	-
2R2500LL-8L	2R2500LM-8L	2500	2500V±20%	3600V	5KA	5A	100 times	500VDC	1	1.5pF	1250V, 1min
2R2700KL-8L	2R2700KM-8L	2700	2700V±20%	4000V	3KA	3A	100 times	1000VDC	1	1.5pF	1250V, 1min
2R3000KL-8L	2R3000KM-8L	3000	3000V±20%	4200V	3KA	3A	100 times	1000VDC	1	1.5pF	1500V, 1min
2R3500KL-8L	2R3500KM-8L	3500	3500V±20%	5000V	3KA	3A	100 times	1000VDC	1	1.5pF	1800V, 1min
2R3600KL-8L	2R3600KM-8L	3600	3600V±20%	5200V	3KA	3A	100 times	1000VDC	1	1.5pF	1800V, 1min

Test Methods and Results

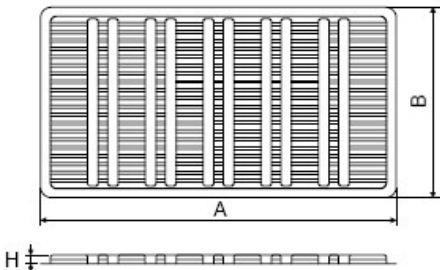
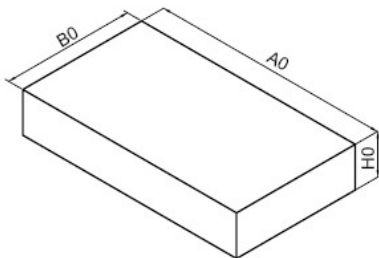
Items	Test Method	Standard
DC Spark-over Voltage	measured with voltage ramp $dv/dt=100V/s$.	To meet the specified value
Maximum Impulse Spark-over Voltage	measured with voltage ramp $dv/dt=1000V/\mu s$.	
Impulse Discharge Current	applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time,	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min.	
Insulation Resistance	measured between two electrodes.	
Capacitance	measured between two electrodes. Test frequency: 1MHz	

Soldering Parameters

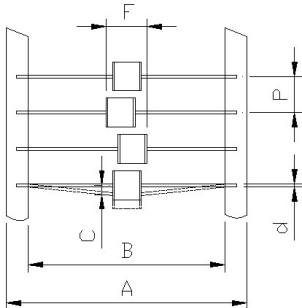
Wave Soldering		Reflow Soldering	
			
		Profile Feature	Pb-Free Assembly
		Average ramp-up rate (T_L to T_P)	3°C/second max.
		Preheat	
		-Temperature Min ($T_{S\ min}$)	150°C
		-Temperature Max ($T_{S\ max}$)	200°C
		-Time (min to max) (t_s)	60-180 seconds
		$T_{S\ max}$ to T_L	
		-Ramp-up Rate	3°C/second max.
		Time maintained above:	
		-Temperature (T_L)	217°C
		-Time (t_L)	60-150 seconds
Item	Conditions	Peak Temperature (T_P)	260°C
Peak Temperature	265°C	Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Dipping Time	10 seconds	Ramp-down Rate	6°C/second max.
Soldering	1 time	Time 25°C to Peak Temperature	8 minutes max.

Packaging Specification

Axial Packing (Bulk)

Skin packing		
	Symbol	Dimension (mm)
	A	265.0±5.0
	B	146.0±5.0
	H	9.5±1.0
Inner box	Quantity: 100pcs	
		
	A0	270.0±2.0
	B0	150.0±2.0
	H0	50.0±2.0
	Quantity: 500pcs	

Axial Packing (Tape & Reel)

Tape		
	Symbol	Dimension (mm)
	P	10.0±0.5
	A	65.0±3.0
	B	53.0±2.0
	C	1.2 Max.
	d	0.8±0.1
Reel	F	8.4 Max.
	D0	16.0±1.0
	D1	82.0±2.0
	D2	330.0±2.0
	W	70.0±0.5
	T	3.0±0.2
	Quantity: 800pcs	

Packaging Specification

SMD Packing (Tape & Reel)

Tape		Symbol	Dimension (mm)
		W	16.0±0.2
		P0	4.0±0.1
		P1	12.0±0.2
		P2	2.0±0.1
		D0	1.55±0.1
		E	1.75±0.1
		F	7.5±0.1
		A0	8.3±0.1
		K0	8.3±0.1
		B0	8.8±0.1
		t0	0.5±0.1
		D0	13.3±1.0
		D1	100.0±2.0
Reel		D2	330.0±2.0
		W	16.5±0.5
		Quantity: 500pcs	