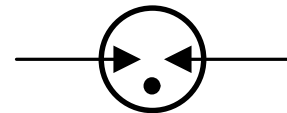


Features

- 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: 5.5mm*6.0mm
- Meets MSL level 1, per J-STD-020
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$

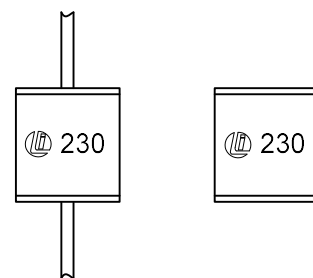
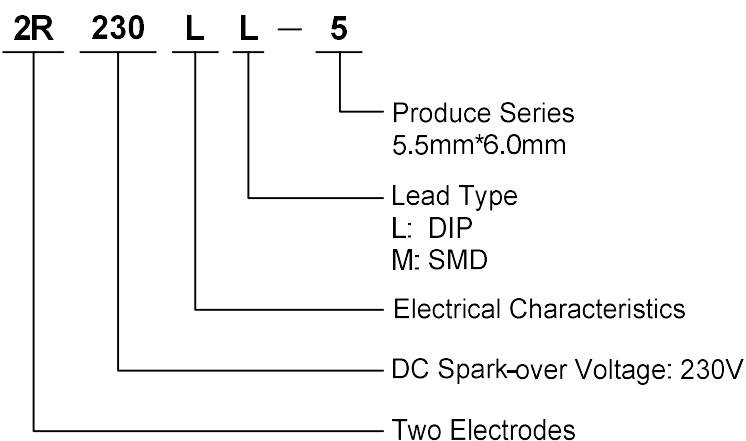
GDT Graphical Symbol



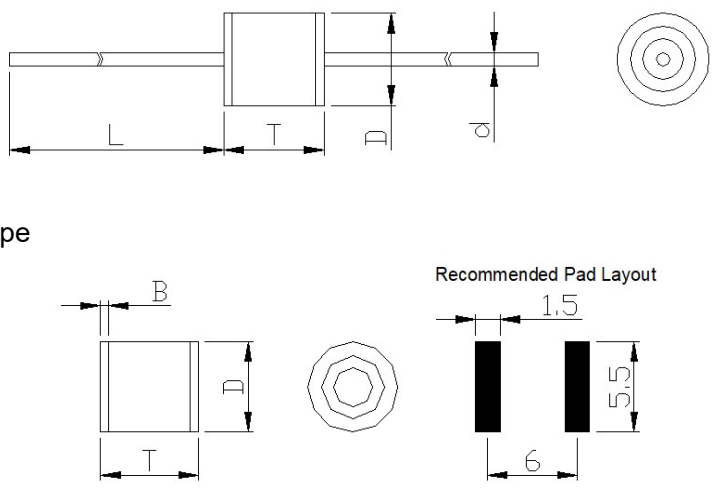
Applications

- 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		Item	Dimensions(mm)
		D	5.5±0.3
		T	6.0±0.3
		d	0.8±0.1
		L	30.0 Max.
		B	0.5±0.1

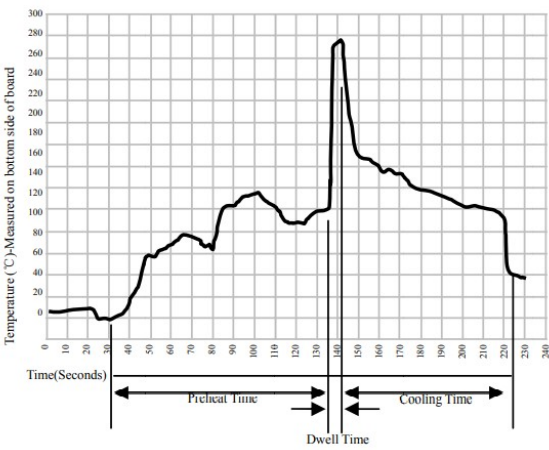
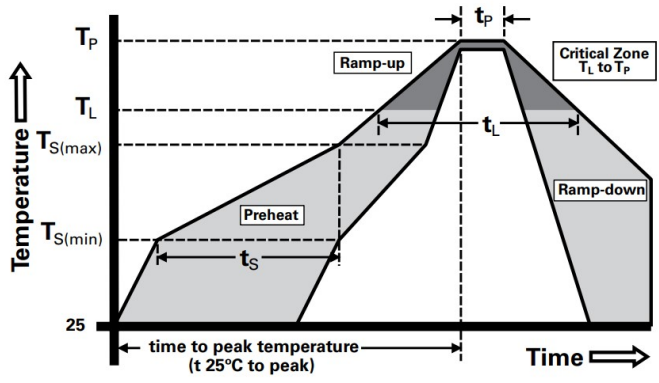
Electrical Characteristics (T_A=25°C)

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	
							Test Voltage	GΩ		
2R075LL-5	2R075LM-5	075	75V±20%	600V	5KA	5A	300 times	25VDC	1	1.5pF
2R090LL-5	2R090LM-5	090	90V±20%	600V	5KA	5A	300 times	50VDC	1	1.5pF
2R150LL-5	2R150LM-5	150	150V±20%	700V	5KA	5A	300 times	100VDC	1	1.5pF
2R230LL-5	2R230LM-5	230	230V±20%	700V	5KA	5A	300 times	100VDC	1	1.5pF
2R250LL-5	2R250LM-5	250	250V±20%	800V	5KA	5A	300 times	100VDC	1	1.5pF
2R300LL-5	2R300LM-5	300	300V±20%	900V	5KA	5A	300 times	100VDC	1	1.5pF
2R350LL-5	2R350LM-5	350	350V±20%	900V	5KA	5A	300 times	100VDC	1	1.5pF
2R400LL-5	2R400LM-5	400	400V±20%	1000V	5KA	5A	300 times	100VDC	1	1.5pF
2R470LL-5	2R470LM-5	470	470V±20%	1100V	5KA	5A	300 times	250VDC	1	1.5pF
2R600LL-5	2R600LM-5	600	600V±20%	1300V	5KA	5A	300 times	250VDC	1	1.5pF
2R800LL-5	2R800LM-5	800	800V±20%	1500V	5KA	5A	300 times	250VDC	1	1.5pF

Test Methods and Results

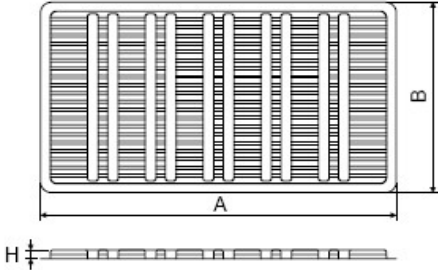
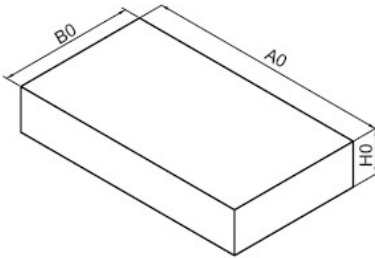
Items	Test Method	Standard
DC Spark-over Voltage	measured with voltage ramp $dv/dt=100V/s$.	To meet the specified value
Maximum Impulse Spark-over Voltage	measured with voltage ramp $dv/dt=1000V/\mu s$.	
Impulse Discharge Current	applied between two electrodes, 5 positive and 5 negative surges, with 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

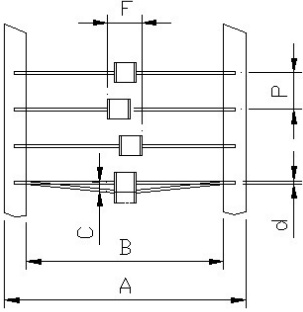
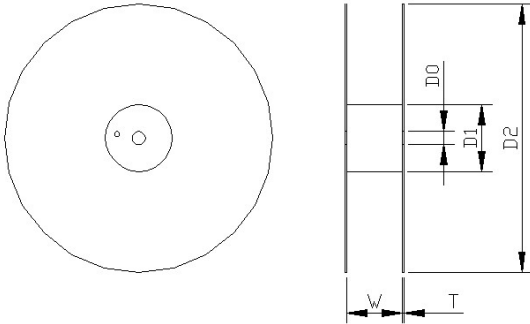
Wave Soldering		Reflow Soldering	
			
		Profile Feature	Pb-Free Assembly
		Average ramp-up rate (T_L to T_P)	3°C/second max.
		Preheat	
		-Temperature Min ($T_{S\ min}$)	150°C
		-Temperature Max ($T_{S\ max}$)	200°C
		-Time (min to max) (t_s)	60-180 seconds
		$T_{S\ max}$ to T_L	
		-Ramp-up Rate	3°C/second 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)

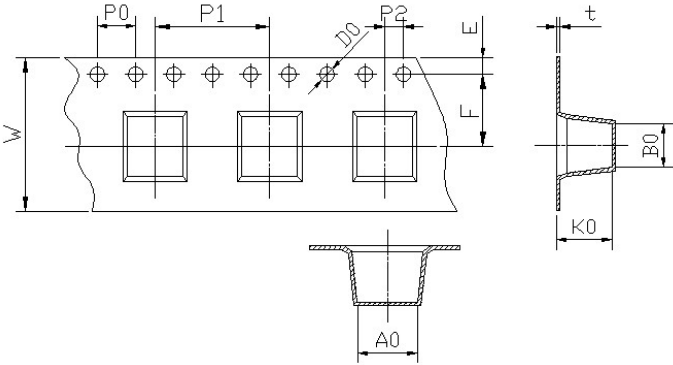
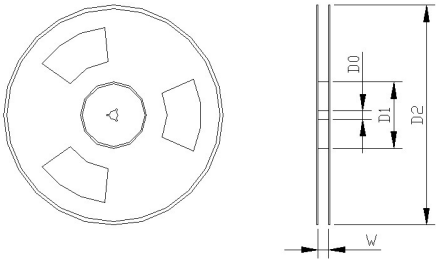
Skin packing		Symbol	Dimension (mm)
		A	265.0±5.0
		B	146.0±5.0
		H	8.5±1.0
		Quantity: 100pcs	
Inner box		A0	270.0±2.0
		B0	150.0±2.0
		H0	50.0±2.0
		Quantity: 500pcs	

Axial Packing (Tape & Reel)

Tape		Symbol	Dimension (mm)
		P	10.0±0.5
		A	65.0±3.0
		B	52.0±2.0
		C	1.2 Max.
		d	0.8±0.1
		F	7.4 Max.
		Reel	
		D1	82.0±2.0
		D2	330.0±2.0
		W	70.0±0.5
		T	3.0±0.2
		Quantity: 1000pcs	

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	5.8±0.1	
		K0	5.8±0.1	
		B0	6.3±0.1	
		t0	0.5±0.1	
		<p data-bbox="89 1111 150 1137">Reel</p> 	D0	13.3±1.0
			D1	100.0±2.0
D2	330.0±2.0			
W	16.5±0.5			
Quantity: 800pcs				