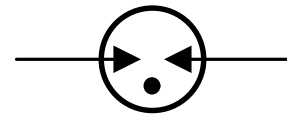


Features

- Stable breakdown voltage
- High insulation resistance
- High current rating
- Low capacitance ($\leq 0.5\text{pF}$)
- Stable performance over life
- Large absorbing transient current capability
- Fast response time
- RoHS compliant
- Standard Size: 2.8mm*3.5mm
- Meets MSL level 1, per J-STD-020
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$

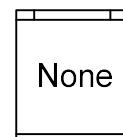
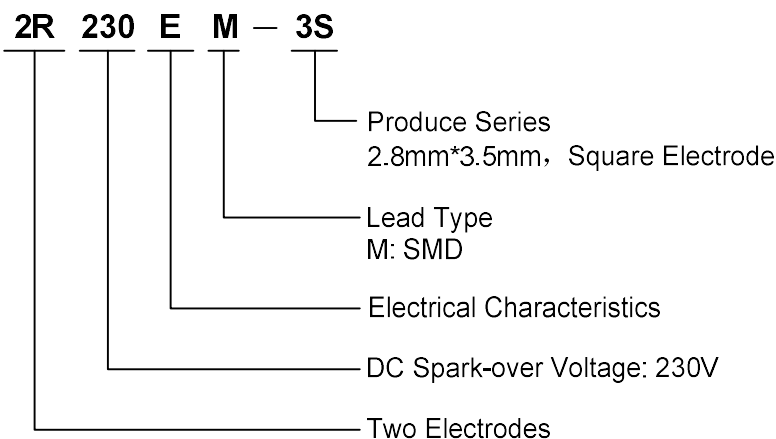
GDT Graphical Symbol



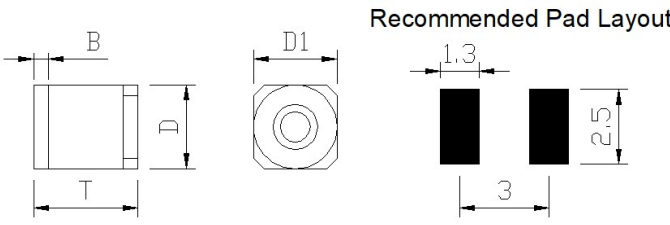
Applications

- 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

	Symbol	Dimensions(mm)
	D	2.8±0.3
	D1	2.8±0.3
	T	3.5±0.3
	B	0.5±0.1

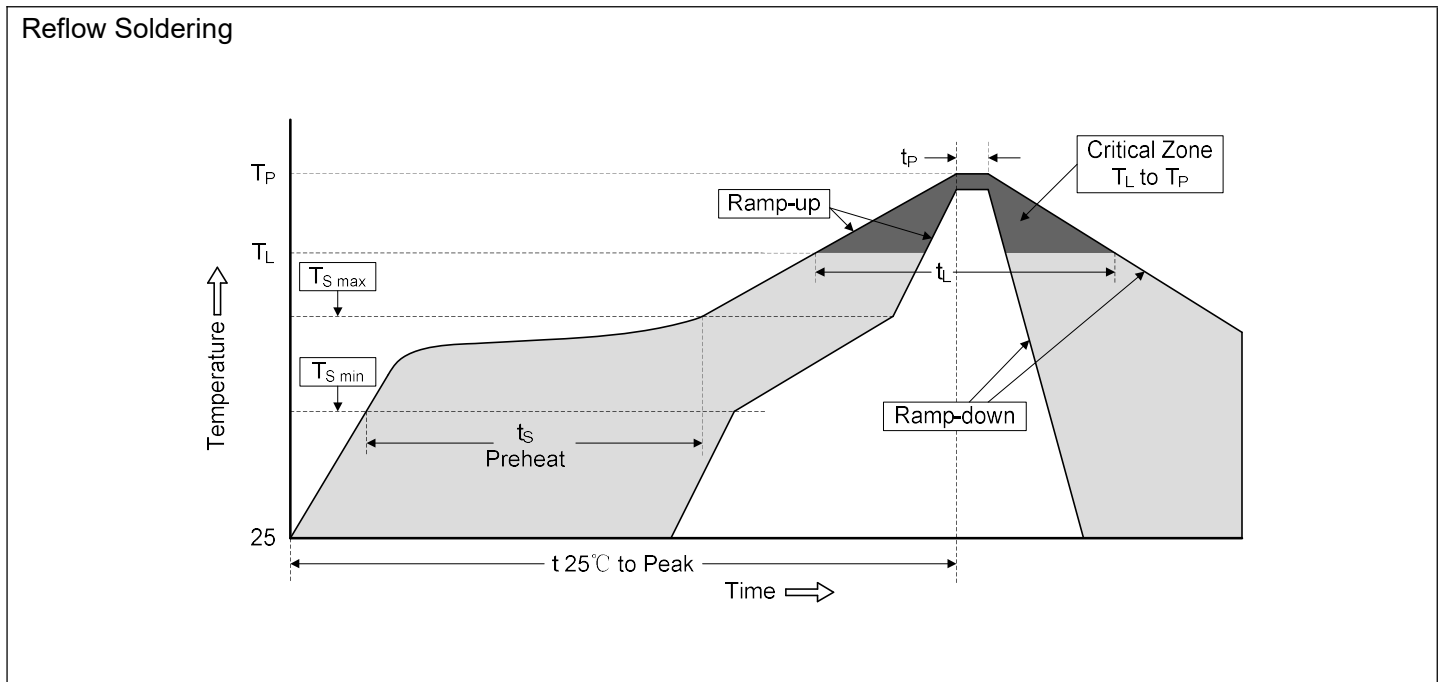
Electrical Characteristics (T_A=25°C)

Part Number	Marking	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Nominal Impulse Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance
		100V/s	1000V/μs	8/20μs, 10 times	8/20μs, 100A	Test Voltage	GΩ	1MHz
2R090EM-3S	None	90V±30%	650V	1KA	300 times	50VDC	1	0.5pF
2R200EM-3S	None	200V±30%	700V	1KA	300 times	100VDC	1	0.5pF
2R300EM-3S	None	300V±30%	900V	1KA	300 times	100VDC	1	0.5pF
2R400EM-3S	None	400V±30%	1100V	1KA	300 times	100VDC	1	0.5pF
2R500EM-3S	None	500V±30%	1300V	1KA	300 times	100VDC	1	0.5pF

Test Methods and Results

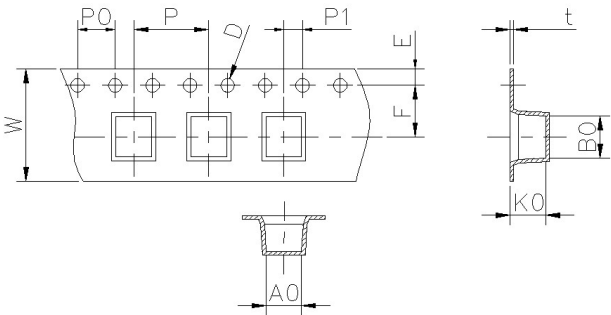
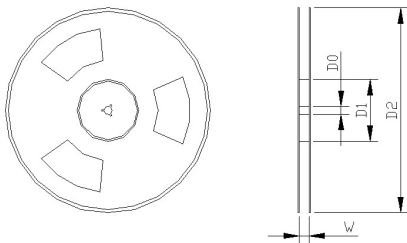
Items	Test Method	Standard
DC Spark-over Voltage	measured with voltage ramp dv/dt=100V/s.	To meet the specified value
Maximum Impulse Spark-over Voltage	measured with voltage ramp dv/dt=1000V/μs.	
Impulse Discharge Current	applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes 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



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 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 Specification

Tape	Symbol	Dimension (mm)	
	W	12.0±0.2	
	P0	4.0±0.1	
	P1	8.0±0.2	
	P2	2.0±0.1	
	D0	1.55±0.1	
	E	1.75±0.1	
	F	5.5±0.1	
	A0	3.2±0.1	
	K0	3.2±0.1	
	B0	3.9±0.1	
	t0	0.35±0.1	
		D0	13.3±1.0
		D1	100.0±2.0
D2		330.0±2.0	
W		12.5±0.5	
Quantity: 2500pcs			