

Ø5.5X7.6mm Series

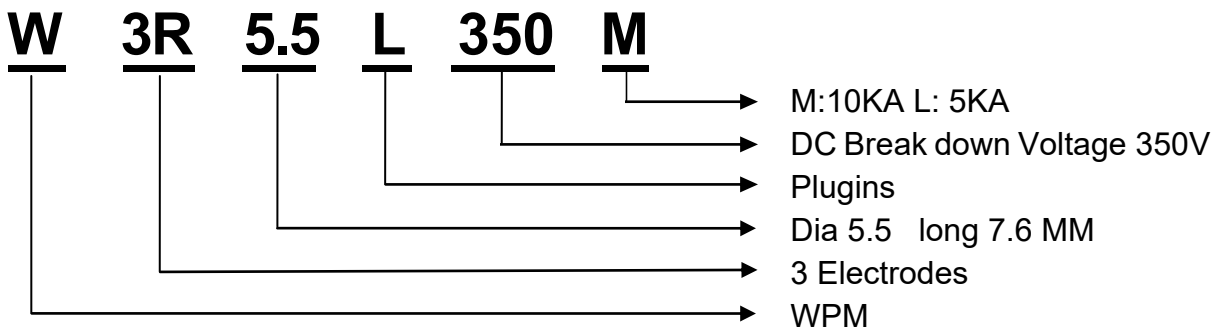
1. Provide ultra-fast response to surge voltage from slow-rising
2. surge of 100V/s to rapid-rising surge of 1KV/μs
3. Stable breakdown voltage
4. High insulation resistance
5. Low capacitance ($\leq 1.0\text{pF}$)
6. High holdover voltage
7. Large absorbing transient current capability
8. Micro-Gap Design
9. Size: 5.0mm*7.6mm
10. Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
11. Meets MSL level 1, per J-STD-020
12. Safety certification: E221527



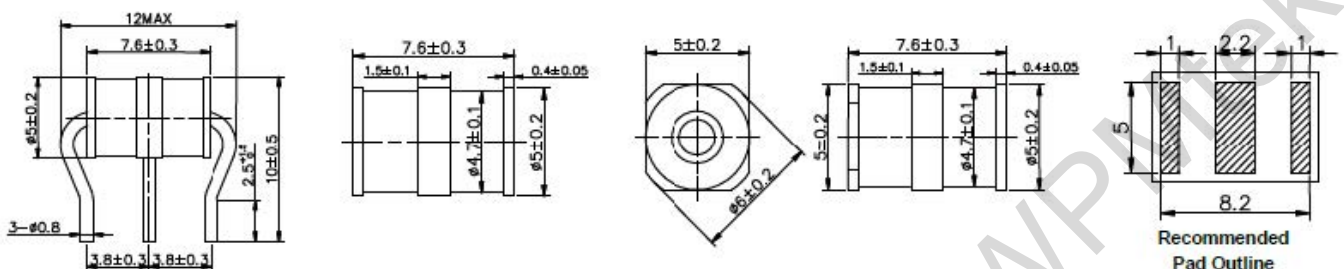
Applications

1. Repeaters, Modems
2. Telephone Interface, Line cards
3. Data communication equipment
4. Line test equipment

Part Number Code



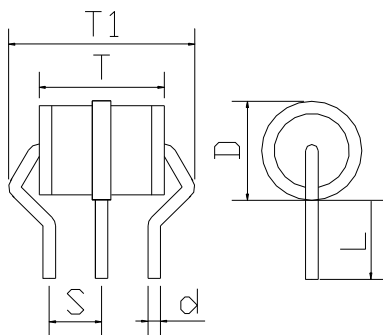
Drawing



Specification

Model Name	DC Breakdown Voltage (V)	Maximum Impulse Breakdown Voltage (V)		Maximum Impulse Discharge Current (8/20 μ s) (KA)		Normal Alternating Discharge Current(A)		Impulse Life (10/1000 μ s) (100A)	DC Holdover Voltage (V)	Minimum Insulation Resistance (G Ω)	Maximum Capacitance (pf)
	100V/s	100V/ μ s	1000V/ μ s	1 time	10 times	50Hz, 1sec	Single 9cycles	times	<150ms	Note2	1MHZ
3R-75	75 $\pm$ 20%	600	700	10	5	5	15	300	52	1	1
3R-90	90 $\pm$ 20%	600	700						52	1	1
3R-120	120 $\pm$ 20%	600	700						52	1	1
3R-130	130 $\pm$ 20%	600	700						52	1	1
3R-145	145 $\pm$ 20%	600	700						52	1	1
3R-230	230 $\pm$ 20%	600	700						80	1	1
3R-250	250 $\pm$ 20%	600	700						80	1	1
3R-300	300 $\pm$ 20%	700	900						150	1	1
3R-350	350 $\pm$ 20%	700	900						150	1	1
3R-400	400 $\pm$ 20%	800	1000						150	1	1
3R-500	500 $\pm$ 20%	900	1100						150	1	1
3R-600	600 $\pm$ 20%	1300	1500	5	2.5	2.5	5	300	150	1	1
3R-800	800 $\pm$ 20%	1500	1700						150	1	1

Outline Drawing

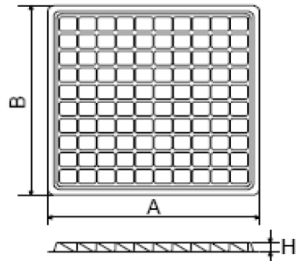


Item	Dimensions	
	Spec.	Tolerance
D	5.0	+0.2,-0.8
T	7.6	$\pm$ 0.5
T1	12.00	+0.8,-0.5
L	5	$\pm$ 0.5
S	3.8	$\pm$ 0.4
d	0.8	$\pm$ 0.05

Packing

Axial Packing (Box)

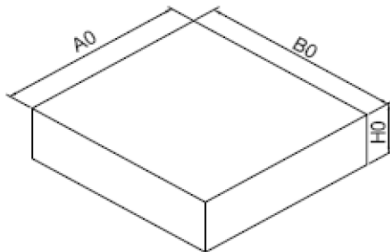
Skin packing



Symbol	Dimension (mm)	
	Spec.	Tolerance
A	217.0	±2.0
B	207.0	±2.0
H	10.3	±0.5

Quantity: 100pcs

Inner box

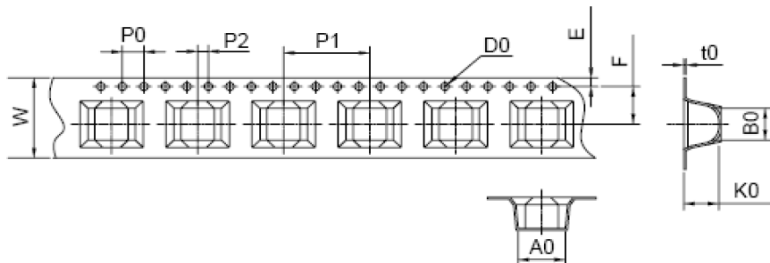


A0	225.0	±2.0
B0	210.0	±2.0
H0	60.0	±2.0

Quantity: 500pcs

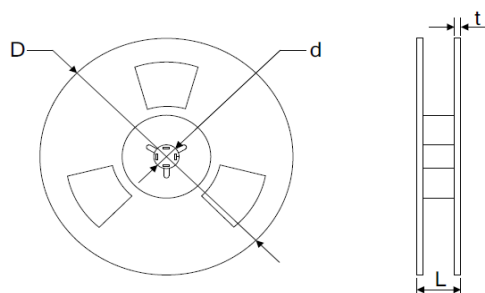
SMD Packing (Tape & Reel)

Tape



Symbol	Dimension (mm)	
	Spec.	Tolerance
W	16.00	±0.20
P0	4.00	±0.10
P1	16.00	±0.10
P2	2.00	±0.10
D0	1.55	±0.05
E	1.75	±0.10
F	7.50	±0.10
A0	8.80	±0.10
K0	6.20	±0.10
B0	6.35	±0.10
t0	0.50	±0.05

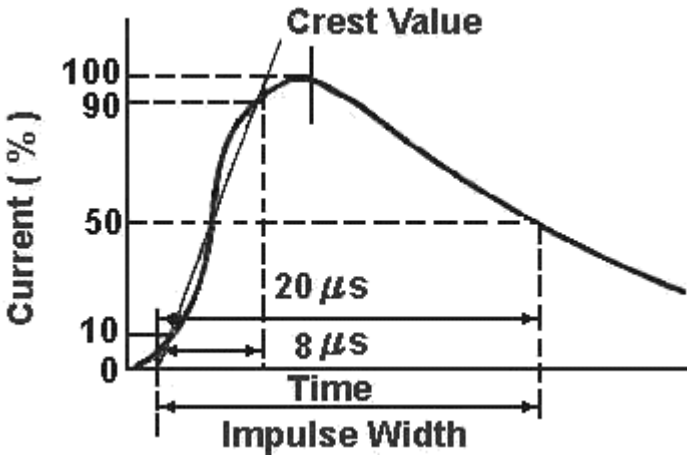
Reel



D	330.00	±2.00
d	13.00	±0.50
L	20.00	±2.00
t	2.00	±0.20

Quantity: 600pcs

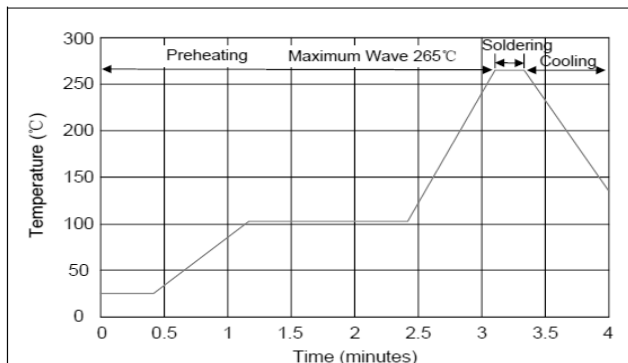
Electrical Rating

Item	Test Condition / Description	Requirement
DC Breakdown Voltage	The voltage is measured with a low rate of rise $dv/dt \div 100 \text{ v/s}$	To meet the specified value
Maximum Impulse	The maximum impulse breakdown voltage is measured with a rise time of $dv/dt \div 1000 \text{ v/}\mu\text{s}$	
Breakdown Voltage	The maximum current within gas tube voltage change of $\pm 20\%$ when one impulse is applied. Applied waveform : 8/20 μsec	
Maximum Impulse Discharge Current		
DC Holdover Voltage	The maximum DC voltage across the two terminals of gas tube under which it may be expected to return to the high impedance state after the gas tube breakdown.	
Insulation Resistance	The resistance of gas tube shall be measured each terminal to each other terminal. Applied voltage: gas tube dc breakdown voltage under 150V, the test voltage is 50V dc; with all other types at 100V dc.	
Capacitance	The capacitance of gas tube shall be measured each terminal to each other terminal. Test frequency : 1 KHZ In measurements involving 3-electrode gas tubes, the terminal not being tested shall be connected to a ground plane.	

Recommended solder profile

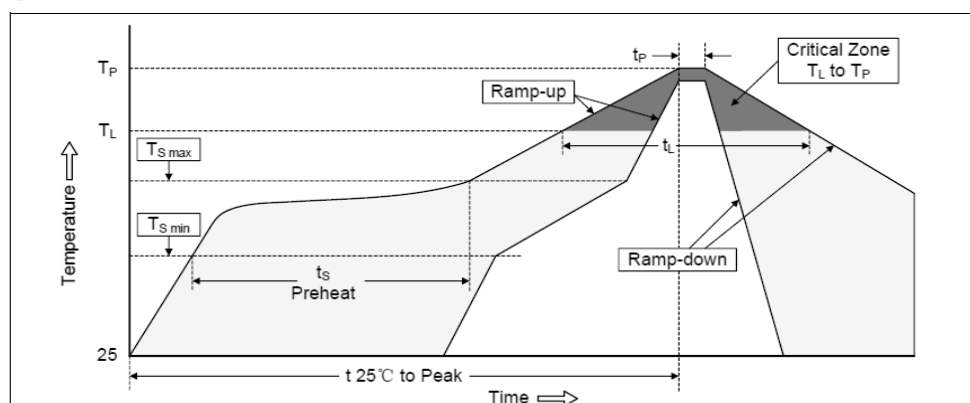
Recommended Soldering Conditions

Wave Soldering



Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds
Soldering	1 time

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\min}$) -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.

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