

Chip Series

1. High insulation resistance
2. Low capacitance ($\leq 1.0\text{pF}$)
3. 10KA , 5KA 8/20 μs maximum surge current capacity in accordance with IEC61000-4-5
4. 6KV 10/700 μs maximum surge rating in accordance with ITU-TK.21
5. Surface mounted gas arrester
6. Micro-Gap Design
7. Size 5.4x5.4x5.0mm
8. Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
9. Meets MSL level 1, per J-STD-020
10. Safety certification:E221527



Applications

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

How to Order

WTG D 301 N - 545450

- Dim 5.4x5.4x5.0mm
- Tolerance of DC Spark-Over Voltage $\pm 20\%$
- DC Breakdown Voltage 300V
- 5KA
- WPMtek Logo

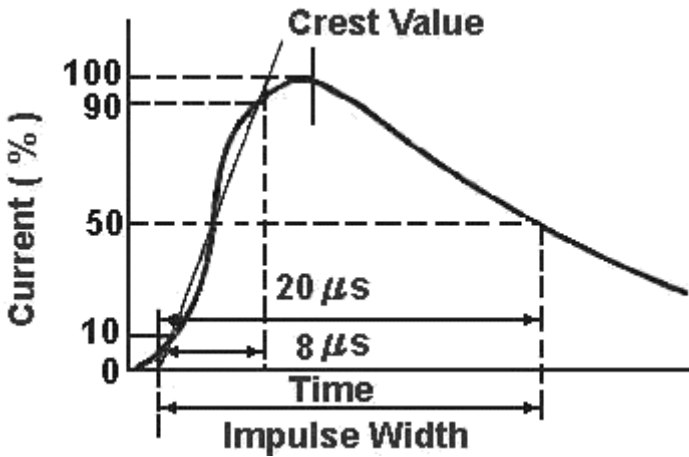
Drawing

M Type	Symbol	Dimension (mm)	
		Spec.	Tolerance
<p>Recommended Pad Size</p>	D	5.4	± 0.2
	T	5.0	± 0.2
	B	0.5	± 0.2

Electrical Specification

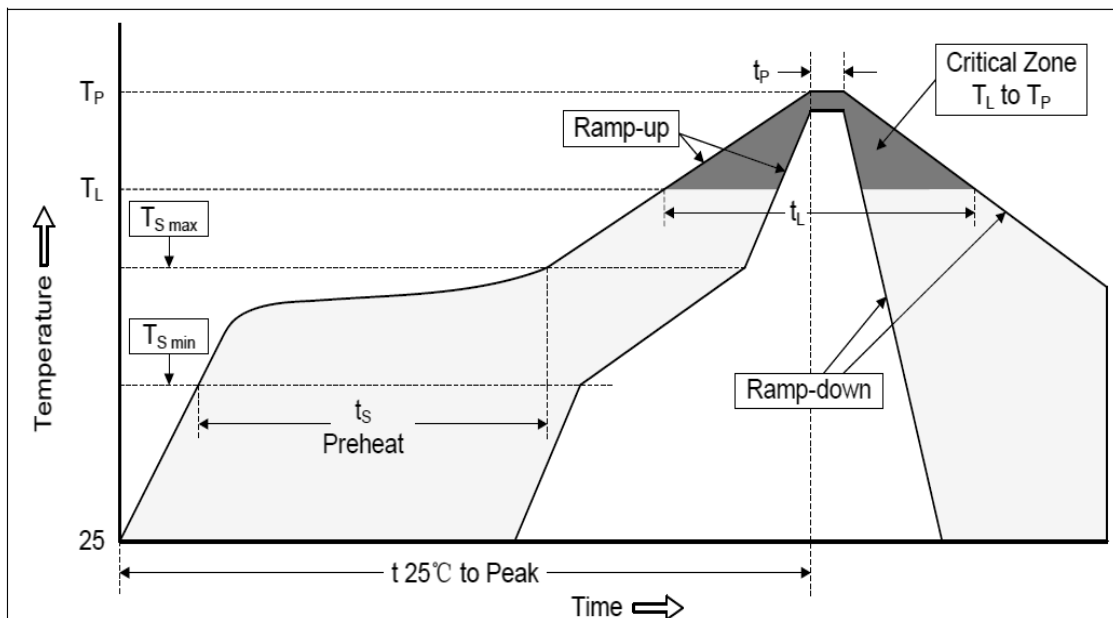
Model	DC Breakdown Voltage 100/s	Impulse Discharge Current	Impulse Withstanding Voltage Capacity	Impulse Spark-over Voltage 1kv/us	Insulation Resistance	Capacitance (1MHz 1V)
WTGF071M-545450	75V 55~95	8/20 us 10KA	10/700 us 6kV Positive/ Negative 5 Times	≧ 600v	1GΩ Min (DC50V)	1 pF Max.
WTGF091M-545450	90V 63~117			≧ 600v		
WTGF121M-545450	120V 84~156			≧ 650v		
WTGF151N-545450	150V 120~180			≧ 650v	1GΩ Min (DC 100V)	
WTGF201N-545450	200V 160~240			≧ 750v		
WTGF231N-545450	230V 184~276			≧ 750v		
WTGD301N-545450	300V 240~360	≧ 800v		1GΩ Min (DC 250V)		
WTGD351N-545450	350V 280~420	≧ 900v				
WTGD401N-545450	400V 320~480	≧ 1000v				
WTGD421N-545450	420V 336~504	≧ 1050v		1GΩ Min (DC 250V)		
WTGD471N-545450	470V 376~564	≧ 1100v				
WTGD501N-545450	500V 400~600	≧ 1200V				
WTGD601N-545450	600V 480~720	≧ 1500V				
WTGD801N-545450	800V 640~960	≧ 1800v				

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 : $8/20 \mu \text{ sec}$	
Maximum Impulse Discharge Current	 <p>The graph shows a typical 8/20 μs impulse waveform. The y-axis is 'Current (%)' with markings at 0, 10, 50, 90, and 100. The x-axis is 'Time' in μs. The curve starts at (0,0), rises to a peak labeled 'Crest Value' at 100%, and then decays. A vertical dashed line at 8 μs intersects the curve at 10% current. Another vertical dashed line at 20 μs intersects the curve at 50% current. A third vertical dashed line is at approximately 15 μs, intersecting the curve at 90% current. The 'Impulse Width' is the time interval between the 10% and 90% current levels, which is approximately 12 μs.</p>	
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.	

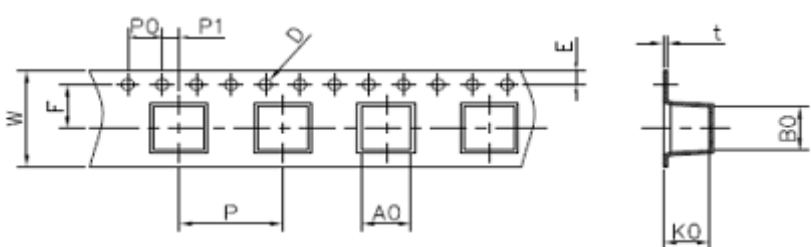
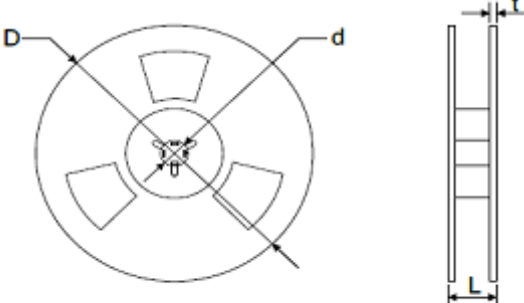
Recommended Solder Conditions

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat <ul style="list-style-type: none"> -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 <ul style="list-style-type: none"> -Ramp-up Rate 	3°C/second max.
Time maintained above: <ul style="list-style-type: none"> -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

Tape	Symbol	Dimension (mm)	
		Spec.	Tolerance
	W	12.00	±0.20
	P0	4.00	±0.10
	P	12.00	±0.10
	P1	2.00	±0.10
	D	1.55	±0.1
	E	1.75	±0.10
	F	5.50	±0.10
	A0	5.80	±0.10
	B0	5.40	±0.10
	K0	5.80	±0.10
	t	0.50	±0.10
	D	330.00	±1.00
	d	13.00	±0.50
	L	20.00	±0.50
	t	2.00	±0.20
	Quantity: 1000 pcs		

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