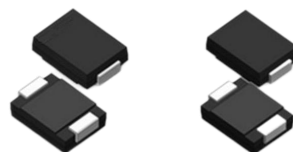
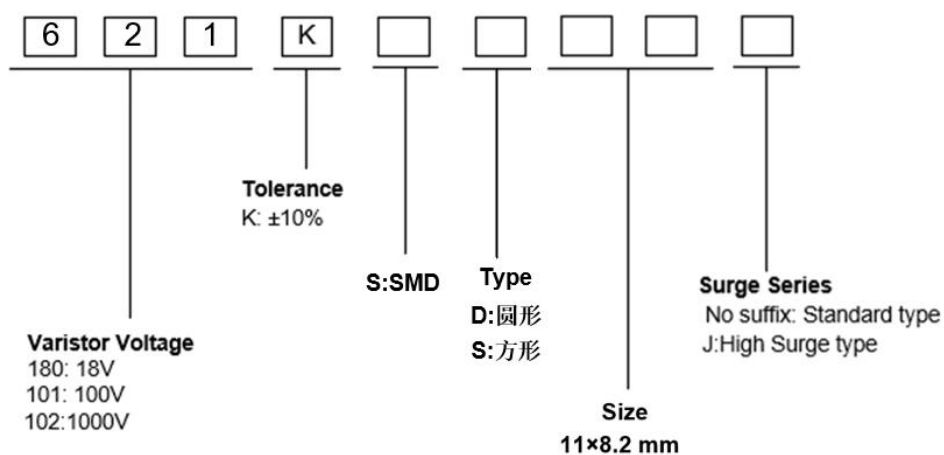


Features

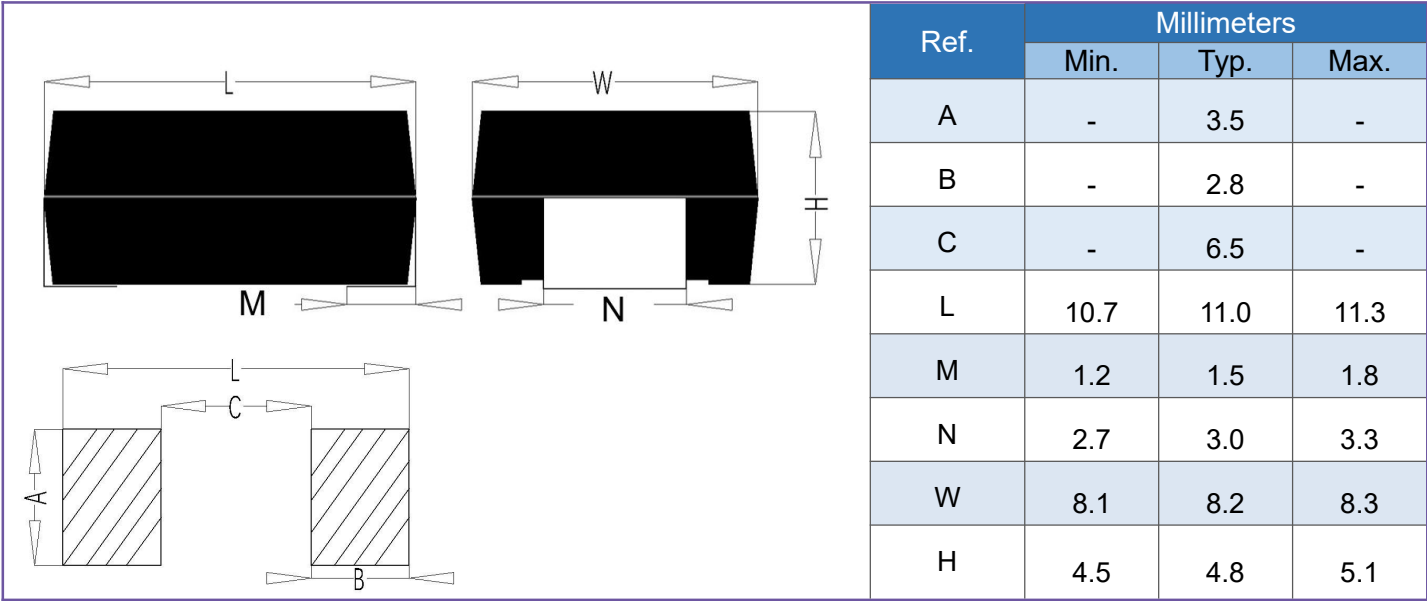
- ◆ Fast responding to transient over-voltage
- ◆ Large absorbing transient energy capability
- ◆ Low clamping ratio and no follow-on current
- ◆ Meets MSL level 1, per J-STD-020
- ◆ Operating Temperature: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- ◆ Storage Temperature: $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$



Part Number Coding System



Dimensions



Electrical Characteristics (T_A=25℃ unless otherwise noted)

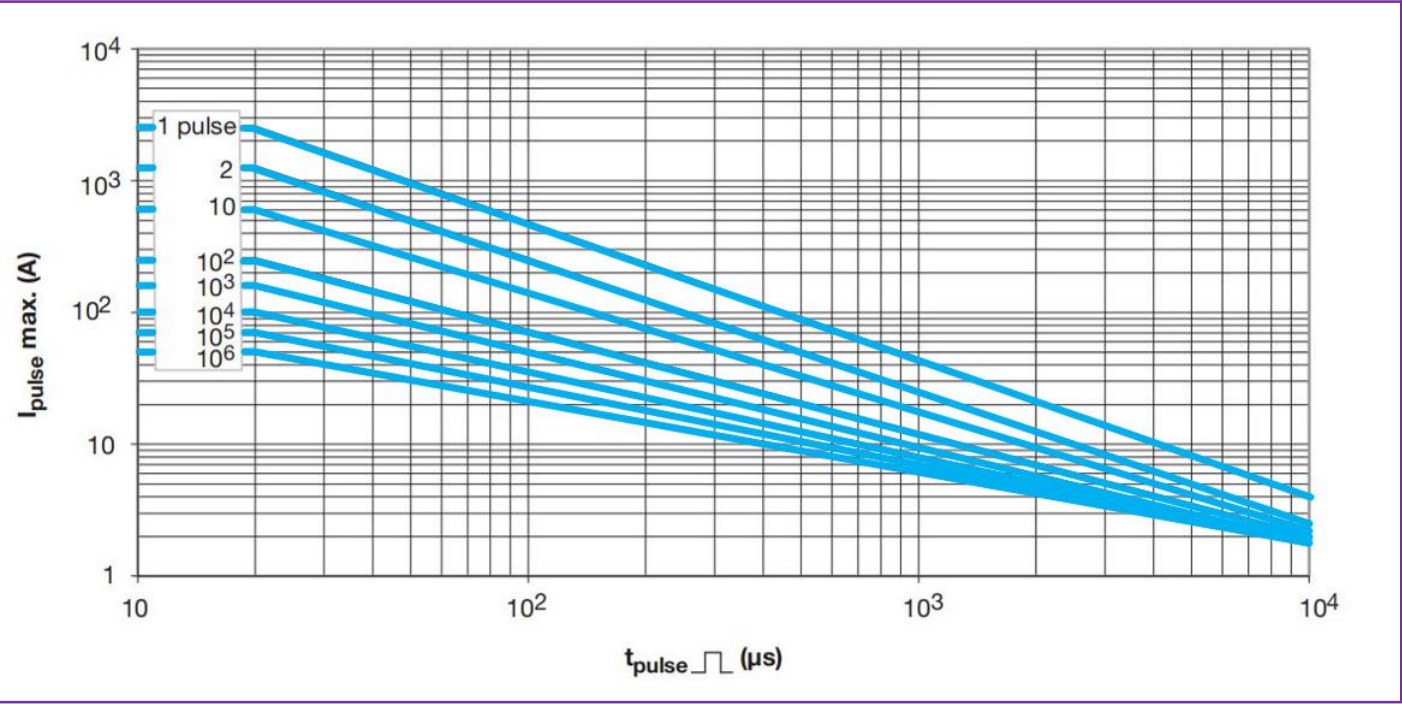
Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current (8/20μs)	Maximum Energy (10/1000μs)	Rated Power	Typical Capacitance (Reference)
	V _{AC} (V)	V _{DC} (V)		I _P (A)	V _C (V)				
Standard	V _{AC} (V)	V _{DC} (V)	V _{1mA} (V)	I _P (A)	V _C (V)	I (A) Standard	(J) Standard	(W)	@1KHz (pF)
621KSS1182	385	505	620(558~682)	25	1025	2500	72.0	0.4	160

Note: Leakage Current (@83% of V_{1mA}): I_R≤20μA

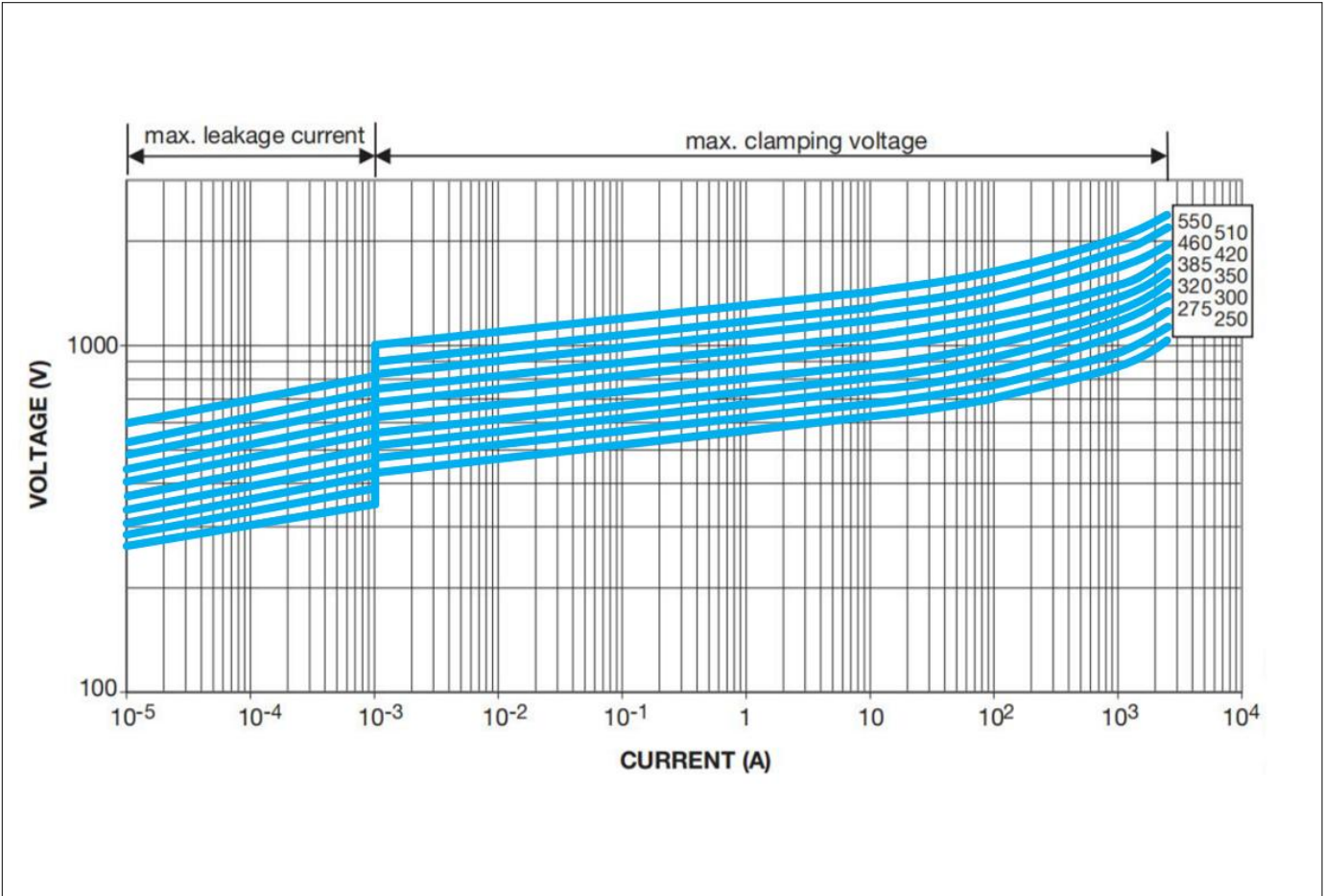
Reliability

Items	Standard	Specifications	Test conditions / Methods			
Climatic sequence	IEC60068-2-4	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	Dry heat: $(125 \pm 2^{\circ}C)$ 16 hrs Cycle damp heat:one $(55 \pm 2^{\circ}C)$ 24hrs, 95 ~ 100% RH Cold: $(-40 \pm 2^{\circ}C)$ 2hrs Cycle damp heat:one $(55 \pm 2^{\circ}C)$ 24hrs, 95 ~ 100% RH 5 remaining cycles,24hrs/cycle			
Damp Heat, Steady State	IEC60068-2-3	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	$40 \pm 2^{\circ}C$, 90~95% RH for 500hrs			
High Temperature Load	IEC60068-2-2	$ \Delta V1mA/V1mA \leq \pm 10\%$	Ambient Temp: $125 \pm 2^{\circ}C$ Duration: 1000hrs Load: Max. Allowable Voltage In AC			
Determination of resistance to wet heat	IEC60068-2-3	No visible damage $ \Delta V1mA/V1mA \leq \pm 10\%$	Ambient Temp: $125 \pm 2^{\circ}C$ Duration: 500hrs Load: Max. Allowable Voltage In AC			
Vibration	IEC60068-2-6	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	Frequency range: 10~55 Hz Amplitude: 0.75mm or 98m/s ² Direction: 3 mutually perpendicular directions,2hrs each			
Shock	IEC60068-2-27	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	Pulse waveform: half-sine wave、490m/s ² Pulse width:11ms Direction:3 mutually perpendicular directions,6times each			
Solderability	IEC60068-2-20	At least 95% of terminal electrode is covered by new solder	Solder Temp: $235 \pm 5^{\circ}C$ Dipping Time: 2 ± 0.5 sec			
Robustness of terminations	IEC60068-2-21	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	Tensile-force: 10 N ($\varnothing$ 0.6 and $\varnothing$ 0.8mm leads)、 20N ($\varnothing$ 1.0mm lead) Duration: 10 sec Bend-Power: 5N($\varnothing$ 0.6 and $\varnothing$ 0.8mm lead)、 10N ($\varnothing$ 1.0mm lead) Bending times: 2 times			
Resistance to Soldering Heat	IEC60068-2-20	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	Solder Temp: $260 \pm 5^{\circ}C$ Duration: 5 sec			
Temperature Cycle	IEC60068-2-14	No visible damage $ \Delta V1mA/V1mA \leq \pm 5\%$	The conditions shown below shall be repeated 5 cycles			
			Step	Temperature ($^{\circ}C$)	Period (minutes)	
			1	-40 ± 3	30 ± 3	
			2	Room temperature	5 ± 3	
			3	125 ± 3	30 ± 3	
			4	Room temperature	5 ± 3	
8/20uS Surge Life	IEC61051-1	No visible damage $\Delta Vb(1mA) \leq \pm 10\%$	8/20 μ S waveform,10 surge currents, unipolar, interval 30secs,amplitude corresponding to max. surge current derating curves for 20 μ S.			
10/1000 μ S Surge Life	IEC61051-1	No visible damage $ \Delta V1mA/V1mA \leq \pm 10\%$	10/1000 μ S waveform,10 surge currents, unipolar, interval 2mins,amplitude corresponding to max. surge current derating curves for 1000 μ S.			
Voltage Proof	IEC61051-1	No visible damage	Metal balls method, 2500Vac 1 min.			

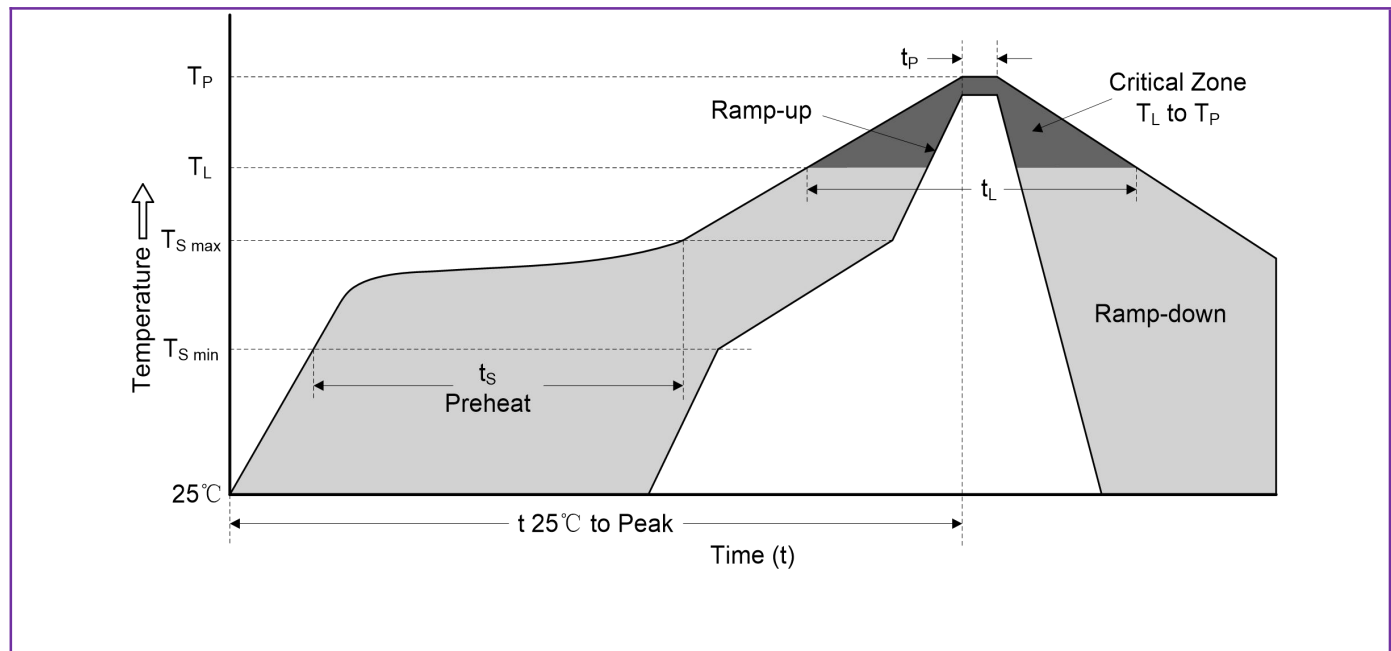
Maximum Surge Current Derating Curve



Maximum Leakage Current and Maximum Clamping Voltage Curve



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Pre heat	-Temperature Min ($T_{S\ min}$)	150°C
	-Temperature Max ($T_{S\ max}$)	200°C
	-Time (min to max) (t_s)	60-180 seconds
Average ramp-up rate (T_L to T_P)		3°C/second max.
$T_{S\ max}$ to T_L -Ramp-up Rate		3°C/second max.
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_s)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)°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(T_P)		8 minutes max.
Do not exceed		260°C