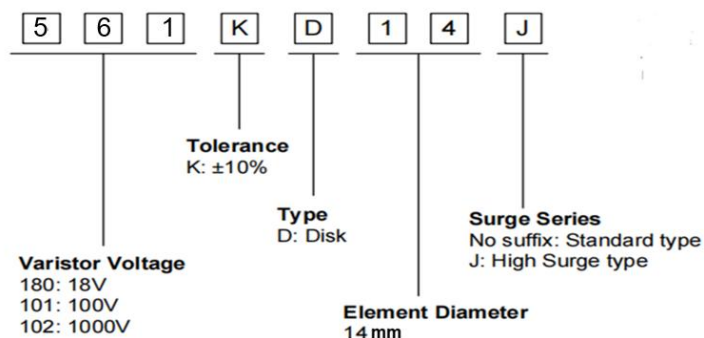


Features

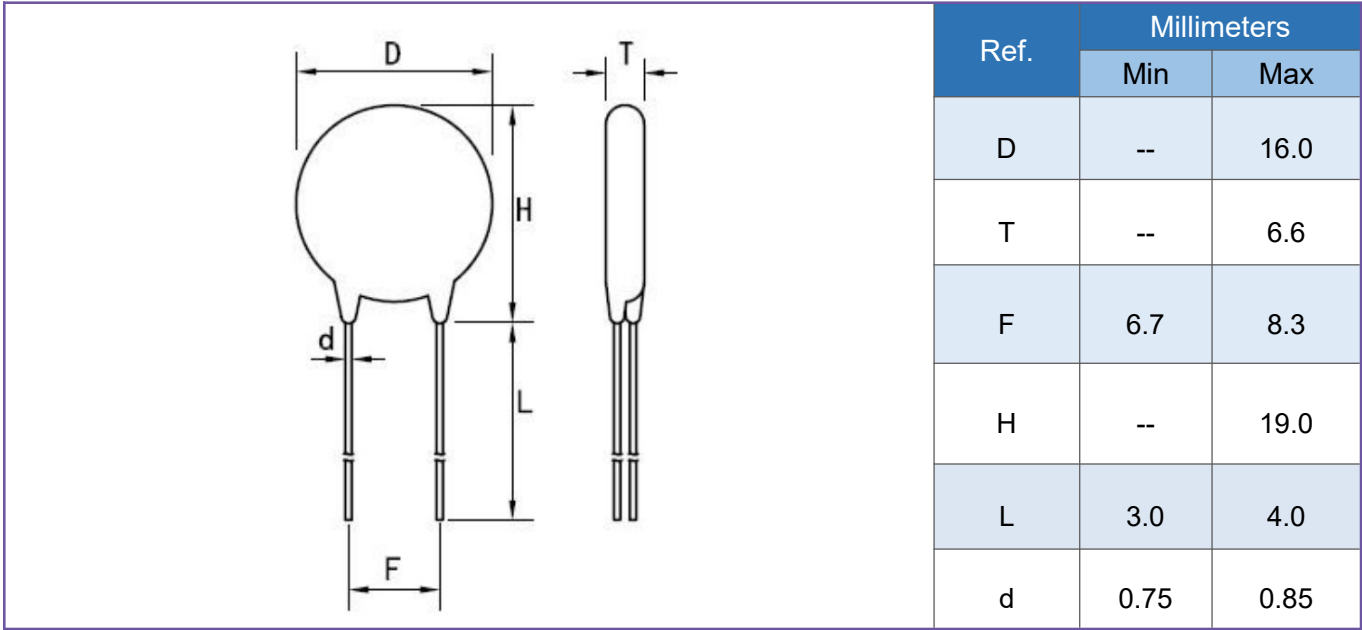
- ◆ Wide operating voltage (V_{1mA}) range from 18V to 1800V
- ◆ Fast responding to transient over-voltage
- ◆ Large absorbing transient energy capability
- ◆ Low clamping ratio and no follow-on current
- ◆ Meets MSL level 1, per J-STD-020
- ◆ Large absorbing transient current capability
- ◆ Operational temperature: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
- ◆ Storage temperature: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$



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		Maximum Energy (10/1000μs)		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	V _{AC} (V)	V _{DC} (V)	V _{1mA} (V)	I _P (A)	V _C (V)	I (A) Standard	I (A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHz (pf)
561KD14	561KD14J	350	460	560(504~616)	50	925	4500	6000	125	185	0.6	360

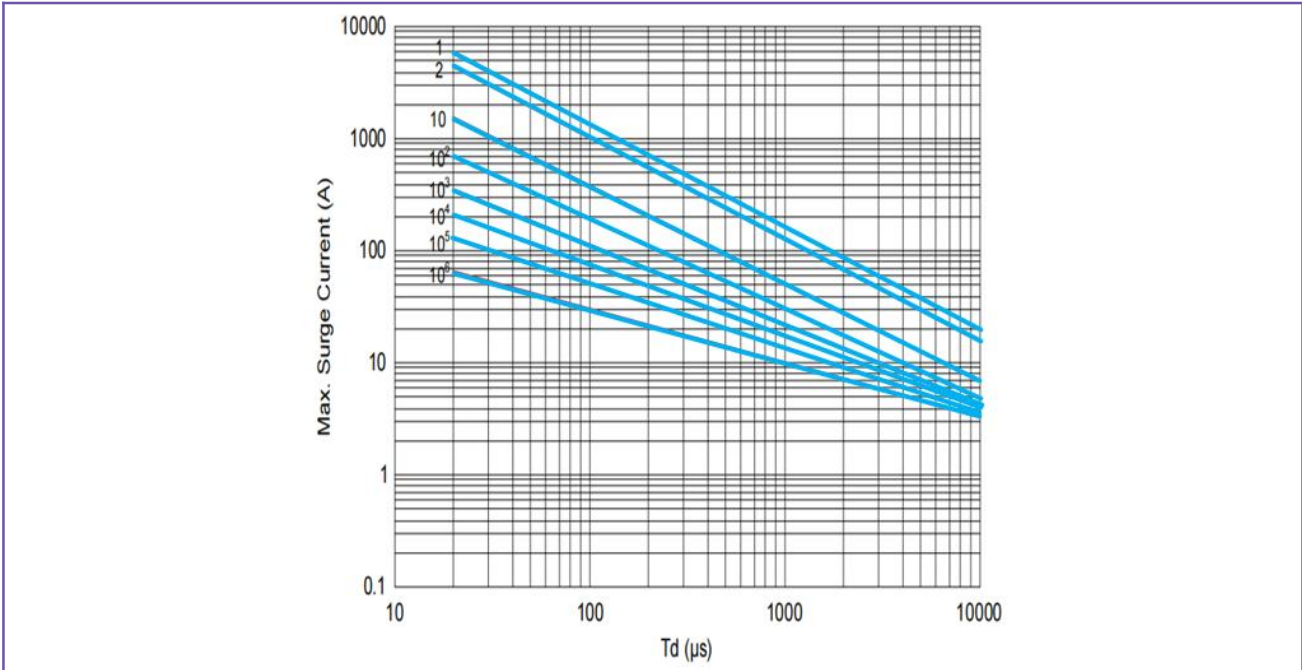
Notes: 1. The tolerance of varistor voltage between 18V and 27V is more than 10%;
2. Leakage Current (@83% of V_{1mA}): I_R≤50μA (180K~680K).

Reliability

Items	Standard	Specifications	Test conditions / Methods				
Tensile Strength of Terminals	IEC60068-2-21	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	Gradually applying the force specified and keeping the unit fixed for 10 ± 1 sec. Terminal diameter (mm) Force (kg) $0.5 < d \leq 0.8$ 1.0 $0.8 < d \leq 1.25$ 2.0 $1.25 < d$ 4.0				
Bending Strength of Terminals	IEC60068-2-21	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	Hold specimen and apply the force specified below to each lead. Bend the specimen to 90° , then return to the original position. Repeat the procedure in the opposite direction. Terminal diameter (mm) Force (kg) $0.5 < d \leq 0.8$ 0.5 $0.8 < d \leq 1.25$ 1.0 $1.25 < d$ 2.0				
Vibration	IEC60068-2-6	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	Frequency range: 10~55 Hz Amplitude: 0.75mm or 98m/s2 Direction: 3 mutually perpendicular directions, 2hrs each.				
Solderability	IEC60068-2-20	At least 95% of terminal electrode is covered by new solder	Solder Temp: $245 \pm 5^\circ\text{C}$ Dipping Time: 2 ± 0.5 sec				
Resistance to Soldering Heat	IEC60068-2-20	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	Solder Temp: $260 \pm 5^\circ\text{C}$ Dipping Time: 10 ± 1 sec				
High Temperature Storage	IEC60068-2-2	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	Ambient Temp: $125 \pm 2^\circ\text{C}$ Duration: 1000 ± 24 hrs				
Low Temperature Storage	IEC60068-2-1	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	Ambient Temp: $-40 \pm 2^\circ\text{C}$ Duration: 1000 ± 24 hrs				
Damp Heat, Steady State	IEC60068-2-78	No visible damage $ \Delta V1mA/V1mA \leq 10\%$ Insulation Resistance $\geq 100\text{M } \Omega$	The test is divided into two groups . a. $40 \pm 2^\circ\text{C}$, 90~95% RH for 1344 ± 24 hrs b. $40 \pm 2^\circ\text{C}$, 90~95% RH,at 10%VDC , 1344 ± 24 hrs				
High Temperature Load	MIL-STD-202 Method 108	$ \Delta V1mA/V1mA \leq 10\%$	Ambient Temp: $105 \pm 2^\circ\text{C}$ Duration: 1000 ± 24 hrs Load: Max. Allowable Voltage In AC.				
Temperature Cycle	IEC60068-2-14	No visible damage $ \Delta V1mA/V1mA \leq 5\%$	The conditions shown below shall be repeated 5 cycles				
			Step	Temperature (°C)	Period (minutes)		
			1	-40 ± 3	30 ± 3		
			2	Room temperature	5 ± 3		
			3	125 ± 3	30 ± 3		
			4	Room temperature	5 ± 3		
8/20μS Surge Life	IEC61051-1	No visible damage $\Delta Vb(1mA) \leq \pm 10\%$	1.2/50@8/20μs waveform,6KV/3KA , 4 phase angles $0^\circ / 90^\circ / 180^\circ / 270^\circ$,10 times per phase, a total of 40 times, with an interval of 1 minute				
10/1000μS Surge Life	IEC61051-1	No visible damage $ \Delta V1mA/V1mA \leq 10\%$	1.2/50@8/20μs waveform,6KV/3KA , 4 phase angles $0^\circ / 90^\circ / 180^\circ / 270^\circ$,10 times per phase, Total 40 times, interval time: 1min				
Voltage Proof	IEC61051-1	No visible damage	Metal balls method, 2500Vac 1 min.				

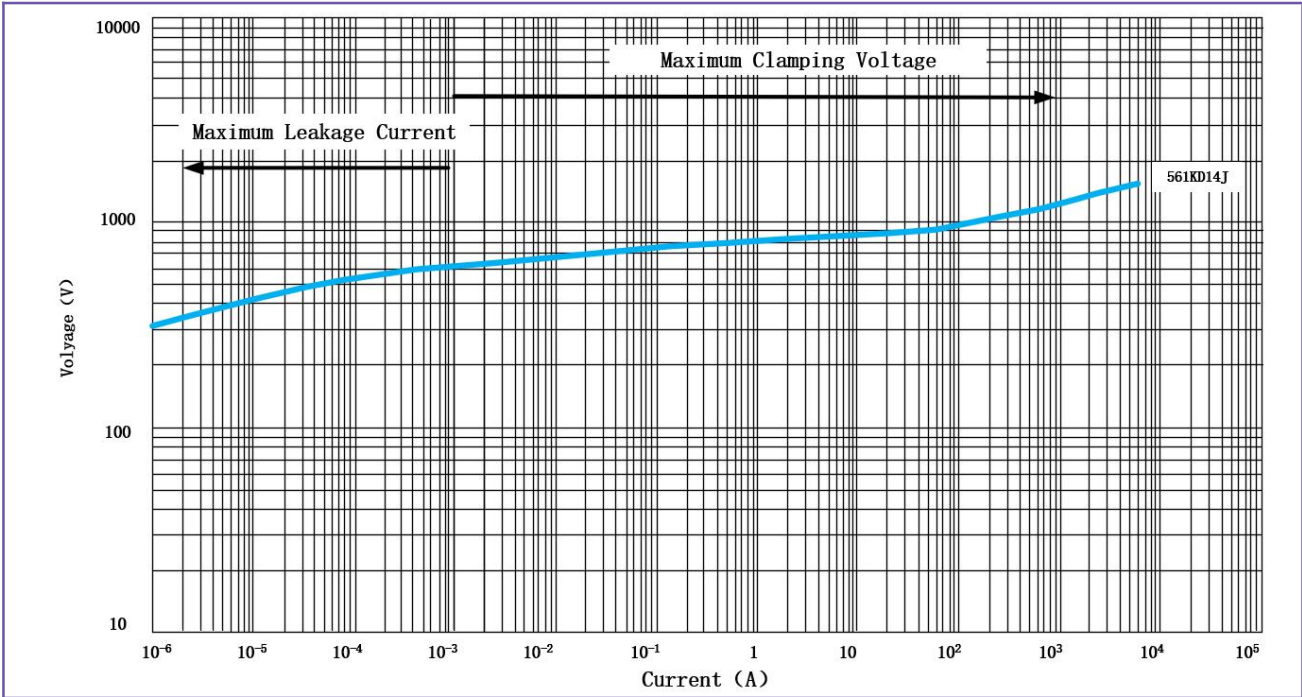
Maximum Surge Current Derating Curve

Figure 1. 561KD14J-UL40SC3.5



Maximum Leakage Current and Maximum Clamping Voltage Curve

Figure 1. 561KD14J-UL40SC3.5



Wave Soldering Parameters

