

Metal Oxide Varistor (MOV) Data Sheet

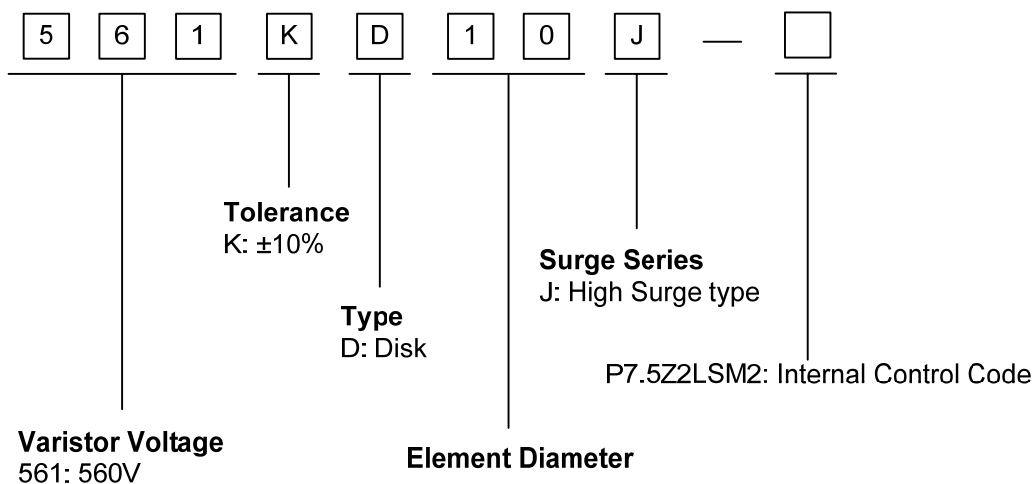
Features

- 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°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C
- Safety certification: UL: E327997
CSA: 246579
VDE: 40027827

Applications

- Transistor, diode, IC, thyristor or triac semiconductor protection
- Surge protection in consumer electronics
- Surge protection in industrial electronics
- Surge protection in electronic home appliances, gas and petroleum appliances
- Relay and electromagnetic valve surge absorption

Part Number Code



Dimensions

	Symbol	Dimension (mm)
	H	10.5~16.0
	L(min.)	20.0
	D	10.0~12.5
	F(±0.5)	7.5
	T	3.6~7.0
	e(±0.8)	3.6
	d(±0.05)	0.8

Electrical Characteristics

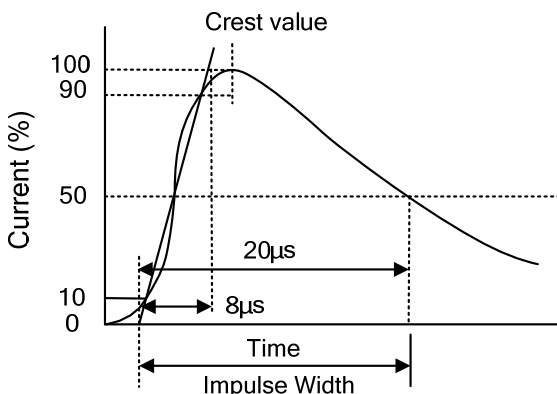
Model Number: 561KD10J					Part Number: 561KD10J-P7.5Z2LSM2				
Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge current	Maximum Energy (10/1000µs)	Rated Power	Leakage Current	Typical Capacitance (Reference)
V _{AC} (V)	V _{DC} (V)	V _{1mA} (V)	I _P (A)	V _C (V)	I (A)	(J)	(W)	@83% of V _{1mA} (µA)	@1KHz (pf)
350	460	560(504~616)	25	925	3500	92.0	0.4	≤25	180

Note: charged AC220V, 1.2/50&8/20µS combination wave form 6KV/3KA,sub 0°、90°、270°phases, each phase ±5 times, a total of 30 times.

Marking Code

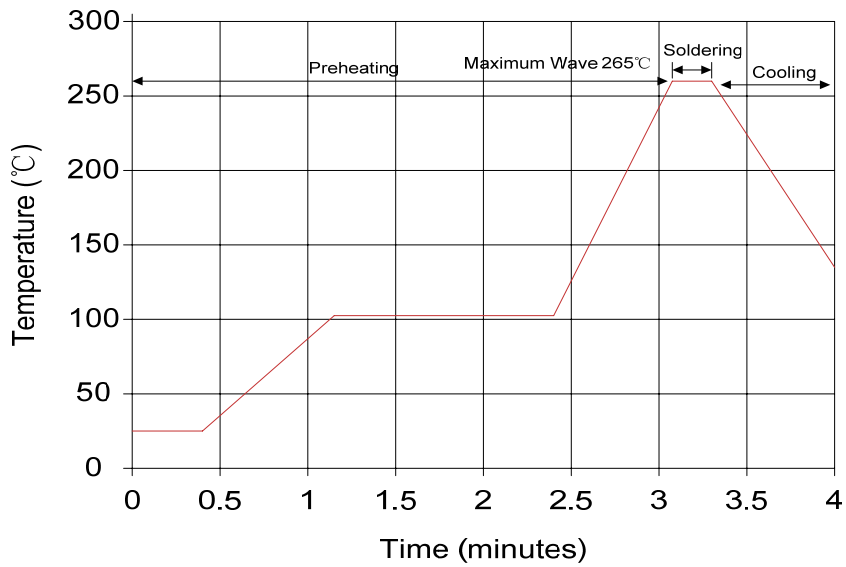
	① Brightking Logo
	② Varistor Voltage
	③ UL Accreditation Logo
	④ CSA Accreditation Logo
	⑤ VDE Accreditation Logo
	⑥ “J” is High Surge Code, no “J” is Standard Surge
	⑦ Disk Size
	⑧ “H” is Halogen Free Code, no “H” is Halogen
	⑨ Date Code
	⑩ Product Line Code (“Y” may be A thru Z or blank)

Electrical Ratings

Items	Test Condition/Description	Requirement					
Varistor Voltage	The voltage between two terminals with the specified measuring current 1mA.DC applied is called Vb.	To meet the Specified value					
Maximum Allowable Voltage	The recommended maximum sine wave voltage (RMS) or the Maximum DC voltage can be applied continuously.						
Maximum Clamping Voltage	<p>The maximum voltage between two terminals with the specification standard impulse current. Applied waveform: 8/20μs</p> 						
Rated Wattage	The maximum average power that can be applied within the specified ambient temperature.						
Energy	The maximum energy within the varistor voltage change of ±10% when one impulse of 10/1000μs or 2ms is applied.						
Withstanding Surge Current	The maximum current within the varistor voltage change of ±10% with the standard impulse current (8/20μs) applied one time.						
Varistor Voltage Temp. Coefficient	$\left \frac{V_{1mA@85^{\circ}C} - V_{1mA@25^{\circ}C}}{V_{1mA@25^{\circ}C}} \times \frac{1}{60} \times 100\% (\%/^{\circ}C) \right $ $\left \frac{V_{1mA@-40^{\circ}C} - V_{1mA@25^{\circ}C}}{V_{1mA@25^{\circ}C}} \times \frac{1}{65} \times 100\% (\%/^{\circ}C) \right $	≤0.05%/°C					
Surge Life	<p>The change of Vb shall be measured after the impulse listed below which is applied 10,000 times continuously with the interval of ten seconds at room temperature.</p> <table border="1" data-bbox="438 1881 1197 2004"> <tr> <td rowspan="2">10Φ series</td> <td>180K to 680K</td> <td>50A (8/20μs)</td> </tr> <tr> <td>820K to 182K</td> <td>100A (8/20μs)</td> </tr> </table>	10Φ series	180K to 680K	50A (8/20μs)	820K to 182K	100A (8/20μs)	$\frac{\Delta V_b}{V_b} \leq \pm 10\%$
10Φ series	180K to 680K		50A (8/20μs)				
	820K to 182K	100A (8/20μs)					

Soldering Recommendation

Wave Lead Free Soldering Recommendation



Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds(max.)
Soldering	1 time

Recommendation Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C(max.)
Soldering Time	3 seconds(max.)
Distance from Varistor	2mm (min.)

Quantity

Packaging Dimensions (Unit: mm)	Quantity
<p>Bulk</p>	<p>500pcs/bag 2bags/box</p>

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