

### Metal Oxide Varistors (MOV)

#### Features

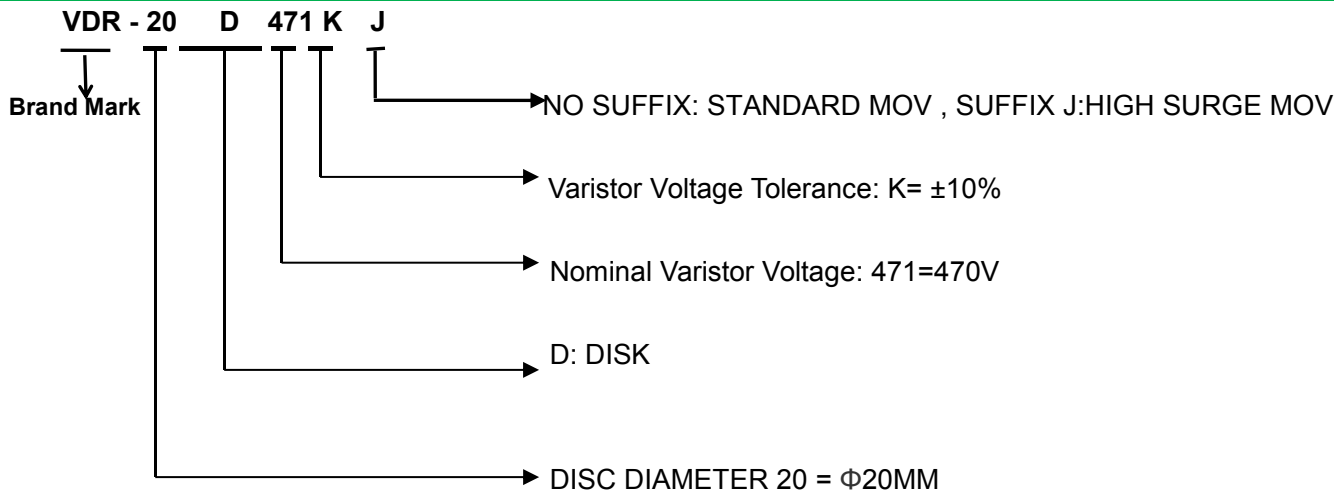
- Wide operating voltage (V1mA) range from 270V to 820V
- Fast responding to transient over-voltage
- Large absorbing transient energy capability
- Low clamping ratio and no follow-on current
- Meets MSL level 1, per J-STD-020
- Operating Temperature: -40°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C
- Safety certification:



#### 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

#### Description of Part Number



#### Delivery Time

6KV/3KA MOV	Delivery Time
VDR-20D271KHC~VDR-20D821KHC	18days

### Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage	Withstandin Surge Current	Maximum Energy (10/1000µs)	Typical Capacitance (Reference)	Safety Certification	
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)						V <sub>1mA</sub> (V)	V <sub>c</sub> (V)AT100 A
6KV/3KA MOV					1.2/50us & 8/20us combination of wave,6KV/3KA Sub 0,90,180,270 four phases,Total	(J)	1KHz(pf)		
VDR-20D271KEC	175	225	270(243~297)	455	80 times	209	670	√	√
VDR-20D301KEC	190	250	300(270~330)	500	80 times	231	610	√	√
VDR-20D331KEC	210	275	330(297~363)	550	80 times	251	560	√	√
VDR-20D361KEC	230	300	360(324~396)	595	80 times	281	510	√	√
VDR-20D391KEC	250	320	390(351~429)	650	80 times	303	460	√	√
VDR-20D431KEC	275	350	430(387~473)	710	80 times	336	230	√	√
VDR-20D471KEC	300	385	470(423~517)	775	80 times	385	430	√	√
VDR-20D511KEC	320	415	510(459~561)	845	80 times	396	390	√	√
VDR-20D561KEC	350	460	560(504~616)	925	80 times	418	360	√	√
VDR-20D621KEC	385	505	620(558~682)	1025	80 times	429	320	√	√
VDR-20D681KEC	420	560	680(612~748)	1120	80 times	440	290	√	√
VDR-20D751KEC	460	615	750(675~825)	1240	80 times	462	270	√	√
VDR-20D781KEC	485	640	780(702~858)	1290	80 times	484	260	√	√
VDR-20D821KEC	510	670	820(738~902)	1355	80 times	506	240	√	√

Dimension(mm)

Straight Leads

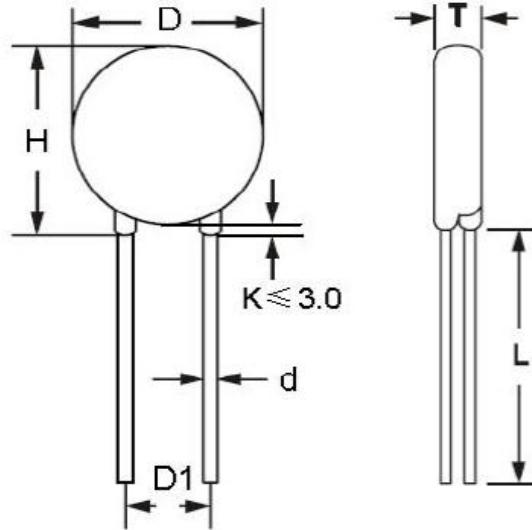


TABLE1

TABLE2

Symbol	Dimensions	Part number	T(±1.0mm)	Part number	T(±1.0mm)
H(Max)	25.0mm	VDR-20D271K	4.00mm	VDR-20D511K	4.91mm
L(Min)	20.0mm	VDR-20D301K	4.05mm	VDR-20D561K	5.18mm
D(Max)	22.0mm	VDR-20D331K	4.22mm	VDR-20D621K	5.51mm
D1(±0.8)	7.5±0.8/10.0±1.0	VDR-20D361K	4.08mm	VDR-20D681K	5.84mm
T	TABLE2	VDR-20D391K	4.25mm	VDR-20D751K	6.23mm
d(±0.05)	1.0mm	VDR-20D431K	4.47mm	VDR-20D781K	6.39mm
		VDR-20D471K	4.69mm	VDR-20D821K	6.61mm

### Packing Information

Part Number	Quantity	Packaging Option	Packaging Specification
VDR-20Dxxx	250PCS	Plastic bag	Bulk Pack

**Notice for use**

To avoid damage to other equipment due to fire or deterioration caused by varistor, please refer to and observe the following principles:

1) When a high current or high voltage flows into the varistor, the varistor itself may be damaged, heated, smoke, catch fire and burst.

To avoid this, fuses or circuit breakers can be installed at both ends of the varistor or power supply;

The fuses of the following specifications are for reference only:

	Diameter 05D	07D	10D	14D	20D
Rated current of fuse	1-2A	2-3A	3-5A	3-10A	5-15A

2) Do not allow the current and energy flowing into the varistor to exceed its rated value.

3) The marked VDR product brand names and marks are all patent applications of the company.

Customers who use or sell VDR products that are not specifically designated for such applications are at their own risk.

4) All VDR products, product specifications and data are subject to change without notice, please improve. For any data sheet Or any other data sheet. Any errors included. Inaccurate or incomplete shall not be liable.

5) Regarding the suitability of products for specific applications. It is the customer's responsibility to confirm that products with the characteristics described in the product specifications application. The data provided in the parameter data sheets and / or specifications may vary for different applications and performance may vary over time Variety. All operating parameters, including typical parameters, must be provided by the customer 's technical experts. Product specifications will not expand or Modify the VDR procurement terms and conditions in other ways, including but not limited to the guarantees described therein.

6) Do not place flammable substances near the varistor.

7) The varistor can only emit a small amount of heat energy, so it is not suitable for use in equipment that often generates sudden heat.

In addition, the higher the working environment of the varistor, the smaller the proportion of heat dissipated. Varistors can only dissipate a small amount of heat energy, so they are not suitable for use in equipment that often generates sudden heat.

If a large amount of heat acts on the varistor in an instant, it is possible that the heat energy cannot be dissipated within the pulse time And the varistor is damaged.

8) When welding, please be careful not to melt the welding points of the varistor and the resin coating.

**Material category policy**

All products of VDR hereby certify that RoHS-compliant products are in accordance with the definitions and Restrictions on June 8, 2011 regarding restrictions on the use of certain hazardous substances (Reach) in electrical and electronic equipment. We confirm All VDR products comply with the IEC 61249-2-21 JEDEC JS709A standard.