

### Metal Oxide Varistors (MOV)

#### Features

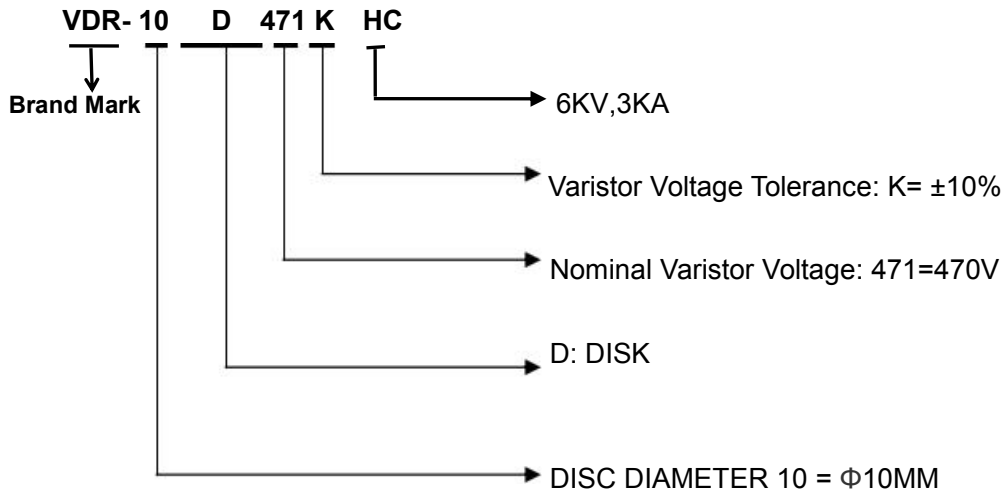
- Wide operating voltage (V1mA) range from 18V to 1100V
- Fast responding to transient over-voltage
- Large absorbing transient energy capability
- Low clamping ratio and no follow-on current
- Meets MSL level 1, per J-STD-020
- Operating Temperature: -40°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C
- 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
VDR10D820KHC ~ VDR-10D821KHC	14days

## Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage	Withstanding Surge Current	Maximum Energy (10/1000µs)	Typical Capacitance (Reference)	Safety Certification	
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)						UL/CUL	VDE
6KV/3KA MOV				V <sub>c</sub> (V) AT 25A	1.2/50us & 8/20us combination of wave, 6KV/3KA Sub 0,90,180,270 four phases, Total	(J) High Surge	1KHz(pf)		
VDR-10D820KHC	50	65	82(73.8~90.2)	135	20times	17.0	1200	√	√
VDR-10D101KHC	60	85	100(90~110)	165	20times	18.0	1000	√	√
VDR-10D121KHC	75	100	120(108~132)	200	20times	21.0	830	√	√
VDR-10D151KHC	95	125	150(135~165)	250	20times	25.0	670	√	√
VDR-10D181KHC	115	150	180(162~198)	300	20times	30.0	560	√	√
VDR-10D201KHC	130	170	200(180~220)	340	20times	35.0	500	√	√
VDR-10D221KHC	140	180	220(198~242)	360	20times	39.0	450	√	√
VDR-10D241KHC	150	200	240(216~264)	395	20times	42.0	420	√	√
VDR-10D271KHC	175	225	270(243~297)	455	20times	49.0	370	√	√
VDR-10D301KHC	190	250	300(270~330)	500	20times	54.0	330	√	√
VDR-10D331KHC	210	275	330(297~363)	550	20times	58.0	300	√	√
VDR-10D361KHC	230	300	360(324~396)	595	20times	65.0	280	√	√
VDR-10D391KHC	250	320	390(351~429)	650	20times	70.0	260	√	√
VDR-10D431KHC	275	350	430(387~473)	710	20times	80.0	230	√	√
VDR-10D471KHC	300	385	470(423~517)	775	20times	85.0	210	√	√
VDR-10D511KHC	320	415	510(459~561)	845	20times	90.0	200	√	√
VDR-10D561KHC	350	460	560(504~616)	925	20times	92.0	180	√	√
VDR-10D621KHC	385	505	620(558~682)	1025	20times	95.0	160	√	√
VDR-10D681KHC	420	560	680(612~748)	1120	20times	98.0	150	√	√
VDR-10D751KHC	460	615	750(675~825)	1240	20times	100.0	130	√	√
VDR-10D781KHC	485	640	780(702~858)	1290	20times	105.0	130	√	√
VDR-10D821KHC	510	670	820(738~902)	1355	20times	110.0	120	√	√

### Dimension(mm)

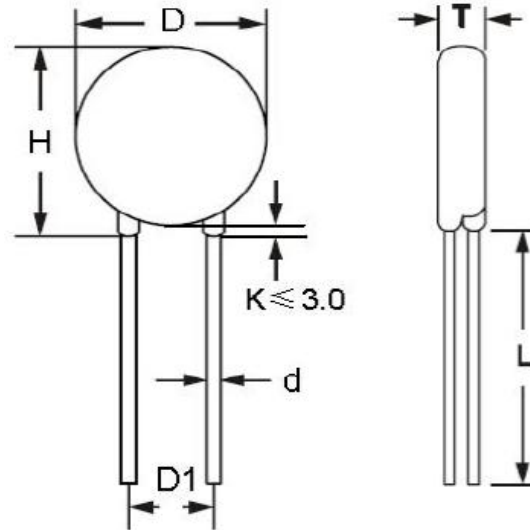


TABLE1

TABLE2

Symbol	Dimensions	Part number	T(±1.0mm)	Part number	T(±1.0mm)
H(Max)	16.5mm	VDR-10D820K	2.6mm	VDR-10D361K	3.9mm
L(Min)	22.0mm	VDR-10D101K	2.8mm	VDR-10D391K	4.4mm
D(Max)	12.5mm	VDR-10D121K	3.0mm	VDR-10D431K	4.4mm
D1(±0.8)	7.5mm	VDR-10D151K	3.3mm	VDR-10D471K	4.6mm
T	TABLE2	VDR-10D181K	2.7mm	VDR-10D511K	4.7mm
d(±0.05)	0.8mm	VDR-10D201K	2.9mm	VDR-10D561K	4.9mm
		VDR-10D221K	3.0mm	VDR-10D621K	5.2mm
		VDR-10D241K	3.1mm	VDR-10D681K	5.5mm
		VDR-10D271K	3.3mm	VDR-10D751K	5.9mm
		VDR-10D301K	3.4mm	VDR-10D781K	6.0mm
		VDR-10D331K	3.7mm	VDR-10D821K	6.2mm

### Packing Information

Part Number	Quantity	Packaging Option	Packaging Specification
VDR-10DxxxKHC	500PCS	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.