

Metal Oxide Varistors (MOV)

Features

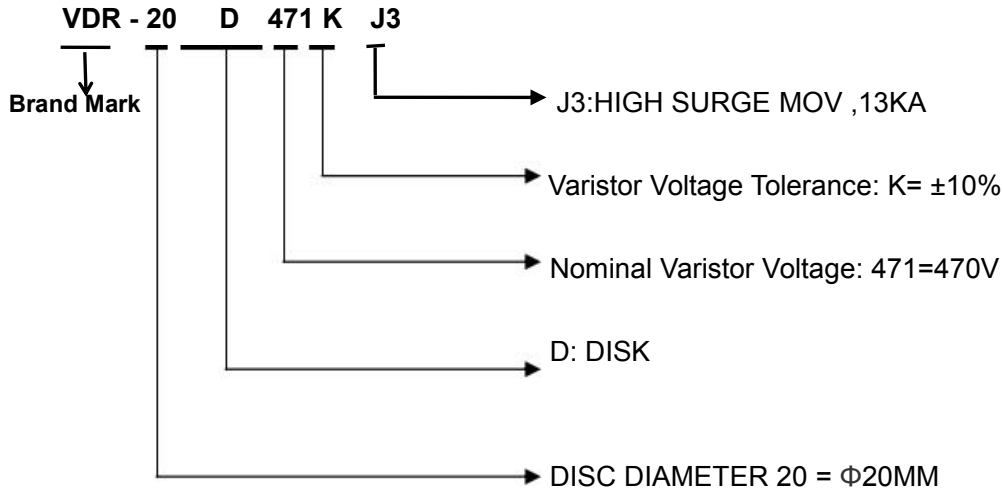
- Wide operating voltage (V1mA) range from 18V to 1800V
- Fast responding to transient over-voltage
- Large absorbing transient energy capability
- Low clamping ratio and no follow-on current
- Meets MSL level 1, per J-STD-020
- Operating Temperature: -40°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C
- 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

High Surge J3	Delivery Time
VDR-20D180LJ3 ~ VDR-20D182KJ3	14days

Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage $V_{1mA}(V)$	Maximum Clamping Voltage $V_c(V)_{AT100A}$	Withstanding Surge Current 8/20 μ S		Maximum Energy (10/1000 μ s) J2	Typical Capacitance (Reference) 1KHz(pf)
	$V_{AC}(V)$	$V_{DC}(V)$			1 Time	2 Times		
VDR-20D220KJ3	14	18	22(19.8~24.2)	43	6.5KA	4KA	18J	18500
VDR-20D270KJ3	17	22	27(24.3~29.7)	53	6.5KA	4KA	21J	13000
VDR-20D330KJ3	20	26	33(29.7~36.3)	65	6.5KA	4KA	26J	11500
VDR-20D390KJ3	25	31	39(35.1~42.9)	77	6.5KA	4KA	31J	8500
VDR-20D470KJ3	30	38	47(42.3~51.7)	93	6.5KA	4KA	37J	7400
VDR-20D560KJ3	35	45	56(50.4~61.6)	100	6.5KA	4KA	51J	6500
VDR-20D680KJ3	40	56	68(61.2~74.8)	135	6.5KA	4KA	54J	5800
VDR-20D820KJ3	50	65	82(73.8~90.2)	135	13KA	7KA	62J	4900
VDR-20D101KJ3	60	85	100(90~110)	165	13KA	7KA	77J	4000
VDR-20D121KJ3	75	100	120(108~132)	200	13KA	7KA	94J	3300
VDR-20D151KJ3	95	125	150(135~165)	250	13KA	7KA	117J	2700
VDR-20D181KJ3	115	150	180(162~198)	300	13KA	7KA	143J	2200
VDR-20D201KJ3	130	170	200(180~220)	340	13KA	7KA	154J	2000
VDR-20D221KJ3	140	180	220(198~242)	360	13KA	7KA	171J	1800
VDR-20D241KJ3	150	200	240(216~264)	395	13KA	7KA	185J	1650
VDR-20D271KJ3	175	225	270(243~297)	455	13KA	7KA	209J	1500
VDR-20D301KJ3	190	250	300(270~330)	500	13KA	7KA	231J	1300
VDR-20D331KJ3	210	275	330(297~363)	550	13KA	7KA	251J	1200
VDR-20D361KJ3	230	300	360(324~396)	595	13KA	7KA	281J	1100
VDR-20D391KJ3	250	320	390(351~429)	650	13KA	7KA	303J	1000
VDR-20D431KJ3	275	350	430(387~473)	710	13KA	7KA	336J	930
VDR-20D471KJ3	300	385	470(423~517)	775	13KA	7KA	385J	850
VDR-20D511KJ3	320	415	510(459~561)	845	13KA	7KA	396J	780
VDR-20D561KJ3	350	460	560(504~616)	925	13KA	7KA	418J	710
VDR-20D621KJ3	385	505	620(558~682)	1025	13KA	7KA	429J	650
VDR-20D681KJ3	420	560	680(612~748)	1120	13KA	7KA	440J	600
VDR-20D751KJ3	460	615	750(675~825)	1240	13KA	7KA	462J	580
VDR-20D781KJ3	485	640	780(702~858)	1290	13KA	7KA	484J	560
VDR-20D821KJ3	510	670	820(738~902)	1355	13KA	7KA	506J	525
VDR-20D911KJ3	550	745	910(819~1001)	1500	13KA	7KA	561J	495
VDR-20D102KJ3	625	825	1000(900~1100)	1650	13KA	7KA	622J	480
VDR-20D112KJ3	680	895	1100(990~1210)	1815	13KA	7KA	682J	460
VDR-20D122KJ3	750	990	1200(1080~1320)	1980	13KA	7KA	726J	350
VDR-20D182KJ3	1000	1465	1800(1620~1980)	2970	13KA	7KA	1089J	320

Dimension(mm)

Straight Leads

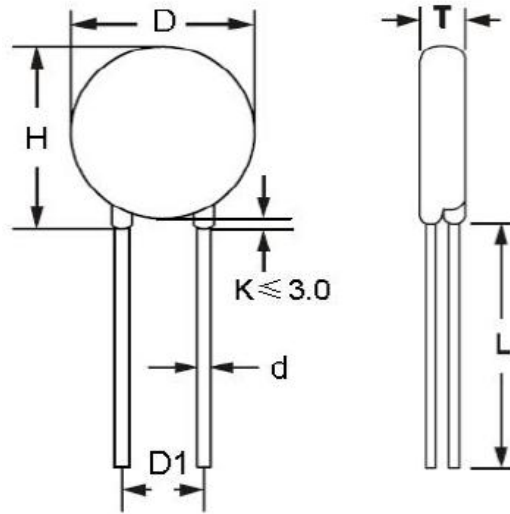


TABLE1

TABLE2

Symbol	Dimensions	Part number	T(±1.0mm)	Part number	T(±1.0mm)
H(Max)	26.5mm	VDR-20D180L	3.95mm	VDR-20D361K	4.08mm
L(Min)	22.0mm	VDR-20D220K	4.04mm	VDR-20D391K	4.25mm
D(Max)	23.0mm	VDR-20D270K	4.19mm	VDR-20D431K	4.47mm
D1(±0.8)	7.5±0.8/10.0±1.0	VDR-20D330K	4.40mm	VDR-20D471K	4.69mm
T	TABLE2	VDR-20D390K	4.16mm	VDR-20D511K	4.91mm
d(±0.05)	0.8mm/1.0mm	VDR-20D470K	4.37mm	VDR-20D561K	5.18mm
		VDR-20D560K	4.02mm	VDR-20D621K	5.51mm
		VDR-20D680K	4.32mm	VDR-20D681K	5.84mm
		VDR-20D820K	3.48mm	VDR-20D751K	6.23mm
		VDR-20D101K	3.65mm	VDR-20D781K	6.39mm
		VDR-20D121K	3.80mm	VDR-20D821K	6.61mm
		VDR-20D151K	3.52mm	VDR-20D911K	6.87mm
		VDR-20D181K	3.66mm	VDR-20D102K	8.34mm
		VDR-20D201K	3.76mm	VDR-20D112K	8.86mm
		VDR-20D221K	3.84mm	VDR-20D122K	8.39mm
		VDR-20D241K	3.95mm	VDR-20D142K	9.96mm
		VDR-20D271K	4.00mm	VDR-20D162K	10.48mm
		VDR-20D301K	4.05mm	VDR-20D182K	11.53mm
		VDR-20D331K	4.22mm		

Packing Information

Part Number	Quantity	Packaging Option	Packaging Specification
VDR-20DxxxK	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.