VDR25D Straight Lead Series

Metal Oxide Varistors (MOV)

Features

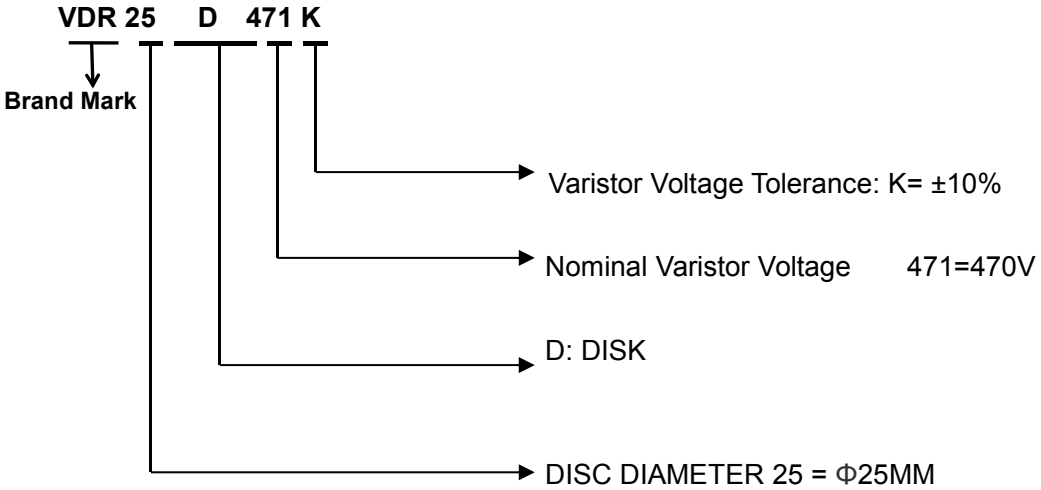
·Wide operating voltage (V1mA) range from 82V to 1800V
·Fast responding to transient over-voltage
·Large absorbing transient energy capability
·Low clamping ratio and no follow-on current
·Meets MSL level 1, per J-STD-020
·Operating Temperature：-40℃ ~ +85℃
·Storage Temperature：-40℃ ~ +125℃
·UL 1449 4th for SPD Type 5 application
·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



Standard MOV	Delivery Time	High Surge MOV	Delivery Time
VDR25D820K~VDR25D182K	22days	VDR25D820KJ~VDR25D182KJ	25days

Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Max Surge Current 8/20μs	Maximum Energy (10/1000μs)	Typical Capacitance(Reference)	Rated Power	Safety Certification
Standard MOV	V_{AC}(V)	V_{DC}(V)	V_{1mA}(V)	I_P(A)	V_C(V)	I_{max}	(J) Standard	1KHz(PF)	(W)	UL
VDR25D820K	50	65	82 (73.8~90.2)	150	135	15KA	80	7700	1.2	-
VDR25D101K	60	85	100 (90~110)	150	165	15KA	100	6300	1.2	-
VDR25D121K	75	100	120 (108~132)	150	200	15KA	120	5200	1.2	-
VDR25D151K	95	125	150 (135~165)	150	250	15KA	160	4300	1.2	-
VDR25D181K	115	150	180 (162~198)	150	300	15KA	175	3500	1.2	-
VDR25D201K	130	170	200 (185~225)	150	330	15KA	190	3200	1.2	√
VDR25D221K	140	180	220 (198~242)	150	360	15KA	200	2900	1.2	√
VDR25D241K	150	200	240 (216~264)	150	395	15KA	220	2650	1.2	√
VDR25D271K	175	225	270 (243~297)	150	455	15KA	255	2400	1.2	√
VDR25D301K	190	250	300 (270~330)	150	505	15KA	275	2100	1.2	√
VDR25D331K	210	275	330 (297~363)	150	550	15KA	300	1900	1.2	√
VDR25D361K	230	300	360 (324~396)	150	595	15KA	330	1750	1.2	√
VDR25D391K	250	320	390 (351~429)	150	650	15KA	360	1600	1.2	√
VDR25D431K	275	350	430 (387~473)	150	710	15KA	380	1500	1.2	√
VDR25D471K	300	385	470 (423~517)	150	775	15KA	400	1400	1.2	√
VDR25D511K	320	415	510 (459~561)	150	845	15KA	420	1250	1.2	√
VDR25D561K	350	460	560 (504~616)	150	920	15KA	440	1150	1.2	√
VDR25D621K	385	505	620 (558~682)	150	1025	15KA	450	1050	1.2	√
VDR25D681K	420	560	680 (612~748)	150	1120	15KA	460	950	1.2	√
VDR25D751K	460	615	750 (675~825)	150	1240	15KA	510	850	1.2	√
VDR25D781K	485	640	780 (702~858)	150	1290	15KA	530	850	1.2	√
VDR25D821K	510	670	820 (738~902)	150	1355	15KA	570	500	1.2	√
VDR25D911K	550	745	910 (819~1001)	150	1500	15KA	620	700	1.2	√
VDR25D102K	625	825	1000 (900~1100)	150	1650	15KA	685	650	1.2	-
VDR25D112K	680	895	1100 (990~1210)	150	1815	15KA	720	600	1.2	-
VDR25D122K	750	980	1200(1080~1320)	150	1980	15KA	795	550	1.2	-
VDR25D142K	880	1140	1400(1260~1540)	150	2310	15KA	850	500	1.2	-
VDR25D162K	1000	1280	1600(1400~1760)	150	2640	15KA	970	450	1.2	-
VDR25D182K	1100	1465	1800(1620~1980)	150	2970	15KA	1092	400	1.2	-

Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Max Surge Current 8/20μs	Surge Operating Duty Test IEC 61643-11 (8/20μs)		Maximum Energy 10/1000μs	Rated Power	Safety Certification
	V_{AC}(V)	V_{DC}(V)	V_{1mA}(V)	I_P(A)	V_C(V)	Imax	Imax	In	(J)	(W)	UL
VDR25D820KJ	50	65	82 (73.8~90.2)	150	135	20KA	20KA	10KA	96	1.2	-
VDR25D101KJ	60	85	100 (90~110)	150	165	20KA	20KA	10KA	120	1.2	-
VDR25D121KJ	75	100	120 (108~132)	150	200	20KA	20KA	10KA	144	1.2	-
VDR25D151KJ	95	125	150 (135~165)	150	250	20KA	20KA	10KA	192	1.2	-
VDR25D181KJ	115	150	180 (162~198)	150	300	20KA	20KA	10KA	210	1.2	-
VDR25D201KJ	130	170	200 (185~225)	150	330	20KA	20KA	10KA	228	1.2	√
VDR25D221KJ	140	180	220 (198~242)	150	360	20KA	20KA	10KA	240	1.2	√
VDR25D241KJ	150	200	240 (216~264)	150	395	20KA	20KA	10KA	264	1.2	√
VDR25D271KJ	175	225	270 (243~297)	150	455	20KA	20KA	10KA	306	1.2	√
VDR25D301KJ	190	250	300 (270~330)	150	505	20KA	20KA	10KA	330	1.2	√
VDR25D331KJ	210	275	330 (297~363)	150	550	20KA	20KA	10KA	360	1.2	√
VDR25D361KJ	230	300	360 (324~396)	150	595	20KA	20KA	10KA	396	1.2	√
VDR25D391KJ	250	320	390 (351~429)	150	650	20KA	20KA	10KA	432	1.2	√
VDR25D431KJ	275	350	430 (387~473)	150	710	20KA	20KA	10KA	456	1.2	√
VDR25D471KJ	300	385	470 (423~517)	150	775	20KA	20KA	10KA	480	1.2	√
VDR25D511KJ	320	415	510 (459~561)	150	845	20KA	20KA	10KA	504	1.2	√
VDR25D561KJ	350	460	560 (504~616)	150	920	20KA	20KA	10KA	528	1.2	√
VDR25D621KJ	385	505	620 (558~682)	150	1025	20KA	20KA	10KA	540	1.2	√
VDR25D681KJ	420	560	680 (612~748)	150	1120	20KA	20KA	10KA	552	1.2	√
VDR25D751KJ	460	615	750 (675~825)	150	1240	20KA	20KA	10KA	612	1.2	√
VDR25D781KJ	485	640	780 (702~858)	150	1290	20KA	20KA	10KA	636	1.2	√
VDR25D821KJ	510	670	820 (738~902)	150	1355	20KA	20KA	10KA	684	1.2	√
VDR25D911KJ	550	745	910 (819~1001)	150	1500	20KA	20KA	10KA	744	1.2	√
VDR25D102KJ	625	825	1000 (900~1100)	150	1650	20KA	20KA	10KA	822	1.2	-
VDR25D112KJ	680	895	1100 (990~1210)	150	1815	20KA	20KA	10KA	864	1.2	-
VDR25D122KJ	750	980	1200(1080~1320)	150	1980	20KA	20KA	10KA	954	1.2	-
VDR25D142KJ	880	1140	1400(1260~1540)	150	2310	20KA	20KA	10KA	1020	1.2	-
VDR25D162KJ	1000	1280	1600(1400~1760)	150	2640	20KA	20KA	10KA	1164	1.2	-
VDR25D182KJ	1100	1465	1800(1620~1980)	150	2970	20KA	20KA	10KA	1310	1.2	-

VDR25D Straight Leads Series

Dimension(mm) Straight Leads

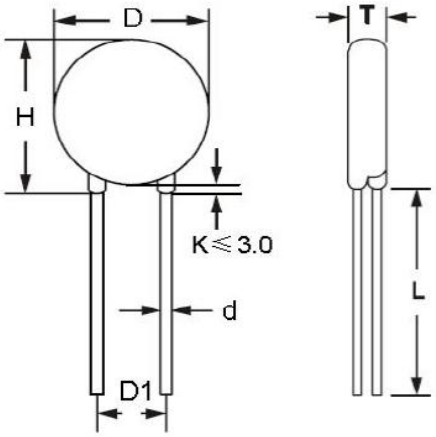


TABLE1		TABLE2		
Symbol	Dimensions	Part number	Part number	T(±1.0mm)
H(Max)	32.0mm	VDR25D820K	VDR25D820KJ	3.3mm
L(Min)	22.0mm	VDR25D101K	VDR25D101KJ	3.5mm
D(Max)	28.0mm	VDR25D121K	VDR25D121KJ	3.6mm
D1(±0.8)	10.0±1/12.5±1	VDR25D151K	VDR25D151KJ	3.7mm
T	TABLE2	VDR25D181K	VDR25D181KJ	4.0mm
d(±0.05)	1.0mm	VDR25D201K	VDR25D201KJ	4.1mm
		VDR25D221K	VDR25D221KJ	4.6mm
		VDR25D241K	VDR25D241KJ	4.1mm
		VDR25D271K	VDR25D271KJ	4.2mm
		VDR25D301K	VDR25D301KJ	4.3mm
		VDR25D331K	VDR25D331KJ	4.5mm
		VDR25D361K	VDR25D361KJ	4.6mm
		VDR25D391K	VDR25D391KJ	4.8mm
		VDR25D431K	VDR25D431KJ	4.8mm
		VDR25D471K	VDR25D471KJ	4.8mm
		VDR25D511K	VDR25D511KJ	5.2mm
		VDR25D561K	VDR25D561KJ	5.2mm
		VDR25D621K	VDR25D621KJ	5.5mm
		VDR25D681K	VDR25D681KJ	5.6mm
		VDR25D751K	VDR25D751KJ	5.8mm
		VDR25D781K	VDR25D781KJ	6.0mm
		VDR25D821K	VDR25D821KJ	6.2mm
		VDR25D911K	VDR25D911KJ	6.8mm
		VDR25D102K	VDR25D102KJ	7.3mm
		VDR25D112K	VDR25D112KJ	7.9mm
		VDR25D122K	VDR25D122KJ	8.6mm
		VDR25D142K	VDR25D142KJ	10.4mm
		VDR25D162K	VDR25D162KJ	11.0mm
		VDR25D182K	VDR25D182KJ	13.2mm

Packing Information

Part Number	Quantity	Packaging Option	Packaging Specification
VDR25DxxxK	100PCS	Plastic bag	Bulk Pack
VDR25DxxxKJ	100PCS	Plastic bag	Bulk Pack

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.