HUAAN 华兴安电子 HUAAN LIMITED

VDR14D Straight Leads Series

Metal Oxide Varistors (MOV)

Features

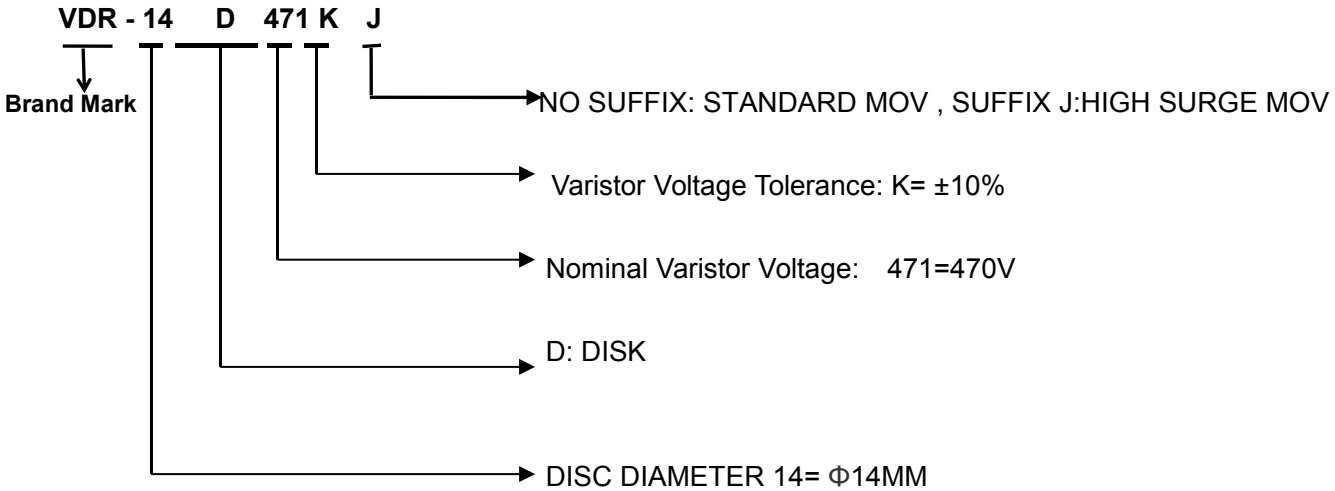
·Wide operating voltage (V1mA) range from 18V to 1800V
·Fast responding to transient over-voltage
·Large absorbing transient energy capability
·Low clamping ratio and no follow-on current
·Meets MSL level 1, per J-STD-020
·Operating Temperature：-40℃ ~ +85℃
·Storage Temperature：-40℃ ~ +125℃
·Safety certification:



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

Standard MOV	Delivery Time	High Surge MOV	Delivery Time
VDR14D180L ~ VDR14D182K	13days	VDR14D180LJ ~ VDR14D182KJ	14days

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Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage	Max Surge Current 8/20μs	Maximum Energy (10/1000μs)	Typical Capacitance (Reference)	Safety Certification	
Standard MOV	V_{AC}(V)	V_{DC}(V)	V_{1mA}(V)	Vc(V) AT 25A	Imax Standard	(J) Standard	1KHz(pf)	UL / CUL	VDE
VDR14D180L	11	14	18(15.3~20.7)	36	1000A	4	11000	√	-
VDR14D220K	14	18	22(19.8~24.2)	43	1000A	5	9100	√	-
VDR14D270K	17	22	27(24.3~29.7)	53	1000A	6	7400	√	√
VDR14D330K	20	26	33(29.7~36.5)	66	1000A	7.5	6100	√	√
VDR14D390K	25	31	39(35.1~42.9)	77	1000A	8.6	5100	√	√
VDR14D470K	30	38	47(42.3~51.7)	93	1000A	10	4300	√	√
VDR14D560K	35	45	56(50.4~61.6)	100	1000A	11	3600	√	√
VDR14D680K	40	56	68(61.2~74.8)	135	1000A	14	2900	√	√
VDR14D820K	50	65	82(73.8~90.2)	135	4500A	22	2400	√	√
VDR14D101K	60	85	100(90~110)	165	4500A	28	2000	√	√
VDR14D121K	75	100	120(108~132)	200	4500A	32	1700	√	√
VDR14D151K	95	125	150(135~165)	250	4500A	40	1300	√	√
VDR14D181K	115	150	180(162~198)	300	4500A	50	1100	√	√
VDR14D201K	130	170	200(180~220)	340	4500A	57	1000	√	√
VDR14D221K	140	180	220(198~242)	360	4500A	60	900	√	√
VDR14D241K	150	200	240(216~264)	395	4500A	63	830	√	√
VDR14D271K	175	225	270(243~297)	455	4500A	70	740	√	√
VDR14D301K	190	250	300(270~330)	500	4500A	77	670	√	√
VDR14D331K	210	275	330(297~363)	550	4500A	85	610	√	√
VDR14D361K	230	300	360(324~396)	595	4500A	93	560	√	√
VDR14D391K	250	320	390(351~429)	650	4500A	100	510	√	√
VDR14D431K	275	350	430(387~473)	710	4500A	115	460	√	√
VDR14D471K	300	385	470(423~517)	775	4500A	125	430	√	√
VDR14D511K	320	415	510(459~561)	845	4500A	125	390	√	√
VDR14D561K	350	460	560(504~616)	925	4500A	125	360	√	√
VDR14D621K	385	505	620(558~682)	1025	4500A	125	320	√	√
VDR14D681K	420	560	680(612~748)	1120	4500A	130	290	√	√
VDR14D751K	460	615	750(675~825)	1240	4500A	143	270	√	√
VDR14D781K	485	640	780(702~858)	1290	4500A	148	260	√	-
VDR14D821K	510	670	820(738~902)	1355	4500A	157	240	√	-
VDR14D911K	550	745	910(819~1001)	1500	4500A	175	220	√	-
VDR14D102K	625	825	1000(900~1100)	1650	4500A	190	200	√	-
VDR14D112K	680	895	1100(990~1210)	1815	4500A	213	180	√	-
VDR14D122K	750	990	1200(1080~1320)	1980	4500A	213	150	√	-
VDR14D182K	1000	1465	1800(1620~1980)	2970	4500A	250	130	√	-

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Electrical Characteristics

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage	Max Surge Current 8/20μs	Maximum Energy (10/1000μs)	Typical Capacitance (Reference)	Safety Certification	
High Surge MOV	V_{AC}(V)	V_{DC}(V)	V_{1mA}(V)	Vc(V) AT 25A	Imax High Surge	(J) High Surge	1KHz(pf)	UL / CUL	VDE
VDR14D180KJ	11	14	18(15.3~20.7)	36	2000A	7	11100	-	-
VDR14D220KJ	14	18	22(19.8~24.2)	43	2000A	8	9100	-	-
VDR14D270KJ	17	22	27(24.3~29.7)	53	2000A	10	7400	-	-
VDR14D330KJ	20	26	33(29.7~36.5)	66	2000A	12	6100	-	-
VDR14D390KJ	25	31	39(35.1~42.9)	77	2000A	13	5100	-	-
VDR14D470KJ	30	38	47(42.3~51.7)	93	2000A	17	4300	-	-
VDR14D560KJ	35	45	56(50.4~61.6)	100	2000A	20	3600	-	-
VDR14D680KJ	40	56	68(61.2~74.8)	135	2000A	24	2900	-	-
VDR14D820KJ	50	65	82(73.8 ~90.2)	135	6000A	27	2400	-	-
VDR14D101KJ	60	85	100(90~110)	165	6000A	33	2000	-	-
VDR14D121KJ	75	100	120(108~132)	200	6000A	40	1700	-	-
VDR14D151KJ	95	125	150(135~165)	250	6000A	53	1300	-	-
VDR14D181KJ	115	150	180(162~198)	300	6000A	60	1100	-	-
VDR14D201KJ	130	170	200(180~220)	340	6000A	70	1000	-	-
VDR14D221KJ	140	180	220(198~242)	360	6000A	78	900	-	-
VDR14D241KJ	150	200	240(216~264)	395	6000A	84	830	-	-
VDR14D271KJ	175	225	270(243~297)	455	6000A	99	740	-	-
VDR14D301KJ	190	250	300(270~330)	500	6000A	108	670	-	-
VDR14D331KJ	210	275	330(297~363)	550	6000A	115	610	-	-
VDR14D361KJ	230	300	360(324~396)	595	6000A	130	560	-	-
VDR14D391KJ	250	320	390(351~429)	650	6000A	140	510	-	-
VDR14D431KJ	**275**	**350**	430(387~473)	**710**	6000A	**155**	**460**	-	-
VDR14D471KJ	**300**	**385**	470(423~517)	**775**	6000A	**175**	**430**	-	-
VDR14D511KJ	**320**	**415**	510(459~561)	**845**	6000A	**180**	**390**	-	-
VDR14D561KJ	**350**	**460**	560(504~616)	**925**	6000A	**185**	**360**	-	-
VDR14D621KJ	**385**	**505**	620(558~682)	**1025**	6000A	**190**	**320**	-	-
VDR14D681KJ	**420**	**560**	680(612~748)	**1120**	6000A	**200**	**290**	-	-
VDR14D751KJ	**460**	**615**	750(675~825)	**1240**	6000A	**210**	**270**	-	-
VDR14D781KJ	**485**	**640**	780(702~858)	**1290**	6000A	**220**	**260**	-	-
VDR14D821KJ	**510**	**670**	820(738~902)	**1355**	6000A	**235**	**240**	-	-
VDR14D911KJ	**550**	**745**	910(819~1001)	**1500**	6000A	**255**	**220**	-	-
VDR14D102KJ	**625**	**825**	1000(900~1100)	**1650**	6000A	**280**	**200**	-	-
VDR14D112KJ	**680**	**895**	1100(990~1210)	**1815**	6000A	**310**	**180**	-	-
VDR14D122KJ	**750**	**990**	1200(1080~1320)	**1980**	6000A	**310**	**150**	-	-
VDR14D182KJ	**1000**	**1465**	1800(1620~1980)	**2970**	6000A	**335**	**130**	-	-

VDR14D Straight Leads Series

Dimension(mm) Straight Lead

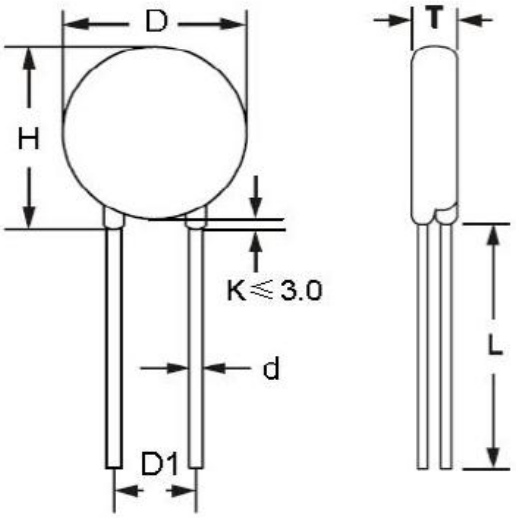


TABLE1		TABLE2			
Symbol	Dimensions	Part number	T(±1.0mm)	Part number	T(±1.0mm)
H(Max)	22.0mm	VDR14D180L	3.24mm	VDR14D331K	3.32mm
L(Min)	22.0mm	VDR14D220K	3.32mm	VDR14D361K	3.50mm
D(Max)	16.5mm	VDR14D270K	3.46mm	VDR14D391K	3.68mm
D1(±0.8)	7.5mm	VDR14D330K	3.68mm	VDR14D431K	3.93mm
T	TABLE2	VDR14D390K	3.44mm	VDR14D471K	4.17mm
d(±0.05)	0.8mm	VDR14D470K	3.63mm	VDR14D511K	4.42mm
		VDR14D560K	3.88mm	VDR14D561K	4.72mm
		VDR14D680K	4.17mm	VDR14D621K	5.09mm
		VDR14D820K	3.38mm	VDR14D681K	5.46mm
		VDR14D101K	3.25mm	VDR14D751K	5.53mm
		VDR14D121K	3.40mm	VDR14D781K	5.59mm
		VDR14D151K	3.12mm	VDR14D821K	5.81mm
		VDR14D181K	3.26mm	VDR14D911K	5.85mm
		VDR14D201K	3.36mm	VDR14D102K	6.30mm
		VDR14D221K	3.40mm	VDR14D112K	6.80mm
		VDR14D241K	3.55mm	VDR14D122K	8.30mm
		VDR14D271K	3.60mm	VDR14D182K	10.30mm
		VDR14D301K	3.64mm		

Packing Information

Part Number	Quantity	Packaging Option	Packaging Specification
VDR14DxxxK	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.

Bulk Pack



Ammo Pack

