HUAAN 华兴安电子 HUAAN LIMITED

VDR-05D Paste Series

Metal Oxide Varistors (MOV)

Features

·Wide operating voltage (V1mA) range from 18V to 620V
·Fast responding to transient over-voltage
·Large absorbing transient energy capability
·Meets MSL level 1, per J-STD-020
·Operating Temperature：-40℃ ~ +85℃
·Safety certification:

Applications

LED light.

Description of Part Number

VDR - 05 D 471 K J

Brand Mark

- NO SUFFIX: STANDARD MOV , SUFFIX J:HIGH SURGE MOV
- Varistor Voltage Tolerance: K= ±10%
- Nominal Varistor Voltage: 471=470V
- D: DISK
- DISC DIAMETER 07 = Φ5MM

Delivery Time

Standard MOV	Delivery Time	High Surge MOV	Delivery Time
VDR-05D180L~VDR-05D621K	18days	VDR-05D180LJ~VDR-05D621KJ	18days

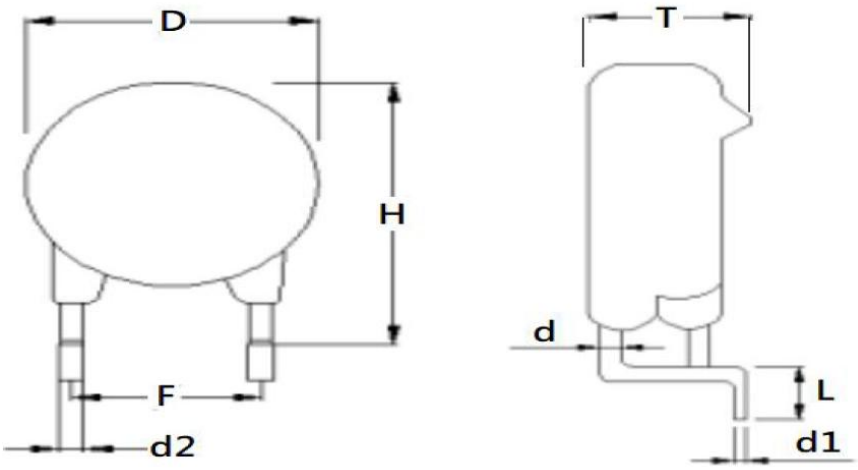
Electrical Characteristics

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)	V_C(V)AT 1A	Imax	(J)	1KHz(pf)	UL / CUL	VDE
VDR-05D180L	11	14	18(15.3~20.7)	40	100A	0.9	2800	√	√
VDR-05D220K	14	18	22(19.8~24.2)	48	100A	1.1	2300	√	√
VDR-05D270K	17	22	27(24.3~29.7)	60	100A	1.4	1800	√	√
VDR-05D330K	20	26	33(29.7~36.3)	73	100A	1.7	1500	√	√
VDR-05D390K	25	31	39(35.1~42.9)	80	100A	2.1	1300	√	√
VDR-05D470K	30	38	47(42.3~51.7)	104	100A	2.5	1100	√	√
VDR-05D560K	35	45	56(50.4~61.6)	123	100A	3.1	890	√	√
VDR-05D680K	40	56	68(61.2~74.8)	145	100A	3.6	740	√	√
VDR-05D820K	50	65	82(73.8~90.2)	150	400A	5.0	600	√	√
VDR-05D101K	60	85	100(90~110)	177	400A	6.5	500	√	√
VDR-05D121K	75	100	120(108~132)	210	400A	7.8	420	√	√
VDR-05D151K	95	125	150(135~165)	260	400A	9.7	330	√	√
VDR-05D181K	115	150	180(162~198)	320	400A	11.7	280	√	√
VDR-05D201K	130	170	200(180~220)	340	400A	13.0	250	√	√
VDR-05D221K	140	180	220(198~242)	380	400A	14.0	230	√	√
VDR-05D241K	150	200	240(216~264)	445	400A	15.0	210	√	√
VDR-05D271K	175	225	270(243~297)	475	400A	18.0	185	√	√
VDR-05D301K	190	250	300(270~330)	520	400A	20.0	165	√	√
VDR-05D331K	210	275	330(297~363)	570	400A	23.0	150	√	√
VDR-05D361K	230	300	360(324~396)	620	400A	25.0	140	√	√
VDR-05D391K	250	320	390(351~429)	675	400A	25.0	130	√	√
VDR-05D431K	275	350	430(387~473)	745	400A	28.0	115	√	√
VDR-05D471K	300	385	470(423~517)	810	400A	30.0	105	√	√
VDR-05D511K	320	415	510(459~561)	845	400A	30.0	100	√	√
VDR-05D561K	350	460	560(504~616)	920	400A	30.0	90	√	√
VDR-05D621K	385	505	620(558~682)	1025	400A	33.0	80	√	-

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)	V_C(V)AT 10A	Imax	(J)	1KHz(pf)	UL / CUL	VDE
VDR-05D180LJ	11	14	18(15.3~20.7)	40	250A	2.0	2800	_	_
VDR-05D220KJ	14	18	22(19.8~24.2)	48	250A	2.4	2300	_	_
VDR-05D270KJ	17	22	27(24.3~29.7)	60	250A	3.0	1800	_	_
VDR-05D330KJ	20	26	33(29.7~36.3)	73	250A	3.5	1500	_	_
VDR-05D390KJ	25	31	39(35.1~42.9)	80	250A	4.0	1300	_	_
VDR-05D470KJ	30	38	47(42.3~51.7)	104	250A	5.0	1100	_	_
VDR-05D560KJ	35	45	56(50.4~61.6)	123	250A	6.0	890	_	_
VDR-05D680KJ	40	56	68(61.2~74.8)	145	250A	7.0	740	_	_
VDR-05D820KJ	50	65	82(73.8~90.2)	150	800A	10.0	600	_	_
VDR-05D101KJ	60	85	100(90~110)	177	800A	12.0	500	_	_
VDR-05D121KJ	75	100	120(108~132)	210	800A	13.0	420	_	_
VDR-05D151KJ	95	125	150(135~165)	260	800A	13.0	330	_	_
VDR-05D181KJ	115	150	180(162~198)	320	800A	16.0	280	_	_
VDR-05D201KJ	130	170	200(180~220)	340	800A	17.0	250	_	_
VDR-05D221KJ	140	180	220(198~242)	380	800A	19.0	230	_	_
VDR-05D241KJ	150	200	240(216~264)	445	800A	21.0	210	_	_
VDR-05D271KJ	175	225	270(243~297)	475	800A	24.0	185	_	_
VDR-05D301KJ	190	250	300(270~330)	520	800A	26.0	165	_	_
VDR-05D331KJ	210	275	330(297~363)	570	800A	28.0	150	_	_
VDR-05D361KJ	230	300	360(324~396)	620	800A	32.0	140	_	_
VDR-05D391KJ	250	320	390(351~429)	675	800A	35.0	130	_	_
VDR-05D431KJ	275	350	430(387~473)	745	800A	40.0	115	_	_
VDR-05D471KJ	300	385	470(423~517)	810	800A	42.0	105	_	_
VDR-05D511KJ	320	415	510(459~561)	845	800A	45.0	100	_	_
VDR-05D561KJ	350	460	560(504~616)	920	800A	49.0	90	_	_
VDR-05D621KJ	385	505	620(558~682)	1025	800A	58.0	80	_	_

Dimension(mm) Paste



Symbol	Dimensions
H	8.5mm
D	6.5mm
F	6.2mm
d2	0.7mm
d	0.6mm
L	2.7mm
d1	0.4mm
T	4.5mm

Packing Information

Part Number	Quantity	Packaging Option
VDR-05DxxxK	1000PCS	Reel 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.