

### Metal Oxide Varistors (MOV) UL File NO: E317616



#### Features

- Wide operating voltage (V1mA) range from 18V to 820V
- 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
- Safety certification: UL1414,UL1449,CSA,VDE
- Operating Temperature: -40°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C

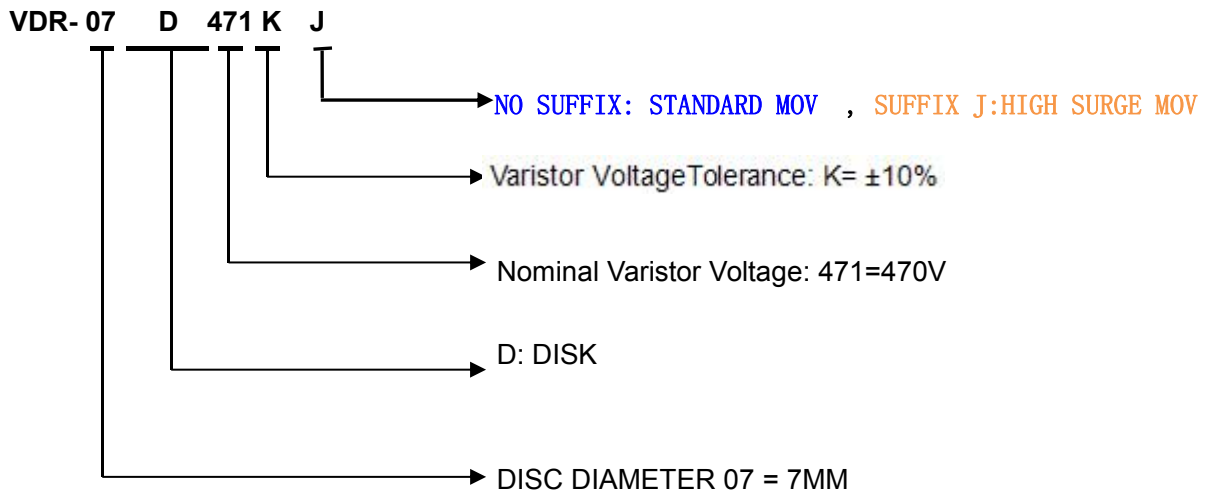


VDR-07D470K Picture

#### 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



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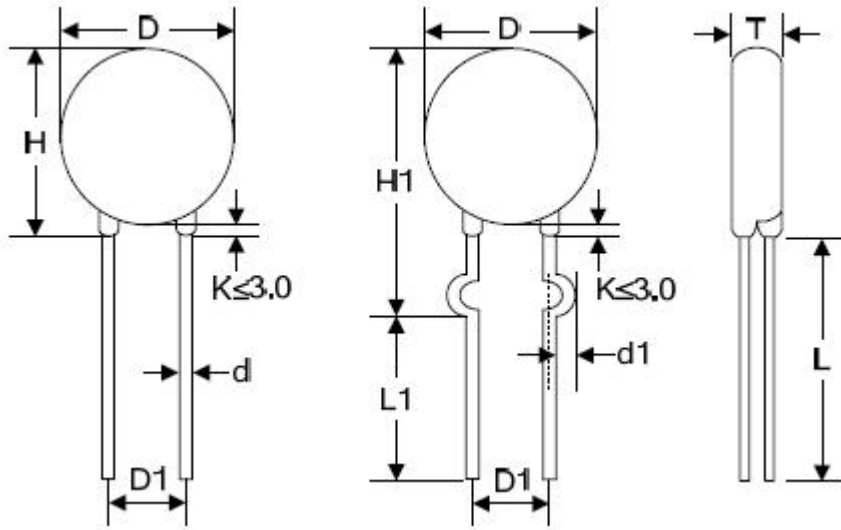
### Electrical Characteristics



Part Number		Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage	Withstanding Surge Current 8/20uS		Maximum Energy (10/1000µs)		Typical Capacitance (Reference)
Standard	High Surge	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)	V <sub>1mA</sub> (V)	V <sub>c</sub> (V)	I(A)	I(A)	(J)	(J)	1KHz(pf)
					AT 10A	Standard	High Surge	Standard	High Surge	
VDR-07D180K	VDR-07D180KJ	11	14	18(15~21.6)	36	250	500	0.9	2.0	2800
VDR-07D220K	VDR-07D220KJ	14	18	22(19.5~26)	43	250	500	1.1	2.4	2300
VDR-07D270K	VDR-07D270KJ	17	22	27(24~30)	53	250	500	1.4	3.0	1800
VDR-07D330K	VDR-07D330KJ	20	26	33(29.5~36.5)	66	250	500	1.7	3.5	1500
VDR-07D390K	VDR-07D390KJ	25	31	39(35~43)	77	250	500	2.1	4.0	1300
VDR-07D470K	VDR-07D470KJ	30	38	47(42~54)	93	250	500	2.5	5.0	1100
VDR-07D560K	VDR-07D560KJ	35	45	56(50~62)	100	250	500	3.1	6.0	890
VDR-07D680K	VDR-07D680KJ	40	56	68(61~75)	135	250	500	3.6	7.0	740
VDR-07D820K	VDR-07D820KJ	50	65	82(74~90)	135	1200	1750	5.0	10.0	600
VDR-07D101K	VDR-07D101KJ	60	85	100(90~110)	165	1200	1750	6.5	12.0	500
VDR-07D121K	VDR-07D121KJ	75	100	120(108~132)	200	1200	1750	7.8	13.0	420
VDR-07D151K	VDR-07D151KJ	95	125	150(135~165)	250	1200	1750	9.7	13.0	330
VDR-07D181K	VDR-07D181KJ	115	150	180(162~198)	300	1200	1750	11.7	16.0	280
VDR-07D201K	VDR-07D201KJ	130	170	200(180~220)	340	1200	1750	13.0	17.0	250
VDR-07D221K	VDR-07D221KJ	140	180	220(198~242)	360	1200	1750	14.0	19.0	230
VDR-07D241K	VDR-07D241KJ	150	200	240(216~264)	395	1200	1750	15.0	21.0	210
VDR-07D271K	VDR-07D271KJ	175	225	270(243~297)	455	1200	1750	18.0	24.0	185
VDR-07D301K	VDR-07D301KJ	190	250	300(270~330)	500	1200	1750	20.0	26.0	165
VDR-07D331K	VDR-07D331KJ	210	275	330(297~363)	550	1200	1750	23.0	28.0	150
VDR-07D361K	VDR-07D361KJ	230	300	360(324~396)	595	1200	1750	25.0	32.0	140
VDR-07D391K	VDR-07D391KJ	250	320	390(351~429)	650	1200	1750	25.0	35.0	130
VDR-07D431K	VDR-07D431KJ	275	350	430(387~473)	710	1200	1750	28.0	40.0	115
VDR-07D471K	VDR-07D471KJ	300	385	470(423~517)	775	1200	1750	30.0	42.0	105
VDR-07D511K	VDR-07D511KJ	320	415	510(459~561)	845	1200	1750	30.0	45.0	100
VDR-07D561K	VDR-07D561KJ	350	460	560(504~616)	925	1200	1750	30.0	49.0	90
VDR-07D621K	VDR-07D621KJ	385	505	620(558~682)	1025	1200	1750	33.0	58.0	80
VDR-07D681K	VDR-07D681KJ	420	560	680(612~748)	1120	1200	1750	33.0	60.0	75
VDR-07D751K	VDR-07D751KJ	460	615	750(675~825)	1240	1200	1750	67.2	75.0	70
VDR-07D781K	VDR-07D781KJ	485	640	780(702~858)	1290	1200	1750	67.2	80.0	70
VDR-07D821K	VDR-07D821KJ	510	670	820(738~902)	1355	1200	1750	67.2	87.0	60

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### Dimension(mm)



**TABLE 1**

Symbol	Dimensions
H(max.)	12.0
H1(max.)	13.5
L(min.)	20.0
L1(min.)	15.0
D(max.)	9.0
D1(±0.8)	5.0
T(max.)	TABLE 2
d(±0.05)	0.6
d1(±0.4)	1.2

**TABLE 2**

Model	T(max.)	Model	T(max.)
180K	4.5	241K	4.6
220K	4.6	271K	4.9
270K	4.7	301K	5.0
330K	4.9	331K	5.1
390K	4.8	361K	5.2
470K	4.9	391K	5.4
560K	5.0	431K	5.7
680K	5.2	471K	6.0
820K	4.1	511K	6.2
101K	4.3	561K	6.5
121K	4.5	621K	7.1
151K	4.8	681K	7.3
181K	4.3	751K	7.06
201K	4.4	781K	7.24
221K	4.5	821K	7.48

### Packing Information

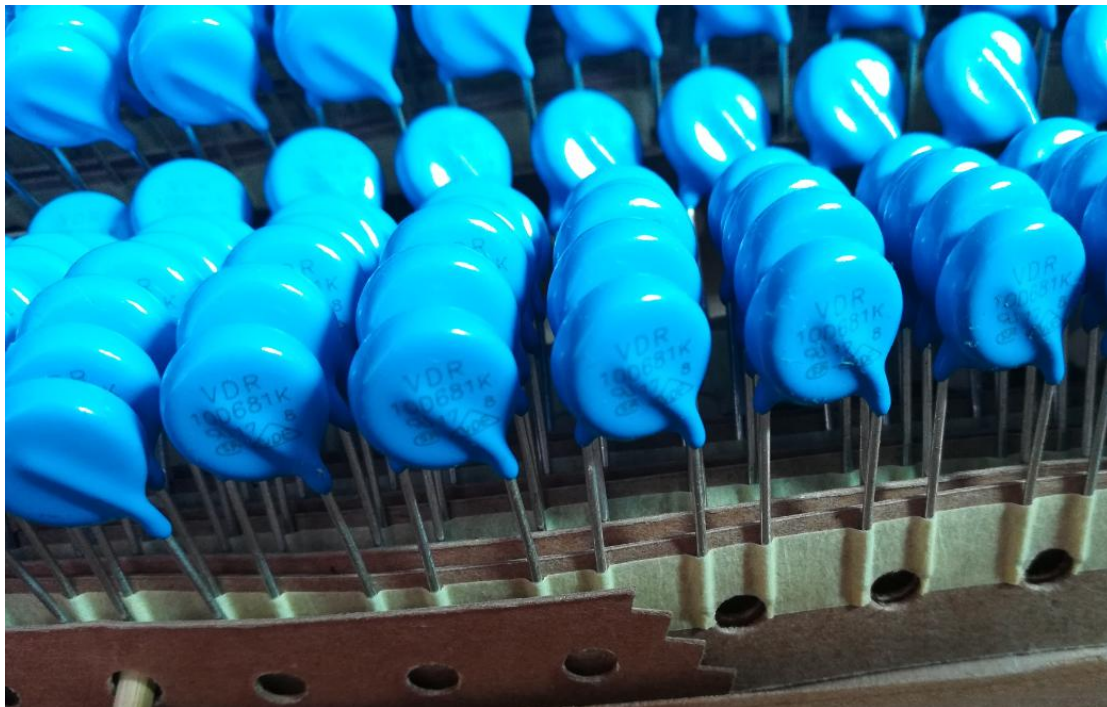
Part Number	Quantity	Packaging Option	Packaging Specification
VDR-07DxxxK	1000PCS	Plastic bag	Bulk Pack

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### Bulk Pack



### Ammo Pack



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