



#### 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
- Safety certification: UL1414,UL1449,CSA,VDE
- Operating Temperature: -40°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C

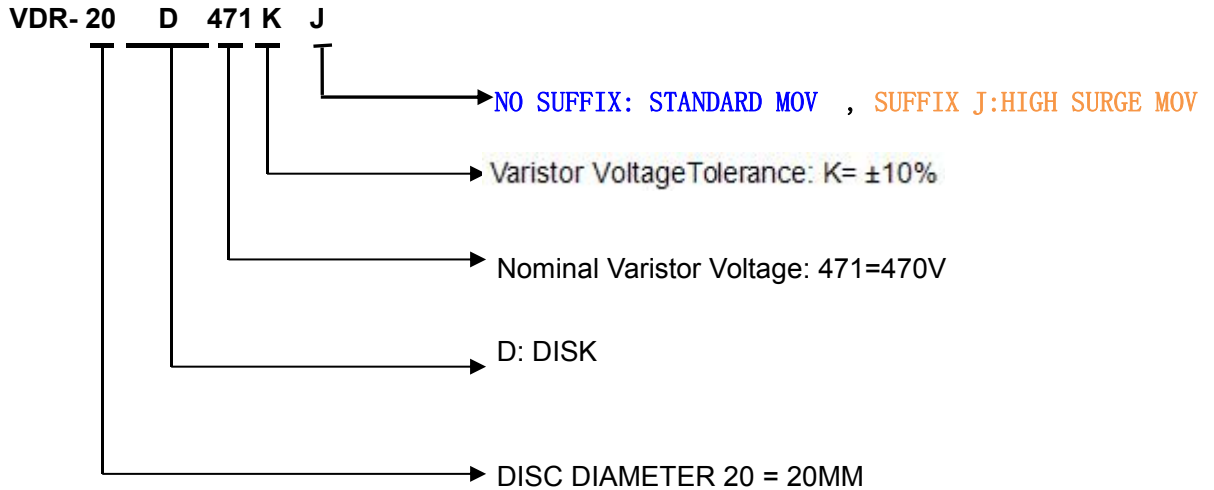


VDR-20D561K Picture

#### 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



### 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) AT 50A	I(A)		J		1KHz(pf)
						Standard	High Surge	Standard	High Surge	
VDR-20D180K	VDR-20D180KJ	11	14	18(15~21.6)	36	2000	3000	11	13	28500
VDR-20D220K	VDR-20D220KJ	14	18	22(19.5~26)	43	2000	3000	14	16	18500
VDR-20D270K	VDR-20D270KJ	17	22	27(24~30)	53	2000	3000	16	19	13000
VDR-20D330K	VDR-20D330KJ	20	26	33(29.5~36.5)	65	2000	3000	23	24	11500
VDR-20D390K	VDR-20D390KJ	25	31	39(35~43)	77	2000	3000	26	28	8500
VDR-20D470K	VDR-20D470KJ	30	38	47(42~54)	93	2000	3000	30	34	7400
VDR-20D560K	VDR-20D560KJ	35	45	56(50~62)	100	2000	3000	41	41	6500
VDR-20D680K	VDR-20D680KJ	40	56	68(61~75)	135	2000	3000	46	49	5800
VDR-20D820K	VDR-20D820KJ	50	65	82(74~90)	135	6500	10000	38	56	4900
VDR-20D101K	VDR-20D101KJ	60	85	100(90~110)	165	6500	10000	45	70	4000
VDR-20D121K	VDR-20D121KJ	75	100	120(108~132)	200	6500	10000	55	85	3300
VDR-20D151K	VDR-20D151KJ	95	125	150(135~165)	250	6500	10000	70	106	2700
VDR-20D181K	VDR-20D181KJ	115	150	180(162~198)	300	6500	10000	85	130	2200
VDR-20D201K	VDR-20D201KJ	130	170	200(180~220)	340	6500	10000	95	140	2000
VDR-20D221K	VDR-20D221KJ	140	180	220(198~242)	360	6500	10000	100	155	1800
VDR-20D241K	VDR-20D241KJ	150	200	240(216~264)	395	6500	10000	108	168	1650
VDR-20D271K	VDR-20D271KJ	175	225	270(243~297)	455	6500	10000	127	190	1500
VDR-20D301K	VDR-20D301KJ	190	250	300(270~330)	500	6500	10000	136	210	1300
VDR-20D331K	VDR-20D331KJ	210	275	330(297~363)	550	6500	10000	150	228	1200
VDR-20D361K	VDR-20D361KJ	230	300	360(324~396)	595	6500	10000	163	255	1100
VDR-20D391K	VDR-20D391KJ	250	320	390(351~429)	650	6500	10000	180	275	1000
VDR-20D431K	VDR-20D431KJ	275	350	430(387~473)	710	6500	10000	190	305	930
VDR-20D471K	VDR-20D471KJ	300	385	470(423~517)	775	6500	10000	220	350	850
VDR-20D511K	VDR-20D511KJ	320	415	510(459~561)	845	6500	10000	220	360	780
VDR-20D561K	VDR-20D561KJ	350	460	560(504~616)	925	6500	10000	220	380	710
VDR-20D621K	VDR-20D621KJ	385	505	620(558~682)	1025	6500	10000	220	390	650
VDR-20D681K	VDR-20D681KJ	420	560	680(612~748)	1120	6500	10000	230	400	600
VDR-20D751K	VDR-20D751KJ	460	615	750(675~825)	1240	6500	10000	255	420	580
VDR-20D781K	VDR-20D781KJ	485	640	780(702~858)	1290	6500	10000	265	440	560
VDR-20D821K	VDR-20D821KJ	510	670	820(738~902)	1355	6500	10000	282	460	525
VDR-20D911K	VDR-20D911KJ	550	745	910(819~1001)	1500	6500	10000	310	510	495
VDR-20D102K	VDR-20D102KJ	625	825	1000(900~1100)	1650	6500	10000	342	565	480

### 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 50A	Standard	High Surge	Standard	High Surge	
VDR-20D112K	VDR-20D112KJ	680	895	1100(990~1210)	1815	6500	10000	383	620	460
VDR-20D122K	VDR-20D122KJ	750	990	1200(1080~1320)	1980	6500	10000	408	660	350
VDR-20D182K	VDR-20D182KJ	1000	1465	1800(1620~1980)	2970	6500	10000	625	750	320

### Dimension(mm)

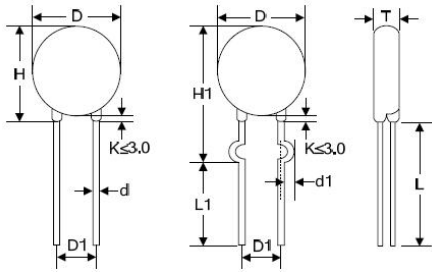


TABLE 1

Symbol	Dimensions
H(max.)	26.5
H1(max.)	28.0
L(min.)	20.0
L1(min.)	15.0
D(max.)	23.0
D1	7.5±0.8/10.0±1.0
T(max.)	TABLE 2
d(±0.05)	0.8/1.0
d1(±0.4)	1.4/1.6

TABLE 2

Model	T(max.)	Model	T(max.)
180K	4.35	361K	5.38
220K	4.44	391K	5.55
270K	4.59	431K	5.77
330K	4.80	471K	5.99
390K	4.56	511K	6.21
470K	4.77	561K	6.48
560K	5.02	621K	6.81
680K	5.32	681K	7.14
820K	4.48	751K	7.53
101K	4.65	781K	7.69
121K	4.80	821K	7.91
151K	4.52	911K	8.17
181K	4.66	102K	8.64
201K	4.76	112K	9.16
221K	4.84	122K	9.69
241K	4.95	142K	11.26
271K	5.00	162K	11.78
301K	5.05	182K	12.83
331K	5.22	-	-

### Packing Information

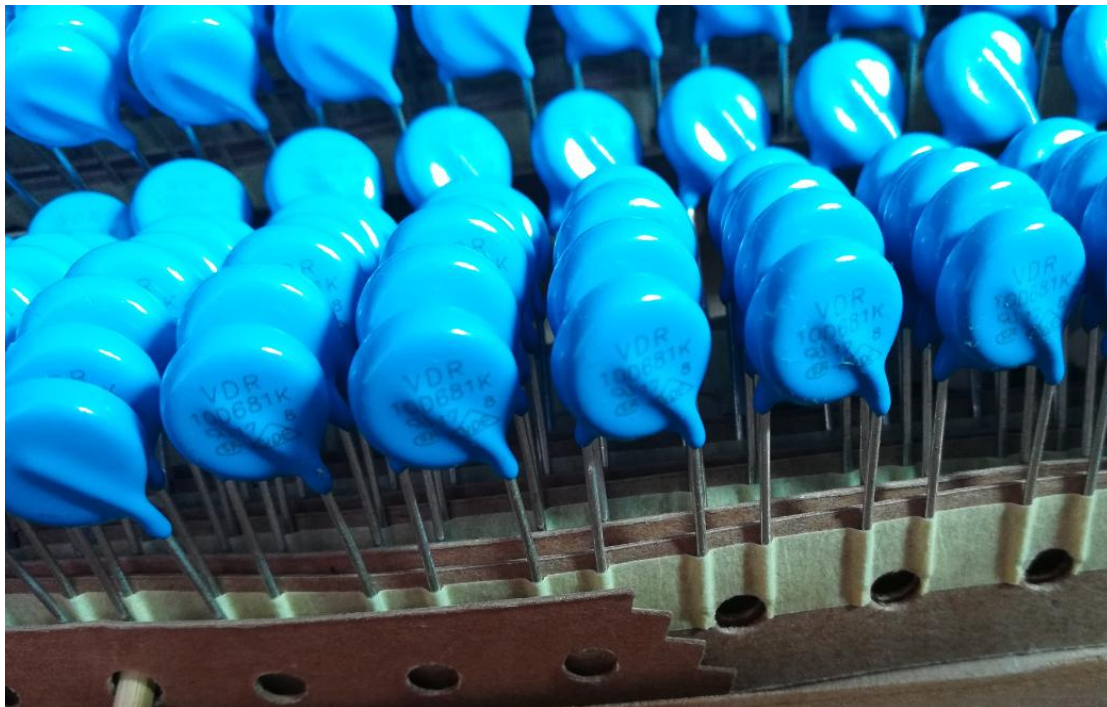
Part Number	Quantity	Packaging Option	Packaging Specification
VDR-20DxxxK	250PCS	Plastic bag	Bulk Pack

[sales@huaandz.com](mailto:sales@huaandz.com)

### Bulk Pack



### Ammo Pack



[sales@huaandz.com](mailto:sales@huaandz.com)