METAL OXIDE VARISTORS

SDVxxxKD20

FEATURE

- Fast response to transient over-voltage and limited current;
- Capable of absorbing high transient energies;
- Low clamping ratio and no follow current.

APPLICATION

- Consumer and industrial electronics;
- Electronic home appliances,gas and petroleum appliances;
- Relay and electromagnetic valve surge absorption,

ELECTRICAL CHARACTERISTICS

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanging Surge Current		Rated Power	Maximum Energy 10/1000μs		Typical Capacitance (Reference)
	V_{AC}	V_{DC}	V_{1mA}	I_P	V_C	Standard	High Surge		Standard	High Surge	@1kHz
	V	V	V	A	V	A	A	W	J	J	pF
180KD20	11	14	18(15~21.6)	20	36	2000	3000	0.2	11	13	28500
220KD20	14	18	22(19.5~26)	20	43				14	16	18500
270KD20	17	22	27(24~31)	20	53				16	19	13000
330KD20	20	26	33(29.5~36.5)	20	65				23	24	11500
390KD20	25	31	39(35~43)	20	77				26	28	8500
470KD20	30	38	47(42~52)	20	93				30	34	7400
560KD20	35	45	56(50~62)	20	110				49	56	6500
680KD20	40	56	68(61~75)	20	135				60	56	5800
820KD20	50	65	82(74~90)	100	135	6500	10000	1.0	48	56	4900
101KD20	60	85	100(90~110)	100	165				51	70	4000
121KD20	75	100	120(108~132)	100	200				55	85	3300
151KD20	95	125	150(135~165)	100	250				70	106	2700
181KD20	115	150	180(162~198)	100	300				85	130	2200
201KD20	130	170	200(180~220)	100	340				95	140	2000
221KD20	140	180	220(198~242)	100	360				100	155	1800
241KD20	150	200	240(216~264)	100	395				108	168	1650
271KD20	175	225	270(243~297)	100	455				127	190	1500
301KD20	190	250	300(270~330)	100	500				136	210	1300
331KD20	210	275	330(297~363)	100	550				150	228	1200
361KD20	230	300	360(324~396)	100	595				163	255	1100

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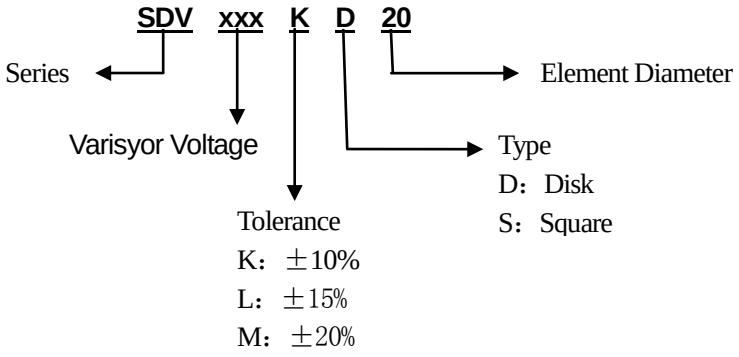
Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanging Surge Current		Rated Power	Maximum Energy 10/1000μs		Typical Capacitance (Reference)
	V_{AC}	V_{DC}	V_{1mA}	I_P	V_C	Standard	High Surge		Standard	High Surge	@1kHz
	V	V	V	A	V	A	A	W	J	J	pF
391KD20	250	320	390(351~429)	100	650				180	275	1000
431KD20	275	350	430(387~473)	100	710				190	305	930
471KD20	300	385	470(423~517)	100	775				220	350	850
511KD20	320	415	510(459~561)	100	845				220	360	780
561KD20	350	460	560(504~616)	100	925				220	360	710
621KD20	385	505	620(558~682)	100	1025				220	390	650
681KD20	420	560	680(612~748)	100	1120				230	400	600
751KD20	460	615	750(675~825)	100	1240				255	420	530
781KD20	485	640	780(702~858)	100	1290	6500	10000	1.0	265	440	510
821KD20	510	670	820(738~902)	100	1355				282	460	500
911KD20	550	745	910(819~1001)	100	1500				310	510	440
102KD20	625	825	1000(900~1100)	100	1650				242	565	400
112KD20	680	895	1100(990~1210)	100	1815				383	620	360
122KD20	750	990	1200(1080~1320)	100	1980				408	660	350
142KD20	880	1140	1400(1260~1540)	100	2310				532	748	340
162KD20	1000	1280	1600(1440~1760)	100	2640				606	896	330
182KD20	1100	1465	1800(1620~1980)	100	2970				625	990	320

GENERAL CHARACTERISTICS DEFIN ITION

- Operating Temperature： -40℃ ~ +85℃
- Storage Temperature：-40℃ ~ +125℃

PART NUMBERING



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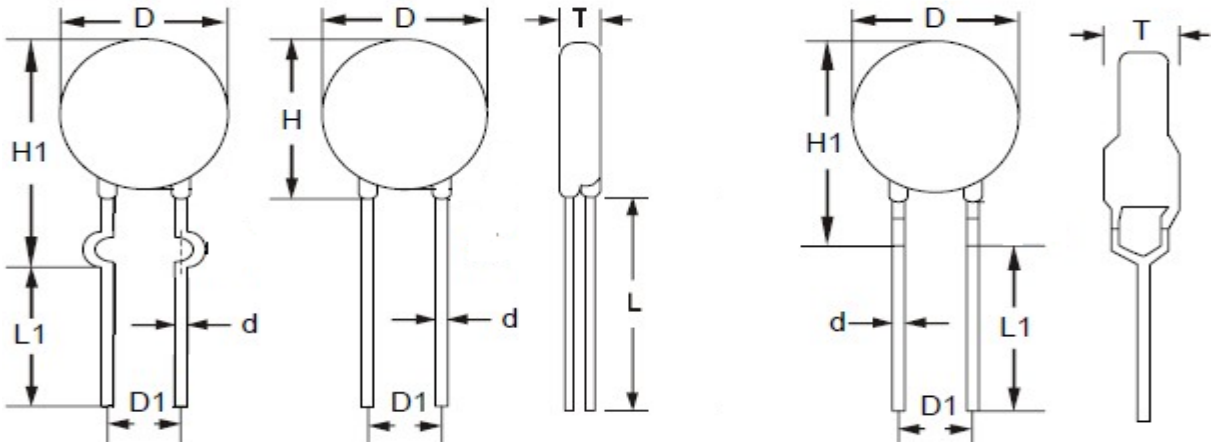
PACKAGE DIMENSIONS（unit：mm）



Symbol	H(max.)	H1(max.)	L(min)	L1(min)	D(max.)	D1(±0.8)	d(±0.05)
Dimensions	26.5	28.0	20.0	15.0	23.0	7.5/10.0	0.8/1.0

T(max)													
180K	4.4	470K	4.8	121K	4.8	241K	5.0	391K	5.6	621K	6.8	911K	8.2
220K	4.5	560K	5.0	151K	4.5	271K	5.0	431K	5.8	681K	7.2	102K	8.7
270K	4.6	680K	5.3	181K	4.7	301K	5.1	471K	6.0	751K	7.6	112K	9.2
330K	4.8	820K	4.5	201K	4.8	331K	5.3	511K	6.2	781K	7.7	162K	11.8
390K	4.7	101K	4.7	221K	4.8	361K	5.4	561K	6.5	821K	8.0	182K	12.9

ELECTRICAL RATINGS

Item	Test Condition/Description	Requirement
Varistor Voltage	The voltage between two terminals with the specified measuring current 1mA DC applied	To meet the specified value
Maximum Allowable Voltage	The recommended maximum sine wave or the maximum DC voltage can be applied continuously	
Maximum Clamping Voltage	The maximum voltage between two terminals with the specification standard impulse current. Applied mave:8/20μs	
Rate Power	The maximum average power that can be applied within the specified ambient temperature	
Energy	The maximum energy within the varistor voltage change of ±10% when one impulse of 10/1000μs or 2 ms is applied.	
Withstanding Surge Current	The maximum current within the varistor voltage change of ±10% with the standard impulse current (8/20□sec.) applied one time.	
Varistor Voltage Temp. Coefficient	$\frac{Vb\,at\,20^{\circ}C - Vb\,at\,70^{\circ}C}{Vb\,at\,20^{\circ}C} \times \frac{1}{50} \times 100(\%^{\circ}C)$	0.05%/℃ max

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