

## 20 Series

### ■ Ratings and Characteristics

- Operating Temperature Range : -40 to 85 °C
- Storage Temperature Range : -40 to 125 °C

### ERZV20D180 to ERZV20D680

Part No.	Varistor Voltage	Maximum Allowable Voltage		Clamping Voltage (max.)	Rated Power	Maximum Energy		Maximum Peak Current (8/20 μs)		Capacitance (max.) @1 kHz (pF)
		ACrms (V)	DC (V)			(10/1000 μs)	(2 ms)	1 time	2 times	
	V <sub>1 mA</sub> (V)	ACrms (V)	DC (V)	V <sub>20 A</sub> (V)	(W)	(J)	(J)	(A)	(A)	
ERZV20D180	18 (16-20)	11	14	36	0.2	13	12	3000	2000	40000
ERZV20D220	22 (20-24)	14	18	43	0.2	16	14	3000	2000	30000
ERZV20D270	27 (24-30)	17	22	53	0.2	19	17	3000	2000	24500
ERZV20D330	33 (30-36)	20	26	65	0.2	24	21	3000	2000	20000
ERZV20D390	39 (35-43)	25	31	77	0.2	28	25	3000	2000	13800
ERZV20D470	47 (42-52)	30	38	93	0.2	34	30	3000	2000	13500
ERZV20D560	56 (50-62)	35	45	110	0.2	41	36	3000	2000	12200
ERZV20D680	68 (61-75)	40	56	135	0.2	49	44	3000	2000	11500

### ERZV20D820 to ERZV20D182

Part No.	Varistor Voltage	Maximum Allowable Voltage		Clamping Voltage (max.)	Rated Power	Maximum Energy		Maximum Peak Current (8/20 μs)		Capacitance (max.) @1 kHz (pF)
		ACrms (V)	DC (V)			(10/1000 μs)	(2 ms)	1 time	2 times	
	V <sub>1 mA</sub> (V)	ACrms (V)	DC (V)	V <sub>50 A</sub> (V)	(W)	(J)	(J)	(A)	(A)	
ERZV20D820	82( 74- 90)	50	65	135	1.0	56	40	10000	7000	7500
ERZV20D101	100( 90- 110)	60	85	165	1.0	70	50	10000	7000	6500
ERZV20D121	120( 108- 132)	75	100	200	1.0	85	60	10000	7000	5500
ERZV20D151	150( 135- 165)	95	125	250	1.0	106	75	10000	7000	4500
ERZV20D201	200( 185- 225)	130	170	340	1.0	140	100	10000	7000	1700
ERZV20D221	220( 198- 242)	140	180	360	1.0	155	110	10000	7000	1600
ERZV20D241	240( 216- 264)	150	200	395	1.0	168	120	10000	7000	1500
ERZV20D271	270( 247- 303)	175	225	455	1.0	190	135	10000	7000	1300
ERZV20D331	330( 297- 363)	210	270	545	1.0	228	160	10000	6500	1100
ERZV20D361	360( 324- 396)	230	300	595	1.0	255	180	10000	6500	1100
ERZV20D391	390( 351- 429)	250	320	650	1.0	275	195	10000	6500	1100
ERZV20D431	430( 387- 473)	275	350	710	1.0	303	215	10000	6500	1000
ERZV20D471	470( 423- 517)	300	385	775	1.0	350	250	10000	6500	900
ERZV20D511	510( 459- 561)	320	410	845	1.0	382	273	10000	6500	800
ERZV20D621	620( 558- 682)	385	505	1025	1.0	382	273	7500	6500	700
ERZV20D681	680( 612- 748)	420	560	1120	1.0	382	273	7500	6500	650
ERZV20D751	750( 675- 825)	460	615	1240	1.0	420	300	7500	6500	600
ERZV20D821	820( 738- 902)	510	670	1355	1.0	460	325	7500	6500	530
ERZV20D911	910( 819-1001)	550	745	1500	1.0	510	360	7500	6500	500
ERZV20D102	1000( 900-1100)	625	825	1650	1.0	565	400	7500	6500	450
ERZV20D112	1100( 990-1210)	680	895	1815	1.0	620	440	7500	6500	400
ERZV20D182	1800(1700-1980)	1000	1465	2970	1.0	1020	720	7500	6500	250

\* Measured at 1 MHz

### ■ Dimensions in mm (not to scale)

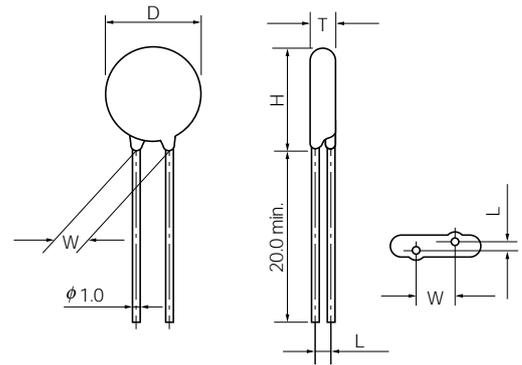
#### ERZV20D180 to ERZV20D680

Part No.	D max.	T max.	W	H max.	L
ERZV20D180	21.5	5.1	10.0±1.0	24.5	1.5±1.0
ERZV20D220	21.5	5.2	10.0±1.0	24.5	1.6±1.0
ERZV20D270	21.5	5.3	10.0±1.0	24.5	1.7±1.0
ERZV20D330	21.5	5.5	10.0±1.0	24.5	1.9±1.0
ERZV20D390	21.5	5.5	10.0±1.0	24.5	1.9±1.0
ERZV20D470	21.5	5.6	10.0±1.0	24.5	2.0±1.0
ERZV20D560	21.5	5.7	10.0±1.0	24.5	2.1±1.0
ERZV20D680	21.5	5.8	10.0±1.0	24.5	2.2±1.0

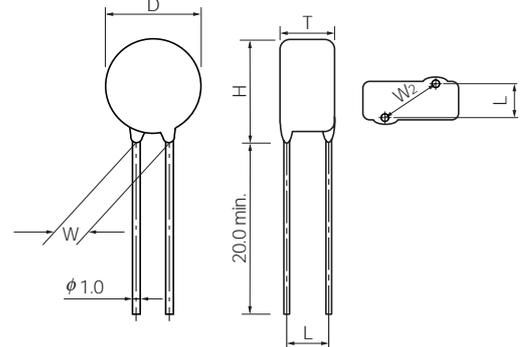
#### ERZV20D820 to ERZV20D182CS

Part No.	D max.	T max.	W	H max.	L
ERZV20D820	21.5	4.9	10.0±1.0	24.5	1.8±1.0
ERZV20D101	21.5	5.1	10.0±1.0	24.5	2.0±1.0
ERZV20D121	21.5	5.3	10.0±1.0	24.5	2.2±1.0
ERZV20D151	21.5	5.6	10.0±1.0	24.5	2.5±1.0
ERZV20D201	21.5	5.2	10.0±1.0	24.5	2.1±1.0
ERZV20D221	21.5	5.3	10.0±1.0	24.5	2.2±1.0
ERZV20D241	21.5	5.4	10.0±1.0	24.5	2.3±1.0
ERZV20D271	21.5	5.6	10.0±1.0	24.5	2.5±1.0
ERZV20D331	21.5	5.9	10.0±1.0	24.5	2.8±1.0
ERZV20D361	21.5	6.1	10.0±1.0	24.5	3.0±1.0
ERZV20D391	21.5	6.2	10.0±1.0	24.5	3.1±1.0
ERZV20D431	21.5	6.4	10.0±1.0	24.5	3.3±1.0
ERZV20D471	21.5	6.6	10.0±1.0	24.5	3.5±1.0
ERZV20D511	21.5	6.8	10.0±1.0	24.5	3.7±1.0
ERZV20D621	22.5	7.5	10.0±1.0	25.5	4.4±1.0
ERZV20D681	22.5	7.8	10.0±1.0	25.5	4.7±1.0
ERZV20D751	22.5	8.2	10.0±1.0	25.5	5.1±1.0
ERZV20D821	22.5	8.5	10.0±1.0	25.5	5.4±1.0
ERZV20D911	22.5	9.0	10.0±1.0	25.5	5.9±1.0
ERZV20D102	22.5	9.5	10.0±1.0	25.5	6.4±1.0
ERZV20D112	22.5	10.1	10.0±1.0	25.5	7.0±1.0
ERZV20D182	23.5	14.8	15.0±1.0*	28.0	10.7±2.0

\*: W<sub>2</sub>



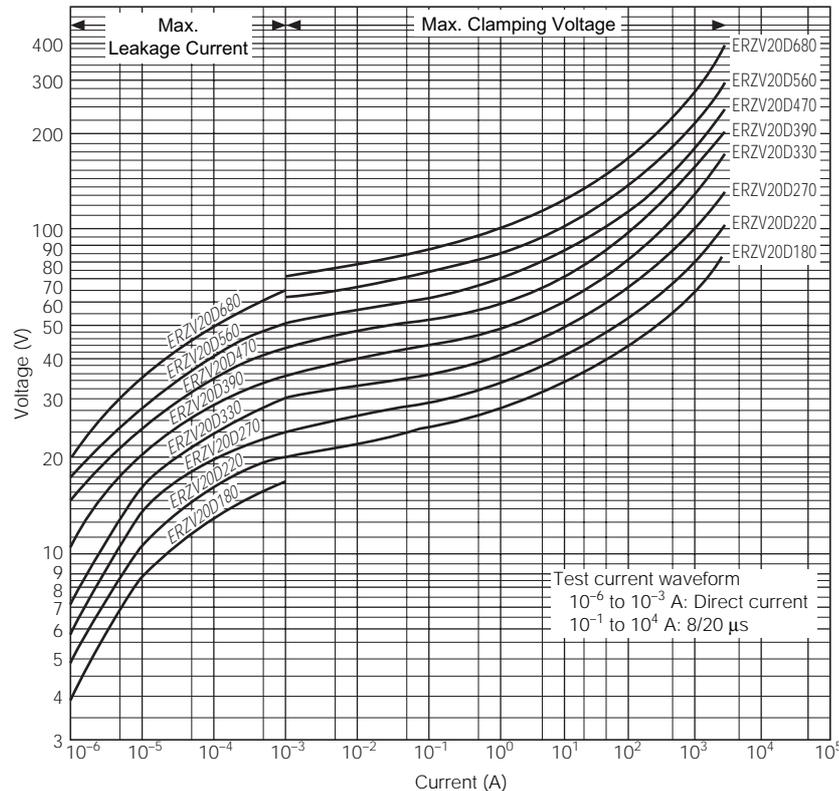
(ERZV20D182)



### ■ Typical Characteristics

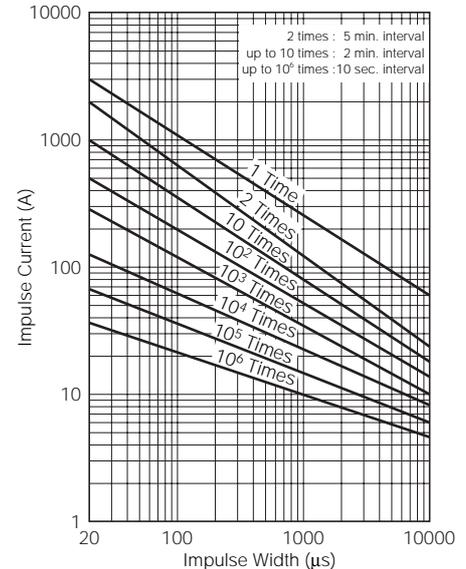
#### Voltage vs. Current

##### ERZV20D180 to ERZV20D680



#### Impulse Derating (Relation between impulse width and impulse current multiple)

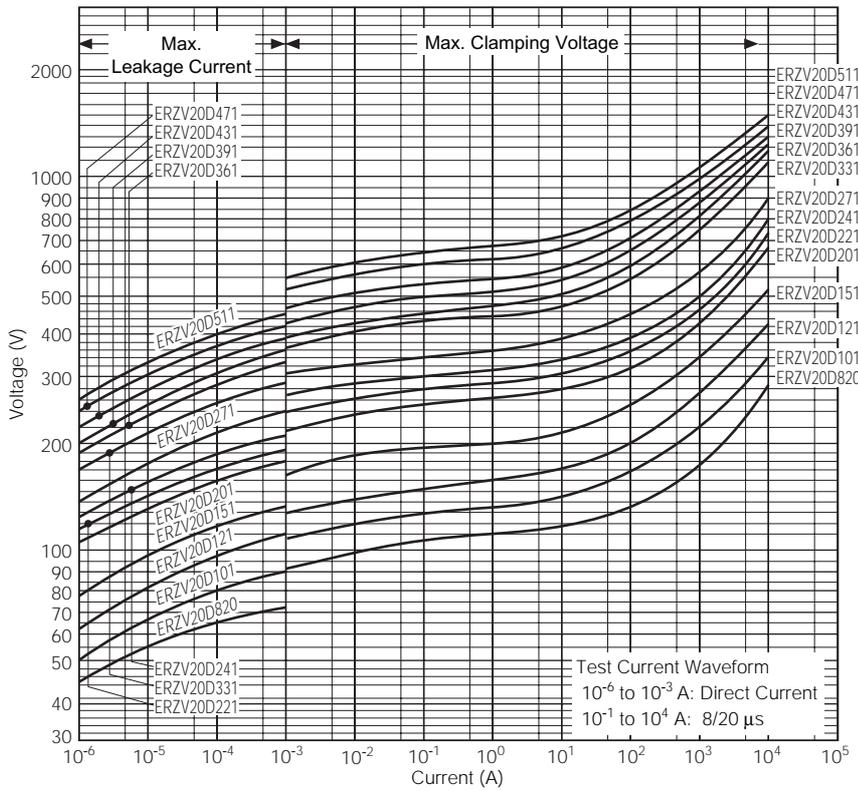
##### ERZV20D180 to ERZV20D680



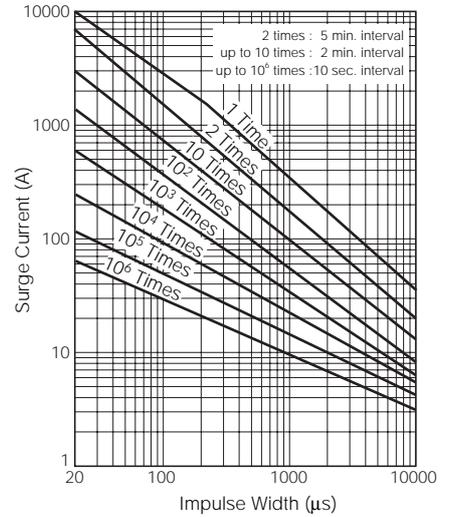
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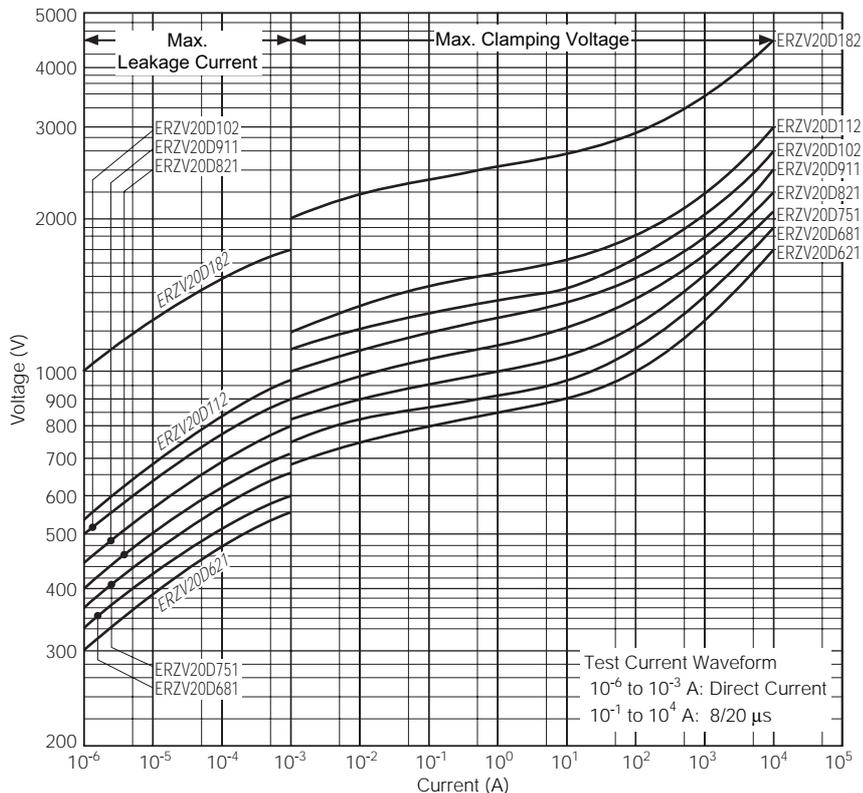
ERZV20D820 to ERZV20D511



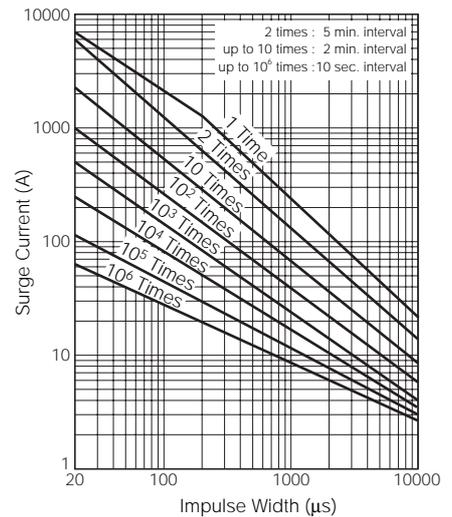
ERZV20D820 to ERZV20D511



ERZV20D621 to ERZV20D182



ERZV20D621 to ERZV20D112



ERZV20D182

