



20D Series

Ratings and Characteristics

- Operating Temperature Range -40 to 85℃
- Storage Temperature Range -40 to 125℃
- Temperature Coefficient Of Varistor Voltage 0 to - 0.05%/℃

Part No.	Varistor Voltage	Maximum Allowable Voltage		Clamping Voltage (max.)	Maximun Peak Current (8/20us)		Rated Power	Energy 10/1000us		Typical Capacitance (Reference)
	V1mA (V)	AC rms (V)	DC (V)	V 100A (V)	1time (A)	2times (A)	(W)	10/1000 us(J)	2ms (J)	@1KHz(pF)
ZOV-20D180L	18 (16-21)	11	14	• 36	2000	1000	0.20	11.0	10.0	28500
ZOV-20D220K	22 (20-24)	14	18	• 43	2000	1000	0.20	14.0	13.0	18500
ZOV-20D270K	27 (24-30)	17	22	• 53	2000	1000	0.20	18.0	15.0	13000
ZOV-20D330K	33 (30-36)	20	26	• 65	2000	1000	0.20	23.0	20.0	11500
ZOV-20D390K	39 (35-43)	25	31	• 77	2000	1000	0.20	26.0	24.0	8500
ZOV-20D470K	47 (42-52)	30	38	• 93	2000	1000	0.20	33.0	30.0	7400
ZOV-20D560K	56 (50-62)	35	45	• 110	2000	1000	0.20	41.0	35.0	6500
ZOV-20D680K	68 (61-75)	40	56	• 135	2000	1000	0.20	46.0	40.0	5800
ZOV-20D820K	82 (74-90)	50	65	135	6500	4500	1.00	38.0	27.0	4900
ZOV-20D101K	100 (90-110)	60	85	165	6500	4500	1.00	45.0	30.0	4000
ZOV-20D121K	120 (108-132)	75	100	200	6500	4500	1.00	55.0	40.0	3300
ZOV-20D151K	150 (135-165)	95	125	250	6500	4500	1.00	70.0	50.0	2700
ZOV-20D181K	180 (162-198)	115	150	300	6500	4500	1.00	85.0	60.0	2200
ZOV-20D201K	200 (185-225)	130	170	340	6500	4500	1.00	95.0	70.0	2000
ZOV-20D221K	220 (198-242)	140	180	360	6500	4500	1.00	100.0	75.0	1800
ZOV-20D241K	240 (216-264)	150	200	395	6500	4500	1.00	108.0	80.0	1650
ZOV-20D271K	270 (243-297)	175	225	455	6500	4500	1.00	127.0	90.0	1500
ZOV-20D301K	300 (270-330)	190	250	500	6500	4500	1.00	136.0	100.0	1300
ZOV-20D331K	330 (297-363)	210	275	550	6500	4500	1.00	150.0	110.0	1200
ZOV-20D361K	360 (324-396)	230	300	595	6500	4500	1.00	163.0	120.0	1100
ZOV-20D391K	390 (351-429)	250	320	650	6500	4500	1.00	180.0	130.0	1000
ZOV-20D431K	430 (387-473)	275	350	710	6500	4500	1.00	190.0	140.0	930
ZOV-20D471K	470 (423-517)	300	385	775	6500	4500	1.00	220.0	150.0	850
ZOV-20D511K	510 (459-561)	320	415	845	6500	4500	1.00	220.0	150.0	780
ZOV-20D561K	560 (504-616)	350	460	920	6500	4500	1.00	220.0	150.0	710
ZOV-20D621K	620 (558-682)	385	505	1025	6500	4500	1.00	220.0	150.0	650
ZOV-20D681K	680 (612-748)	420	560	1120	6500	4500	1.00	230.0	160.0	600

•The clamping voltage from 180K to 680K is tested with current 20A.

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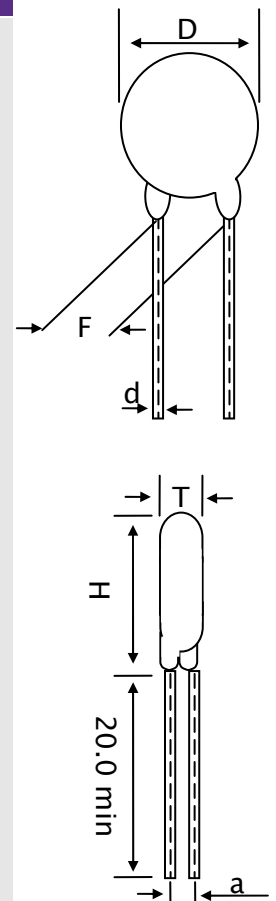
- Operating Temperature Range -40 to 85℃
- Storage Temperature Range -40 to 125℃
- Temperature Coefficient Of Varistor Voltage 0 to - 0.05%/℃

Part No.	Varistor Voltage	Maximum Allowable Voltage		Clamping Voltage (max.)	Maximum Peak Current (8/20us)		Rated Power	Energy 10/1000us		Typical Capacitance (Reference)
	V1mA (V)	ACrms (V)	DC (V)	V100A(V)	1time (A)	2times (A)	(W)	10/100 0 us(J)	2ms (J)	@1KHz(pF)
ZOV-20D751K	750 (675-825)	460	615	1240	6500	4500	1.00	255.0	175.0	530
ZOV-20D781K	780 (702-858)	485	640	1290	6500	4500	1.00	265.0	180.0	510
ZOV-20D821K	820 (738-902)	510	670	1355	6500	4500	1.00	282.0	190.0	500
ZOV-20D911K	910 (819-1001)	550	745	1500	6500	4500	1.00	310.0	215.0	440
ZOV-20D102K	1000 (900-1100)	625	825	1650	6500	4500	1.00	342.0	230.0	400
ZOV-20D112K	1100 (990-1210)	680	895	1815	6500	4500	1.00	383.0	250.0	360
ZOV-20D182K	1800(1620-1980)	1000	1465	2970	6500	4500	1.00	625.0	400.0	260

•The clamping voltage from 180K to 680K is tested with current 20A.

Dimensions in mm

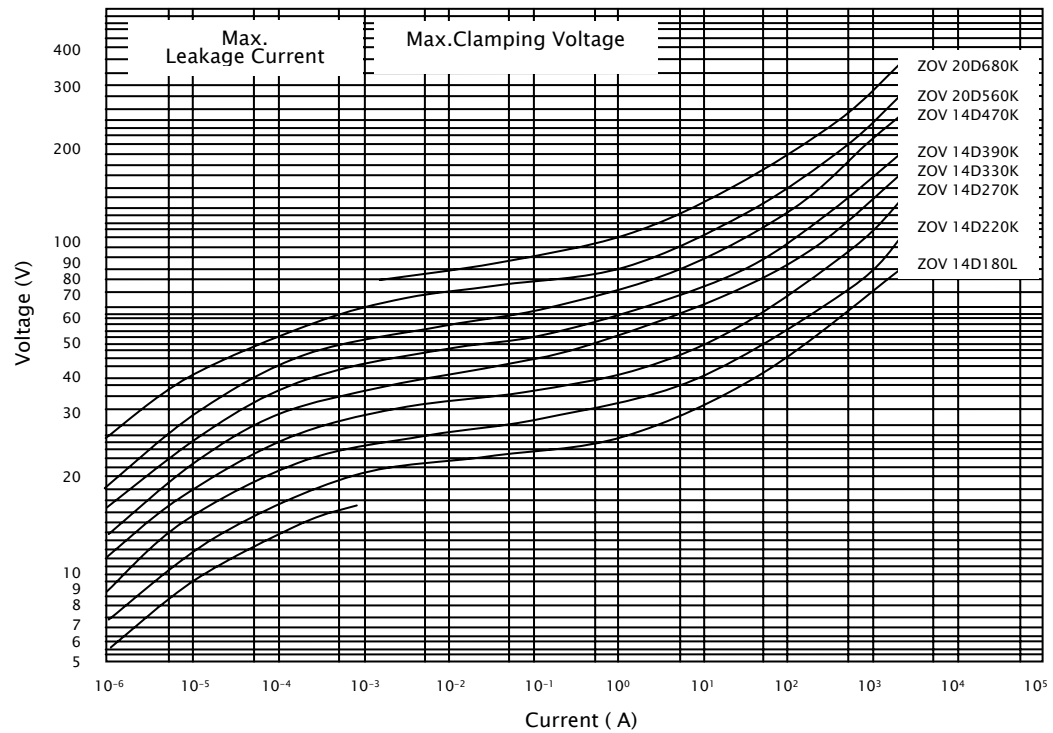
Part No.	D max.	T max.	F	H max.	a	d
ZOV-20D180L	23.0	4.8	10.0±1.0	28.0	1.5±1.0	1.0±0.05
ZOV-20D220K	23.0	4.9	10.0±1.0	28.0	1.6±1.0	1.0±0.05
ZOV-20D270K	23.0	5.0	10.0±1.0	28.0	1.7±1.0	1.0±0.05
ZOV-20D330K	23.0	5.2	10.0±1.0	28.0	1.8±1.0	1.0±0.05
ZOV-20D390K	23.0	5.5	10.0±1.0	28.0	2.0±1.0	1.0±0.05
ZOV-20D470K	23.0	5.6	10.0±1.0	28.0	2.2±1.0	1.0±0.05
ZOV-20D560K	23.0	5.7	10.0±1.0	28.0	2.5±1.0	1.0±0.05
ZOV-20D680K	23.0	5.8	10.0±1.0	28.0	1.6±1.0	1.0±0.05
ZOV-20D820K	23.0	4.9	10.0±1.0	28.0	1.6±1.0	1.0±0.05
ZOV-20D101K	23.0	5.1	10.0±1.0	28.0	1.7±1.0	1.0±0.05
ZOV-20D121K	23.0	5.3	10.0±1.0	28.0	2.0±1.0	1.0±0.05
ZOV-20D151K	23.0	5.6	10.0±1.0	28.0	1.8±1.0	1.0±0.05
ZOV-20D181K	23.0	5.2	10.0±1.0	28.0	1.8±1.0	1.0±0.05
ZOV-20D201K	23.0	5.2	10.0±1.0	28.0	1.8±1.0	1.0±0.05
ZOV-20D221K	23.0	5.3	10.0±1.0	28.0	2.1±1.0	1.0±0.05
ZOV-20D241K	23.0	5.4	10.0±1.0	28.0	2.1±1.0	1.0±0.05
ZOV-20D271K	23.0	5.6	10.0±1.0	28.0	2.3±1.0	1.0±0.05
ZOV-20D301K	23.0	5.7	10.0±1.0	28.0	2.3±1.0	1.0±0.05
ZOV-20D331K	23.0	6.0	10.0±1.0	28.0	2.7±1.0	1.0±0.05
ZOV-20D361K	23.0	6.2	10.0±1.0	28.0	2.8±1.0	1.0±0.05
ZOV-20D391K	23.0	6.4	10.0±1.0	28.0	3.1±1.0	1.0±0.05
ZOV-20D431K	23.0	6.7	10.0±1.0	28.0	3.3±1.0	1.0±0.05
ZOV-20D471K	23.0	7.0	10.0±1.0	28.0	3.7±1.0	1.0±0.05
ZOV-20D511K	23.0	7.0	10.0±1.0	28.0	4.0±1.0	1.0±0.05
ZOV-20D561K	23.0	7.0	10.0±1.0	28.0	4.4±1.0	1.0±0.05
ZOV-20D621K	23.0	7.5	10.0±1.0	28.0	4.7±1.0	1.0±0.05
ZOV-20D681K	23.0	7.8	10.0±1.0	28.0	5.0±1.0	1.0±0.05
ZOV-20D751K	23.0	8.2	10.0±1.0	28.0	5.0±1.0	1.0±0.05
ZOV-20D781K	23.0	8.3	10.0±1.0	28.0	5.2±1.0	1.0±0.05
ZOV-20D821K	23.0	8.5	10.0±1.0	28.0	5.2±1.0	1.0±0.05
ZOV-20D911K	23.0	9.0	10.0±1.0	28.0	6.0±1.0	1.0±0.05
ZOV-20D102K	23.0	9.5	10.0±1.0	28.0	6.4±1.0	1.0±0.05
ZOV-20D112K	23.0	10.3	10.0±1.0	28.0	7.0±1.0	1.0±0.05
ZOV-20D182K	23.0	14.4	15.0±1.0	28.0	10.7±2.0	1.0±0.05





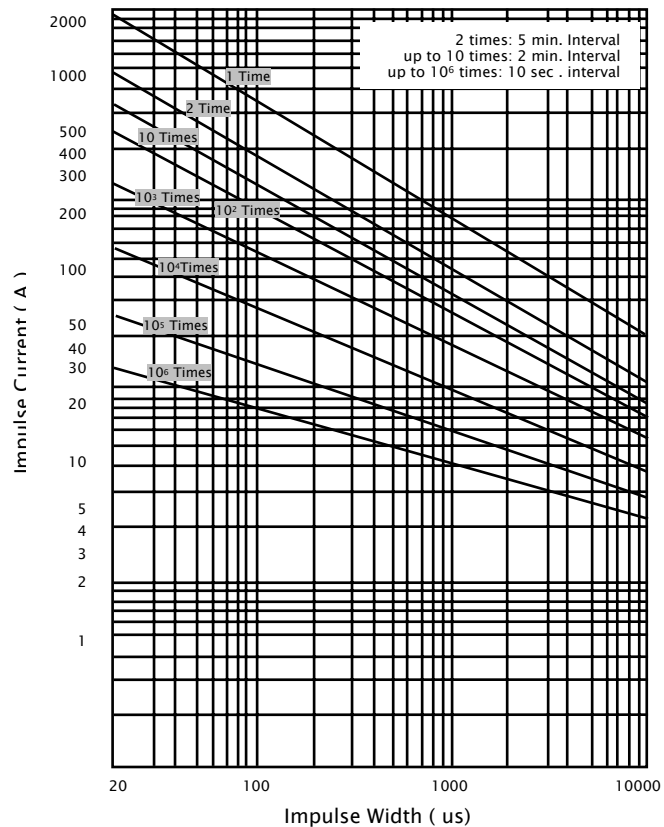
Typical Characteristics Voltage vs. Current

ZOV 20D180L to ZOV 20D680K



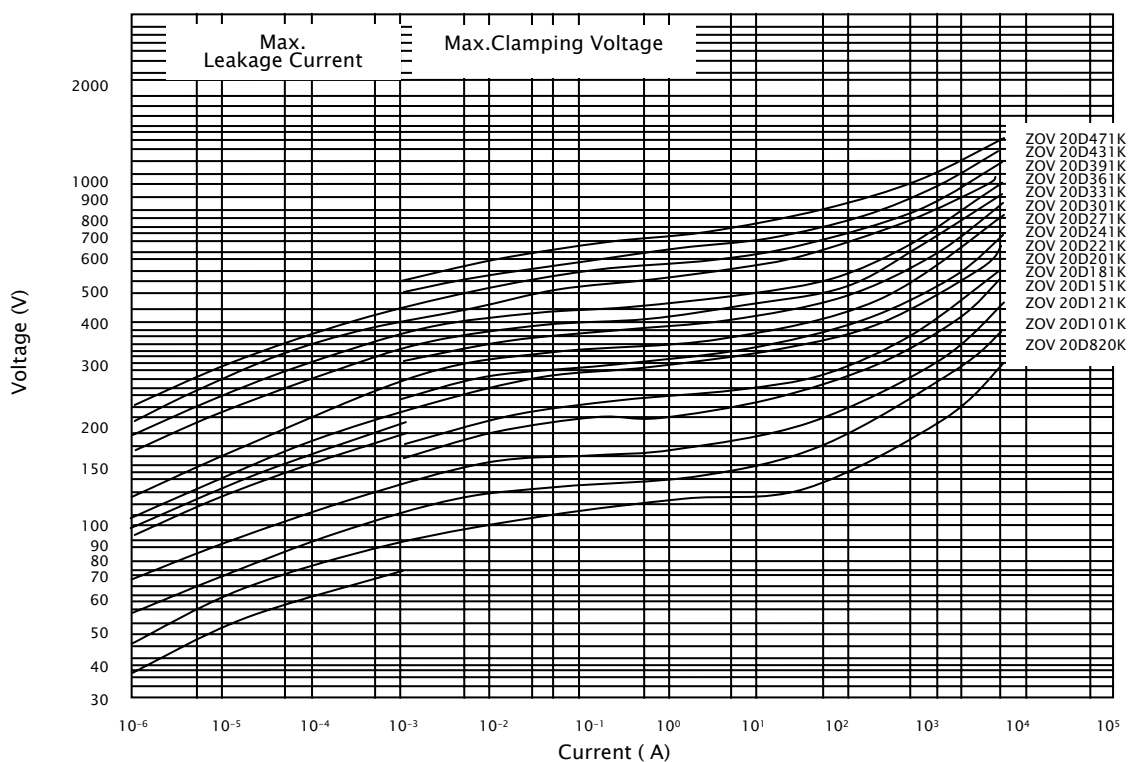
Impulse Lifetime Ratings

ZOV 20D180L to ZOV 20D680K



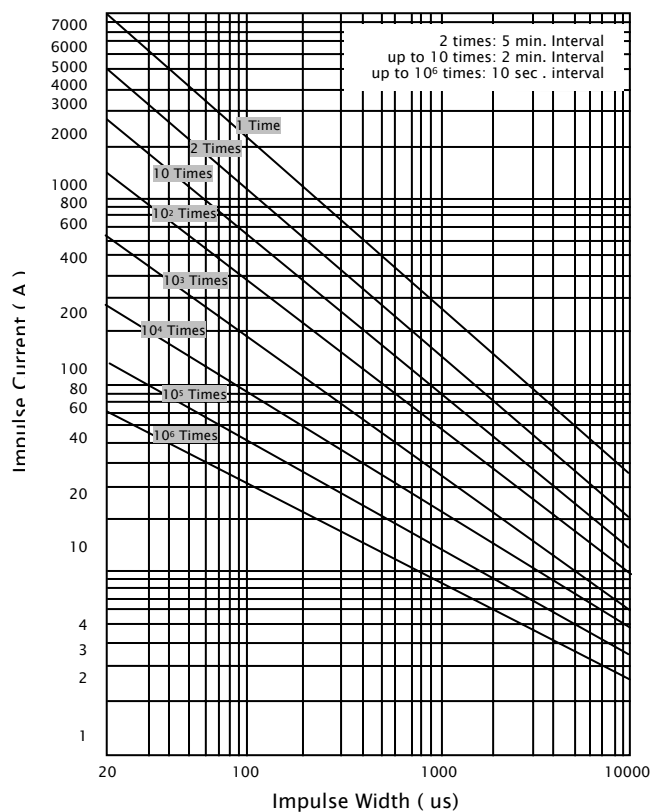
Typical Characteristics Voltage vs. Current

ZOV 20D820K to ZOV 20D471K



Impulse Lifetime Ratings

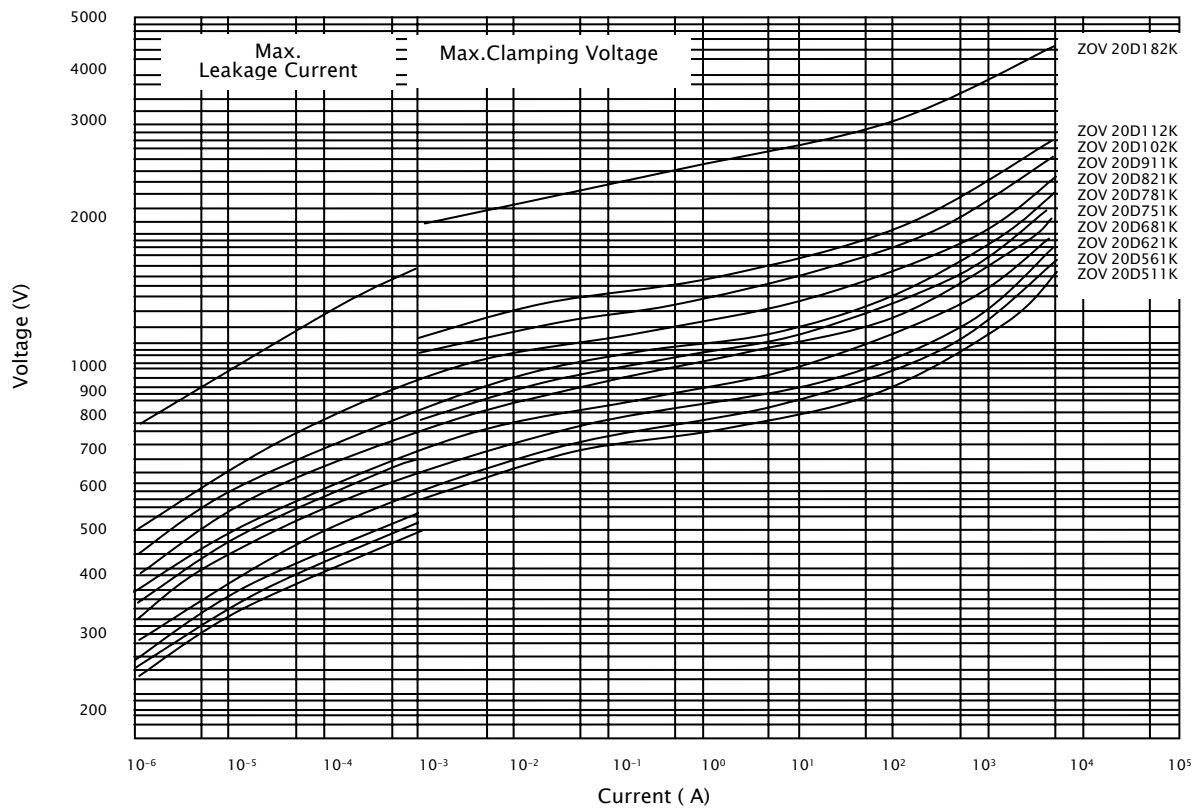
ZOV 20D820K to ZOV 20D471K





Typical Characteristics Voltage vs. Current

ZOV 20D511K to ZOV 20D182K



Impulse Lifetime Ratings

ZOV 20D511K to ZOV 20D182K

