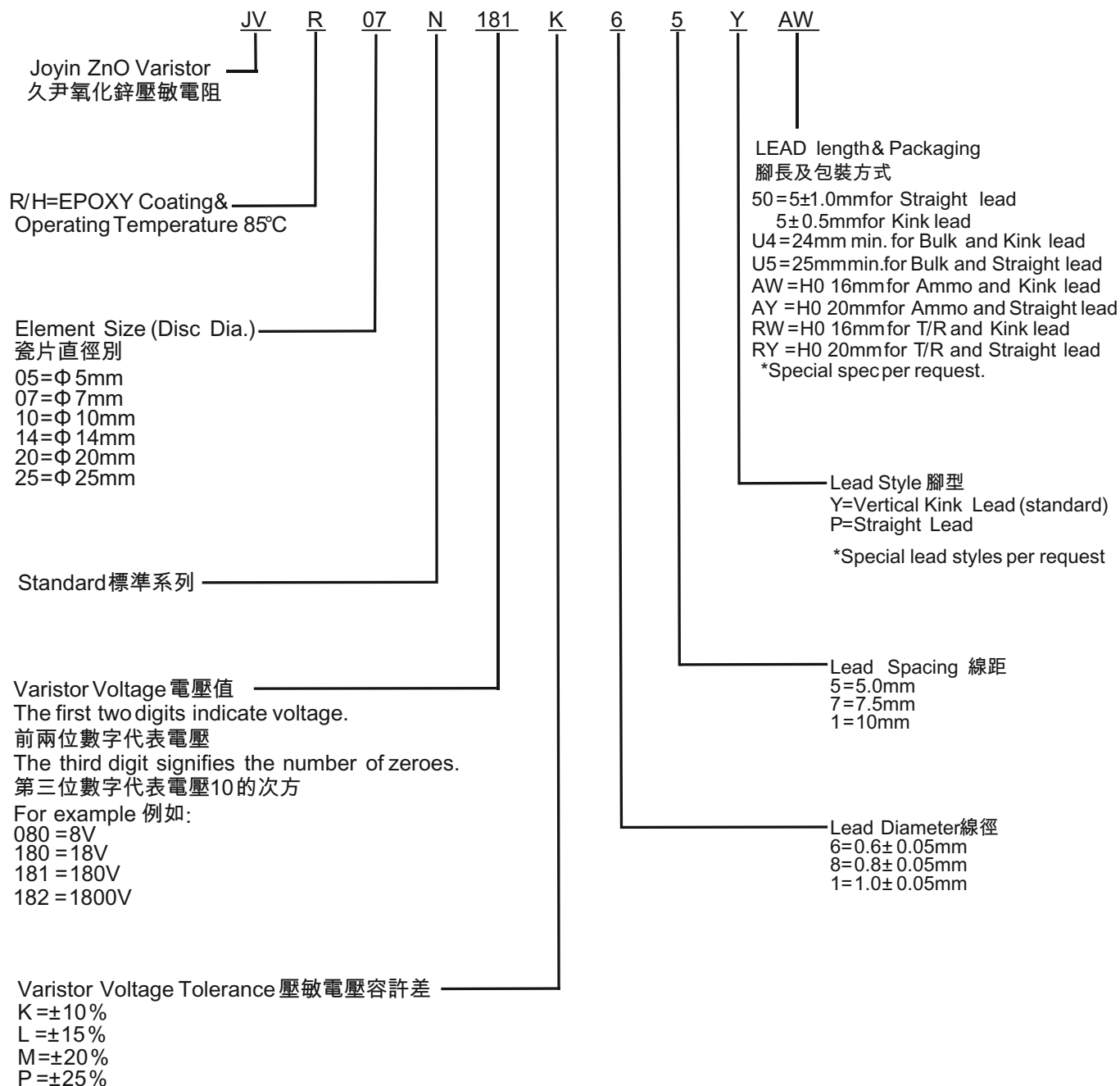


ORDERING CODE





RATING AND CHARACTERISTICS

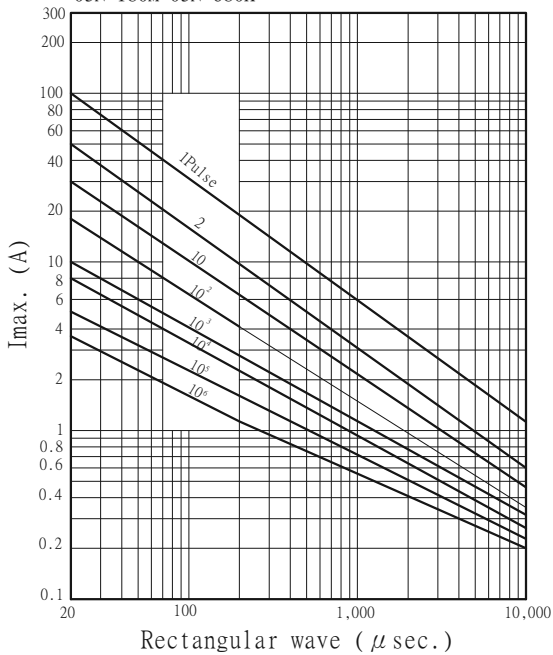
Standard Varistors - 5mm

Part No.	Varistor Voltage at 0.1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)	  
JVR 05N 180M	18	±20%	11	14	40	1	100	0.1	0.01	0.6	☆ ☆ ☆
JVR 05N 220L	22	±15%	14	18	48	1	100	0.1	0.01	0.7	☆ ☆ ☆
JVR 05N 270K	27	±10%	17	22	60	1	100	0.1	0.01	0.9	☆ ☆ ☆
JVR 05N 330K	33	±10%	20	26	73	1	100	0.1	0.01	1.1	☆ ☆ ☆
JVR 05N 390K	39	±10%	25	31	86	1	100	0.1	0.01	1.2	☆ ☆ ☆
JVR 05N 470K	47	±10%	30	38	104	1	100	0.1	0.01	1.5	☆ ☆ ☆
JVR 05N 560K	56	±10%	35	45	123	1	100	0.1	0.01	1.8	☆ ☆ ☆
JVR 05N 680K	68	±10%	40	56	150	1	100	0.1	0.01	2.1	☆ ☆ ☆
JVR 05N 820K	82	±10%	50	65	145	5	400	0.1	0.1	2.8	☆ ☆ ☆
JVR 05N 101K	100	±10%	60	85	175	5	400	0.1	0.1	3.5	☆ ☆ ☆
JVR 05N 121K	120	±10%	75	100	210	5	400	0.1	0.1	4	☆ ☆ ☆
JVR 05N 151K	150	±10%	95	125	260	5	400	0.1	0.1	5.5	☆ ☆ ☆
JVR 05N 181K	180	±10%	115	150	320	5	400	0.1	0.1	6.5	☆ ☆ ☆
JVR 05N 201K	200	±10%	130	170	355	5	400	0.1	0.1	7.1	☆ ☆ ☆
JVR 05N 221K	220	±10%	140	180	380	5	400	0.1	0.1	7.8	☆ ☆ ☆
JVR 05N 241K	240	±10%	150	200	415	5	400	0.1	0.1	8.4	☆ ☆ ☆
JVR 05N 271K	270	±10%	175	225	475	5	400	0.1	0.1	9.9	☆ ☆ ☆
JVR 05N 301K	300	±10%	195	250	525	5	400	0.1	0.1	10.5	☆ ☆ ☆
JVR 05N 331K	330	±10%	210	275	575	5	400	0.1	0.1	11.5	☆ ☆ ☆
JVR 05N 361K	360	±10%	230	300	620	5	400	0.1	0.1	13	☆ ☆ ☆
JVR 05N 391K	390	±10%	250	320	675	5	400	0.1	0.1	15	☆ ☆ ☆
JVR 05N 431K	430	±10%	275	350	745	5	400	0.1	0.1	16.5	☆ ☆ ☆
JVR 05N 471K	470	±10%	300	385	810	5	400	0.1	0.1	17.5	☆ ☆ ☆
JVR 05N 511K	510	±10%	320	418	880	5	400	0.1	0.1	18.5	☆ ☆ ☆
JVR 05N 561K	560	±10%	350	460	940	5	400	0.1	0.1	19.5	☆ ☆ ☆
JVR 05N 621K	620	±10%	385	505	1050	5	400	0.1	0.1	20.5	☆ ☆ ☆
JVR 05N 681K	680	±10%	420	560	1150	5	400	0.1	0.1	21.5	☆ ☆ ☆
JVR 05N 751K	750	±10%	460	615	1290	5	400	0.1	0.1	22.5	☆ ☆ ☆

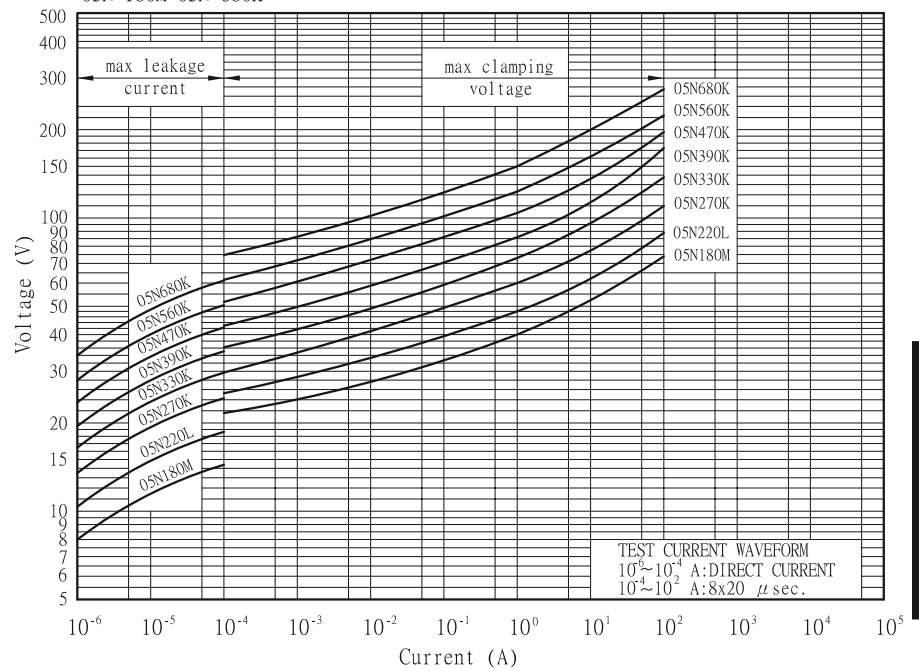
Application notes for UL,CSA,VDE and CQC reconized related standards

Standard NO.	UL	CUL	VDE		CQC	
	UL 1449 4 TH Edition	CSA 22.2 No. 269.5	IEC61051-1 IEC61051-2 IEC61051-2-2	IEC61051-1 IEC61051-2 IEC61051-2-2 IEC60950-1:2013AnnexQ IEC62368-1:2014 / G.8.2	GB/T1093-1997 GB/T10194-1997	GB4943.1-2011 GB/T1093-1997 GB/T10194-1997 GB8898-2011
Title	Transient Voltage Surge Suppressors	Transient Voltage Surge Suppressors	Varistors for use in electronic equipment		Engaged in Voluntary Product Certification	
Certificate No.	VZCA2.E325508	VZCA8.E325508	5937		CQC07001019159/9161/9162/9163/9164	
Symbols	☆		★	★	★	⊕

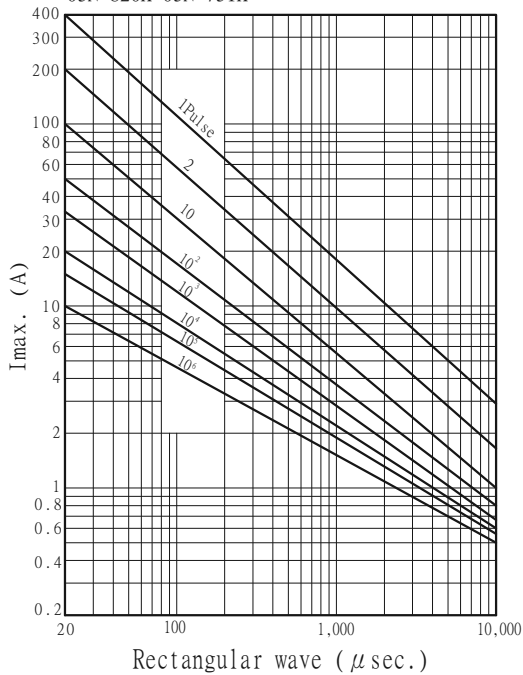
Pulse Life time Ratings-5mm
05N 180M-05N 680K



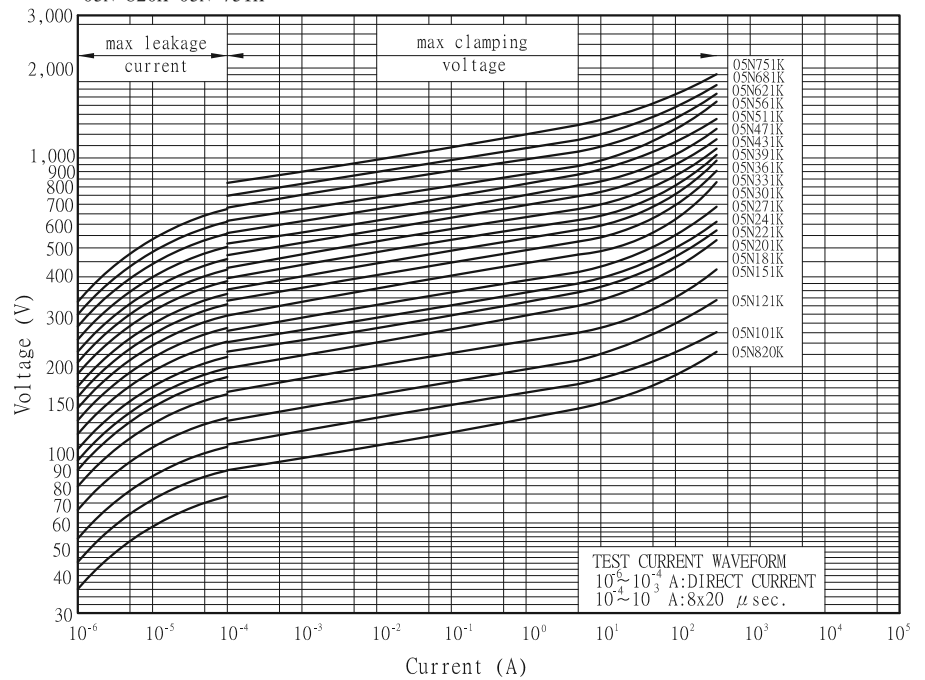
V-I Characteristic Curve-5mm
05N 180M-05N 680K



05N 820K-05N 751K



05N 820K-05N 751K



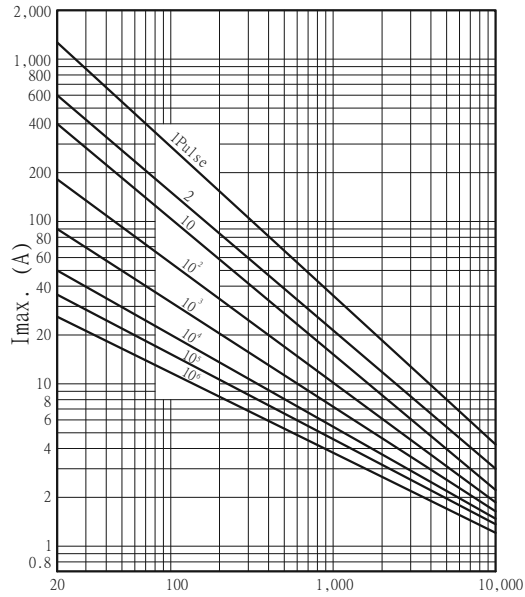


RATING AND CHARATERISTICS

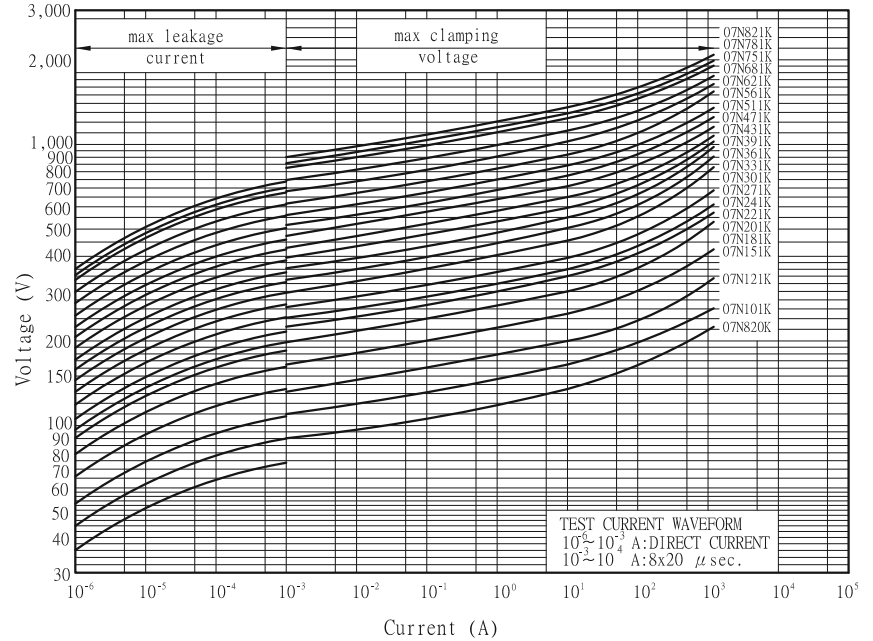
Standard Varistors - 7mm

Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)			
JVR 07N 180M	18	±20%	11	14	40	2.5	250	0.2	0.02	1.2	☆	☆	☆
JVR 07N 220L	22	±15%	14	18	48	2.5	250	0.2	0.02	1.4	☆	☆	☆
JVR 07N 270K	27	±10%	17	22	60	2.5	250	0.2	0.02	1.7	☆	☆	☆
JVR 07N 330K	33	±10%	20	26	73	2.5	250	0.2	0.02	2.2	☆	☆	☆
JVR 07N 390K	39	±10%	25	31	86	2.5	250	0.2	0.02	2.4	☆	☆	☆
JVR 07N 470K	47	±10%	30	38	104	2.5	250	0.2	0.02	3.0	☆	☆	☆
JVR 07N 560K	56	±10%	35	45	123	2.5	250	0.2	0.02	3.5	☆	☆	☆
JVR 07N 680K	68	±10%	40	56	150	2.5	250	0.2	0.02	4.3	☆	☆	☆
JVR 07N 820K	82	±10%	50	65	145	10	1200	0.5	0.25	5.5	☆	☆	☆
JVR 07N 101K	100	±10%	60	85	175	10	1200	0.5	0.25	7.0	☆	☆	☆
JVR 07N 121K	120	±10%	75	100	210	10	1200	0.5	0.25	8.0	☆	☆	☆
JVR 07N 151K	150	±10%	95	125	260	10	1200	0.5	0.25	11.0	☆	☆	☆
JVR 07N 181K	180	±10%	115	150	320	10	1200	0.5	0.25	13.0	☆	☆	☆
JVR 07N 201K	200	±10%	130	170	355	10	1200	0.5	0.25	14.3	☆	☆	☆
JVR 07N 221K	220	±10%	140	180	380	10	1200	0.5	0.25	15.5	☆	☆	☆
JVR 07N 241K	240	±10%	150	200	415	10	1200	0.5	0.25	16.8	☆	☆	☆
JVR 07N 271K	270	±10%	175	225	475	10	1200	0.5	0.25	19.8	☆	☆	☆
JVR 07N 301K	300	±10%	195	250	525	10	1200	0.5	0.25	21.0	☆	☆	☆
JVR 07N 331K	330	±10%	210	275	575	10	1200	0.5	0.25	23.0	☆	☆	☆
JVR 07N 361K	360	±10%	230	300	620	10	1200	0.5	0.25	26.0	☆	☆	☆
JVR 07N 391K	390	±10%	250	320	675	10	1200	0.5	0.25	30.0	☆	☆	☆
JVR 07N 431K	430	±10%	275	350	745	10	1200	0.5	0.25	33.0	☆	☆	☆
JVR 07N 471K	470	±10%	300	385	810	10	1200	0.5	0.25	35.0	☆	☆	☆
JVR 07N 511K	510	±10%	320	418	880	10	1200	0.5	0.25	37.0	☆	☆	☆
JVR 07N 561K	560	±10%	350	460	940	10	1200	0.5	0.25	39.0	☆	☆	☆
JVR 07N 621K	620	±10%	385	505	1050	10	1200	0.5	0.25	41.0	☆	☆	☆
JVR 07N 681K	680	±10%	420	560	1150	10	1200	0.5	0.25	43.0	☆	☆	☆
JVR 07N 751K	750	±10%	460	615	1290	10	1200	0.5	0.25	45.0	☆	☆	☆
JVR 07N 781k	780	±10%	485	640	1290	10	1200	0.5	0.25	46.0	☆	☆	☆
JVR 07N 821k	820	±10%	510	670	1355	10	1200	0.5	0.25	47.0	☆	☆	☆

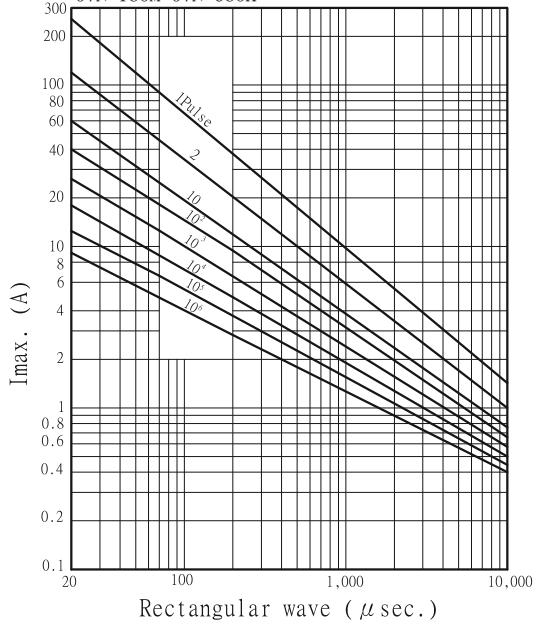
Pulse Life time Ratings-7mm
07N 820K-07N 821K



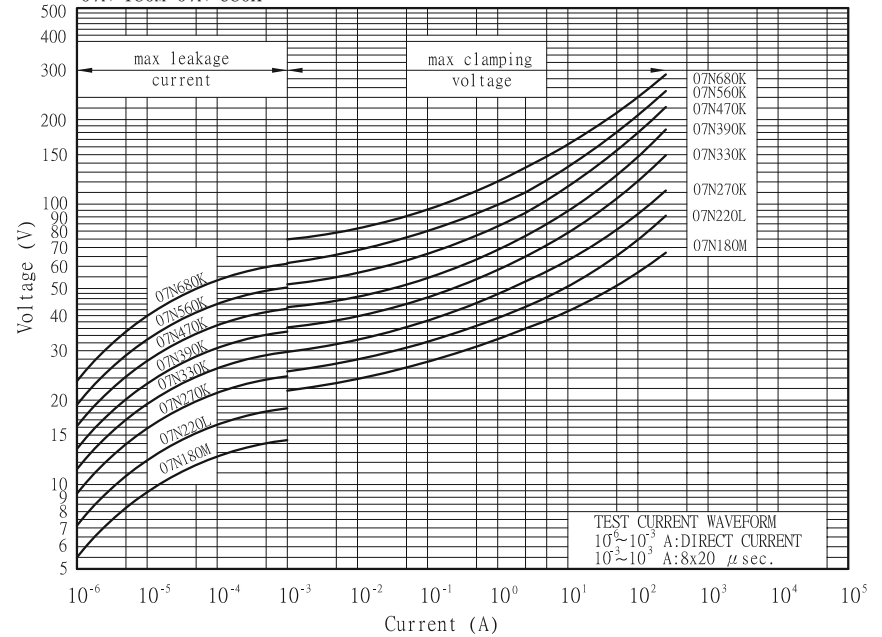
V-I Characteristic Curve-7mm
07N 820K-07N 821K



07N 180M-07N 680K



07N 180M-07N 680K



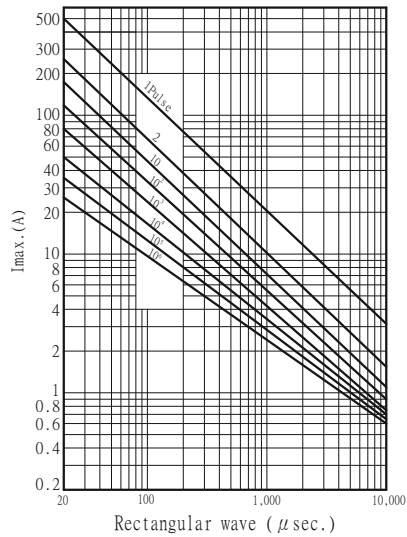


RATING AND CHARACTERISTICS

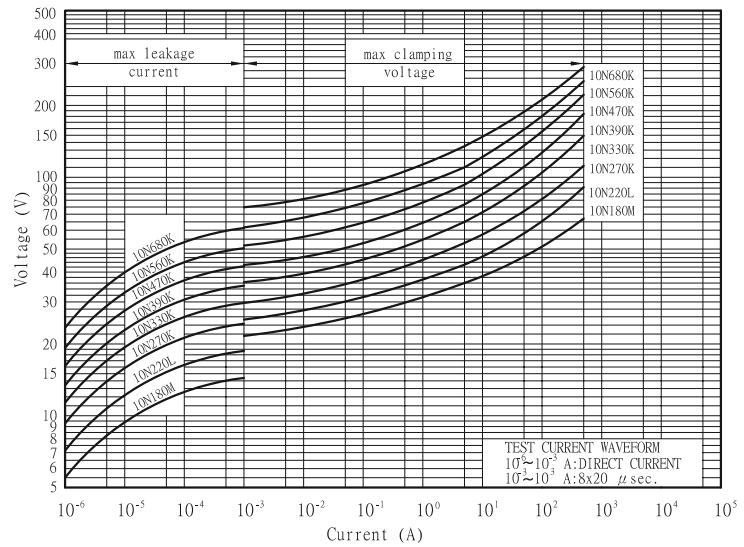
Standard Varistors - 10mm

Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)			
JVR 10N 180M	18	±20%	11	14	36	5	500	0.3	0.05	2.4	☆	★	★
JVR 10N 220L	22	±15%	14	18	43	5	500	0.3	0.05	2.7	☆	★	★
JVR 10N 270K	27	±10%	17	22	53	5	500	0.3	0.05	3.5	☆	★	★
JVR 10N 330K	33	±10%	20	26	65	5	500	0.3	0.05	4.4	☆	★	★
JVR 10N 390K	39	±10%	25	31	77	5	500	0.3	0.05	4.7	☆	★	★
JVR 10N 470K	47	±10%	30	38	93	5	500	0.3	0.05	6.0	☆	★	★
JVR 10N 560K	56	±10%	35	45	110	5	500	0.3	0.05	7.0	☆	★	★
JVR 10N 680K	68	±10%	40	56	135	5	500	0.3	0.05	8.5	☆	★	★
JVR 10N 820K	82	±10%	50	65	135	25	2500	1.5	0.4	11.0	☆	★	★
JVR 10N 101K	100	±10%	60	85	165	25	2500	1.5	0.4	14.0	☆	★	★
JVR 10N 121K	120	±10%	75	100	200	25	2500	1.5	0.4	16.0	☆	★	★
JVR 10N 151K	150	±10%	95	125	250	25	2500	1.5	0.4	22.0	☆	★	★
JVR 10N 181K	180	±10%	115	150	300	25	2500	1.5	0.4	26.0	☆	★	★
JVR 10N 201K	200	±10%	130	170	340	25	2500	1.5	0.4	28.5	☆	★	★
JVR 10N 221K	220	±10%	140	180	360	25	2500	1.5	0.4	31.0	☆	★	★
JVR 10N 241K	240	±10%	150	200	395	25	2500	1.5	0.4	33.5	☆	★	★
JVR 10N 271K	270	±10%	175	225	455	25	2500	1.5	0.4	39.5	☆	★	★
JVR 10N 301K	300	±10%	195	250	505	25	2500	1.5	0.4	42.0	☆	★	★
JVR 10N 331K	330	±10%	210	275	550	25	2500	1.5	0.4	46.0	☆	★	★
JVR 10N 361K	360	±10%	230	300	595	25	2500	1.5	0.4	52.0	☆	★	★
JVR 10N 391K	390	±10%	250	320	650	25	2500	1.5	0.4	60.0	☆	★	★
JVR 10N 431K	430	±10%	275	350	710	25	2500	1.5	0.4	66.0	☆	★	★
JVR 10N 471K	470	±10%	300	385	775	25	2500	1.5	0.4	70.0	☆	★	★
JVR 10N 511K	510	±10%	320	418	842	25	2500	1.5	0.4	74.0	☆	★	★
JVR 10N 561K	560	±10%	350	460	920	25	2500	1.5	0.4	78.0	☆	★	★
JVR 10N 621K	620	±10%	385	505	1025	25	2500	1.5	0.4	82.0	☆	★	★
JVR 10N 681K	680	±10%	420	560	1120	25	2500	1.5	0.4	86.0	☆	★	★
JVR 10N 751K	750	±10%	460	615	1240	25	2500	1.5	0.4	90.0	☆	★	★
JVR 10N 781K	780	±10%	485	640	1290	25	2500	1.5	0.4	92.0	☆	★	★
JVR 10N 821K	820	±10%	510	670	1355	25	2500	1.5	0.4	94.0	☆	★	★
JVR 10N 911K	910	±10%	550	745	1500	25	2500	1.5	0.4	102.0	☆	★	★
JVR 10N 102K	1000	±10%	625	825	1650	25	2500	1.5	0.4	112.0	☆	★	★
JVR 10N 112K	1100	±10%	680	895	1815	25	2500	1.5	0.4	124.0	☆	★	★
JVR 10N 122K	1200	±10%	720	975	1980	25	2500	1.5	0.4	134.0	☆	★	★
JVR 10N 142K	1400	±10%	825	1135	2310	25	2500	1.5	0.4	148.0	☆	★	★
JVR 10N 162K	1600	±10%	920	1300	2640	25	2500	1.5	0.4	162.0	☆	★	★
JVR 10N 182K	1800	±10%	1000	1465	2970	25	2500	1.5	0.4	174.0	☆	★	★

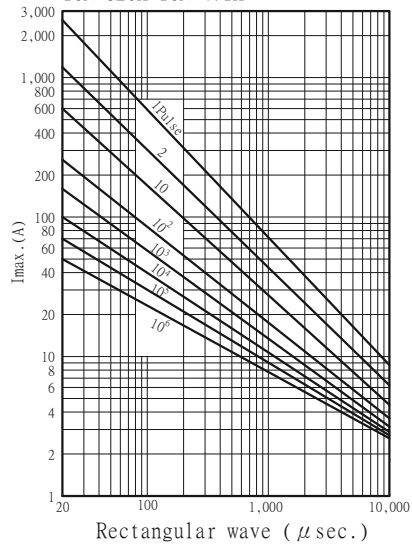
Pulse Life time Ratings-10mm
10N 180M~10N 680K



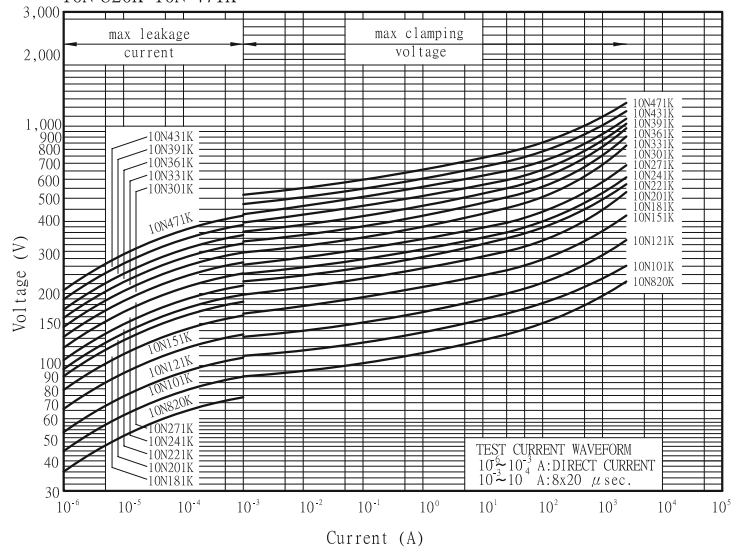
V-I Characteristic Curve-10mm
10N 180M~10N 680K



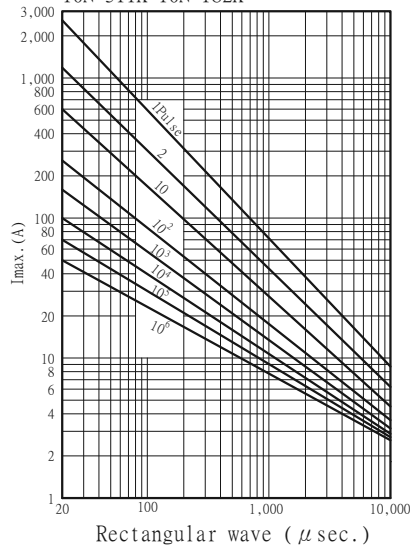
10N 820K~10N 471K



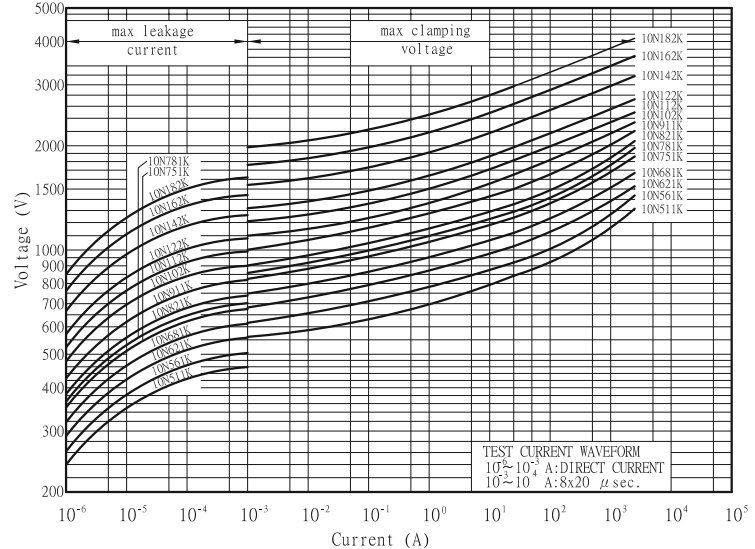
10N 820K~10N 471K



10N 511K~10N 182K



10N 511K~10N 182K



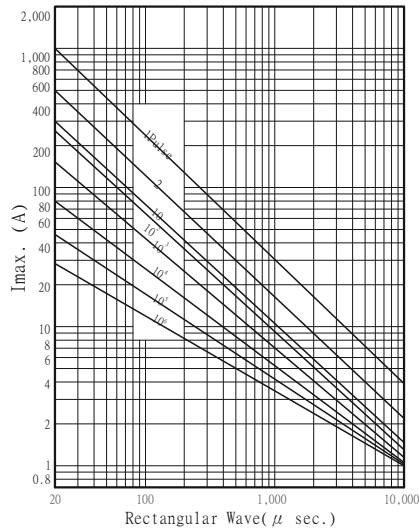


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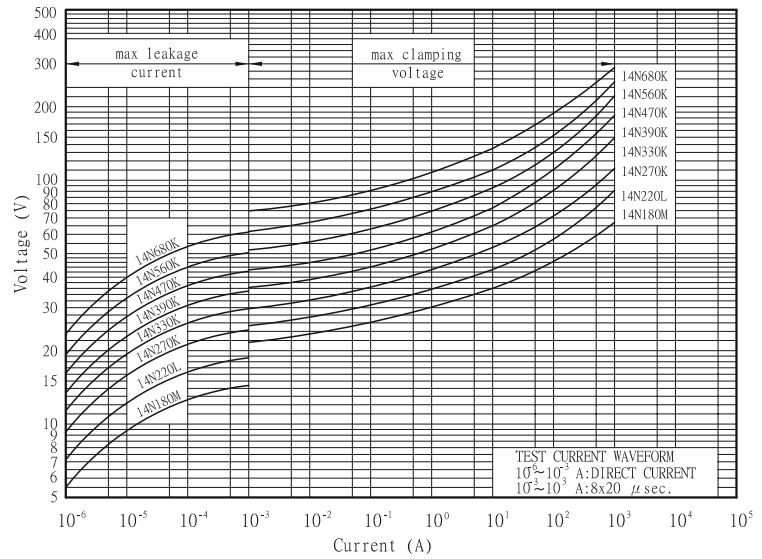
Standard Varistors - 14mm

Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)	UL	US	CEC
JVR 14N 180M	18	±20%	11	14	36	10	1000	1	0.1	4.7	☆	★	★
JVR 14N 220L	22	±15%	14	18	43	10	1000	1	0.1	5.4	☆	★	★
JVR 14N 270K	27	±10%	17	22	53	10	1000	1	0.1	6.9	☆	★	★
JVR 14N 330K	33	±10%	20	26	65	10	1000	1	0.1	8.8	☆	★	★
JVR 14N 390K	39	±10%	25	31	77	10	1000	1	0.1	9.4	☆	★	★
JVR 14N 470K	47	±10%	30	38	93	10	1000	1	0.1	12.0	☆	★	★
JVR 14N 560K	56	±10%	35	45	110	10	1000	1	0.1	14.0	☆	★	★
JVR 14N 680K	68	±10%	40	56	135	10	1000	1	0.1	17.0	☆	★	★
JVR 14N 820K	82	±10%	50	65	135	50	4500	3.0	0.6	22.0	☆	★	★
JVR 14N 101K	100	±10%	60	85	165	50	4500	3.0	0.6	28.0	☆	★	★
JVR 14N 121K	120	±10%	75	100	200	50	4500	3.0	0.6	32.0	☆	★	★
JVR 14N 151K	150	±10%	95	125	250	50	4500	3.0	0.6	44.0	☆	★	★
JVR 14N 181K	180	±10%	115	150	300	50	4500	3.0	0.6	52.0	☆	★	★
JVR 14N 201K	200	±10%	130	170	340	50	4500	3.0	0.6	57.0	☆	★	★
JVR 14N 221K	220	±10%	140	180	360	50	4500	3.0	0.6	62.0	☆	★	★
JVR 14N 241K	240	±10%	150	200	395	50	4500	3.0	0.6	67.0	☆	★	★
JVR 14N 271K	270	±10%	175	225	455	50	4500	3.0	0.6	79	☆	★	★
JVR 14N 301K	300	±10%	195	250	505	50	4500	3.0	0.6	84.0	☆	★	★
JVR 14N 331K	330	±10%	210	275	550	50	4500	3.0	0.6	92.0	☆	★	★
JVR 14N 361K	360	±10%	230	300	595	50	4500	3.0	0.6	104.0	☆	★	★
JVR 14N 391K	390	±10%	250	320	650	50	4500	3.0	0.6	120.0	☆	★	★
JVR 14N 431K	430	±10%	275	350	710	50	4500	3.0	0.6	132.0	☆	★	★
JVR 14N 471K	470	±10%	300	385	775	50	4500	3.0	0.6	140.0	☆	★	★
JVR 14N 511K	510	±10%	320	418	842	50	4500	3.0	0.6	148.0	☆	★	★
JVR 14N 561K	560	±10%	350	460	920	50	4500	3.0	0.6	156.0	☆	★	★
JVR 14N 621K	620	±10%	385	505	1025	50	4500	3.0	0.6	164.0	☆	★	★
JVR 14N 681K	680	±10%	420	560	1120	50	4500	3.0	0.6	172.0	☆	★	★
JVR 14N 751K	750	±10%	460	615	1240	50	4500	3.0	0.6	180.0	☆	★	★
JVR 14N 781K	780	±10%	485	640	1290	50	4500	3.0	0.6	184.0	☆	★	★
JVR 14N 821K	820	±10%	510	670	1355	50	4500	3.0	0.6	188.0	☆	★	★
JVR 14N 911K	910	±10%	550	745	1500	50	4500	3.0	0.6	204.0	☆	★	★
JVR 14N 102K	1000	±10%	625	825	1650	50	4500	3.0	0.6	224.0	☆	★	★
JVR 14N 112K	1100	±10%	680	895	1815	50	4500	3.0	0.6	248.0	☆	★	★
JVR 14N 122K	1200	±10%	720	975	1980	50	4500	2.0	0.6	268.0	☆	★	★
JVR 14N 142K	1400	±10%	825	1135	2310	50	4500	2.0	0.6	300.0	☆	★	★
JVR 14N 162K	1600	±10%	920	1300	2640	50	4500	2.0	0.6	328.0	☆	★	★
JVR 14N 182K	1800	±10%	1000	1465	2970	50	4500	2.0	0.6	348.0	☆	★	★

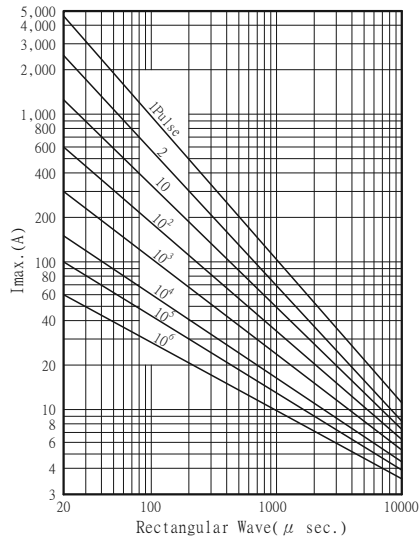
Pulse Life time Ratings-14mm
14N 180M~14N 680K



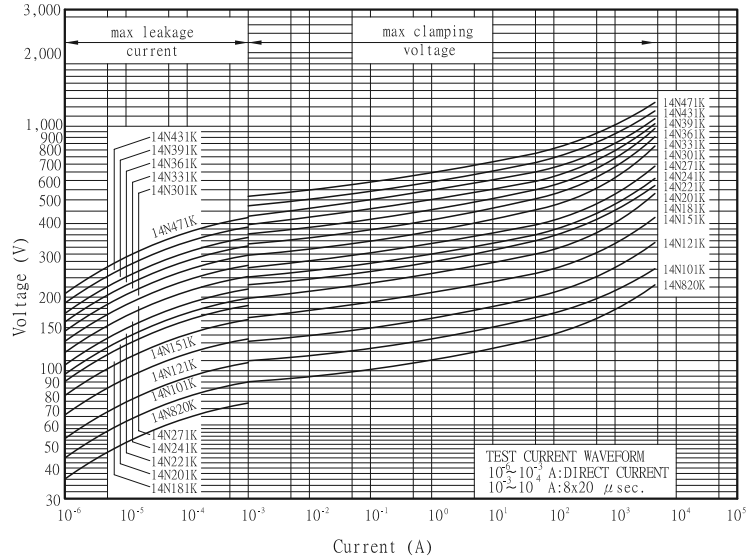
V-I Characteristic Curve-14mm
14N 180M~14N 680K



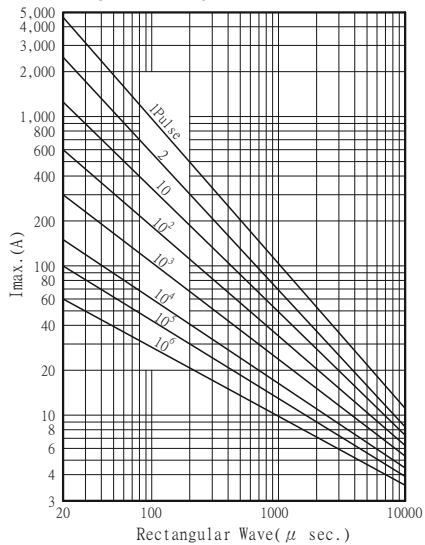
14N 820K~14N 471K



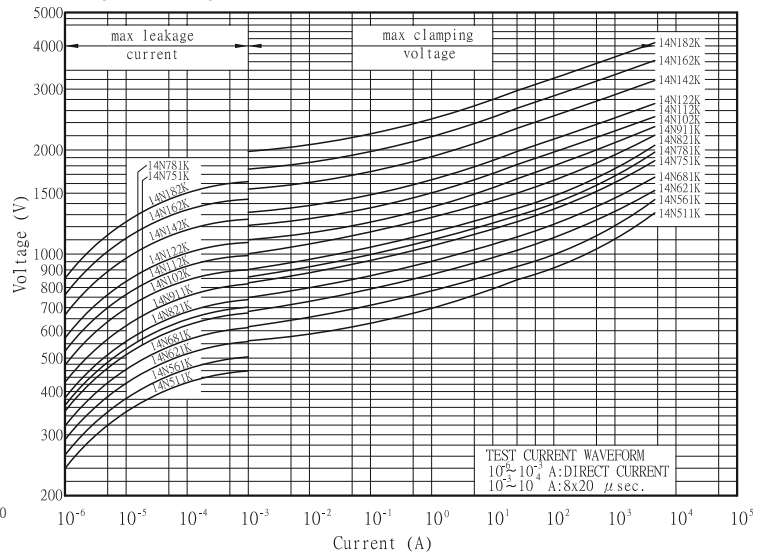
14N 820K~14N 471K



14N 511K~14N 182K



14N 511K~14N 182K



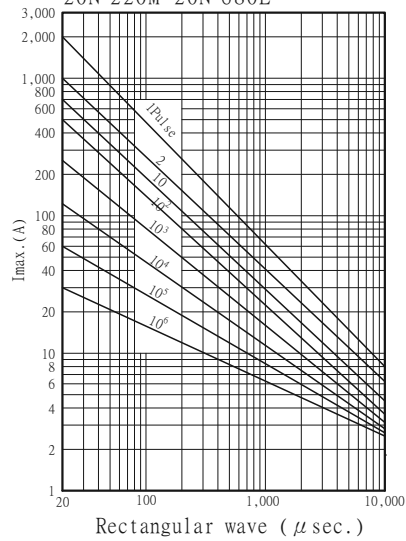


RATING AND CHARACTERISTICS

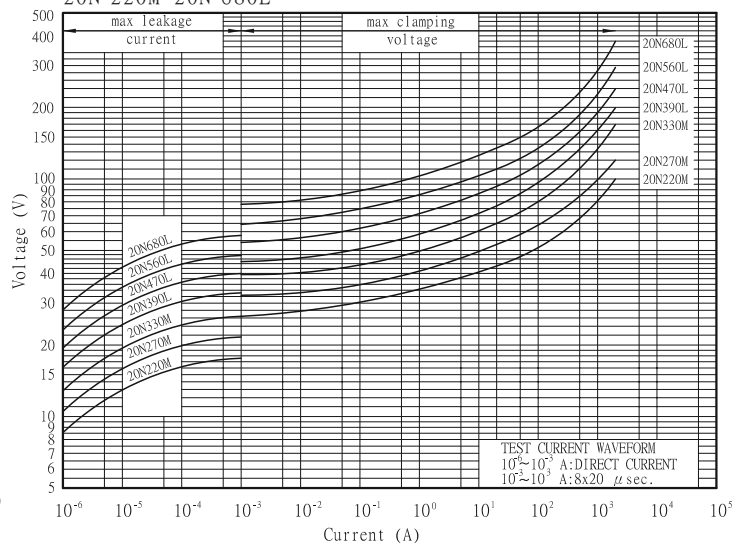
Standard Varistors-20mm

Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)			
JVR20N 220M	22	±20%	14	18	43	20	2000	2	0.2	8.0	☆	★	★
JVR20N 270M	27	±20%	17	22	53	20	2000	2	0.2	10.0	☆	★	★
JVR20N 330M	33	±20%	20	26	65	20	2000	2	0.2	12.0	☆	★	★
JVR20N 390L	39	±15%	25	31	77	20	2000	2	0.2	14.0	☆	★	★
JVR20N 470L	47	±15%	30	38	93	20	2000	2	0.2	17.0	☆	★	★
JVR20N 560L	56	±15%	35	45	110	20	2000	2	0.2	20.0	☆	★	★
JVR20N 680L	68	±15%	40	56	135	20	2000	2	0.2	24.0	☆	★	★
JVR20N 820L	82	±15%	50	65	135	100	6500	4	1	44.0	☆	★	★
JVR20N 101K	100	±10%	60	85	165	100	6500	4.0	1	56.0	☆	★	★
JVR20N 121K	120	±10%	75	100	200	100	6500	4.0	1	64.0	☆	★	★
JVR20N 151K	150	±10%	95	125	250	100	6500	4.0	1	88.0	☆	★	★
JVR20N 181K	180	±10%	115	150	300	100	6500	4.0	1	104.0	☆	★	★
JVR20N 201K	200	±10%	130	170	340	100	6500	4.0	1	114.0	☆	★	★
JVR20N 221K	220	±10%	140	180	360	100	6500	4.0	1	124.0	☆	★	★
JVR20N 241K	240	±10%	150	200	395	100	6500	4.0	1	134.0	☆	★	★
JVR20N 271K	270	±10%	175	225	455	100	6500	4.0	1	158.0	☆	★	★
JVR20N 301K	300	±10%	195	250	505	100	6500	4.0	1	168	☆	★	★
JVR20N 331K	330	±10%	210	275	550	100	6500	4.0	1	184.0	☆	★	★
JVR20N 361K	360	±10%	230	300	595	100	6500	4.0	1	208.0	☆	★	★
JVR20N 391K	390	±10%	250	320	650	100	6500	4.0	1	240.0	☆	★	★
JVR20N 431K	430	±10%	275	350	710	100	6500	4.0	1	264.0	☆	★	★
JVR20N 471K	470	±10%	300	385	775	100	6500	4.0	1	280.0	☆	★	★
JVR20N 511K	510	±10%	320	418	842	100	6500	4.0	1	296.0	☆	★	★
JVR20N 561K	560	±10%	350	460	920	100	6500	4.0	1	312.0	☆	★	★
JVR20N 621K	620	±10%	385	505	1025	100	6500	4.0	1	328.0	☆	★	★
JVR20N 681K	680	±10%	420	560	1120	100	6500	4.0	1	344.0	☆	★	★
JVR20N 751K	750	±10%	460	615	1240	100	6500	4.0	1	360.0	☆	★	★
JVR20N 781K	780	±10%	485	640	1290	100	6500	4.0	1	368.0	☆	★	★
JVR20N 821K	820	±10%	510	670	1355	100	6500	4.0	1	376.0	☆	★	★
JVR20N 911K	910	±10%	550	745	1500	100	6500	4.0	1	408.0	☆	★	★
JVR20N 102K	1000	±10%	625	825	1650	100	6500	4.0	1	448.0	☆	★	★
JVR20N 112K	1100	±10%	680	895	1815	100	6500	4.0	1	496.0	☆	★	★
JVR20N 122K	1200	±10%	720	975	1980	100	6500	3.0	1	528.0	☆	★	★
JVR20N 142K	1400	±10%	825	1135	2310	100	6500	3.0	1	596.0	☆	★	★
JVR20N 162K	1600	±10%	920	1300	2640	100	6500	3.0	1	656.0	☆	★	★
JVR20N 182K	1800	±10%	1000	1465	2970	100	6500	3.0	1	695.0	☆	★	★

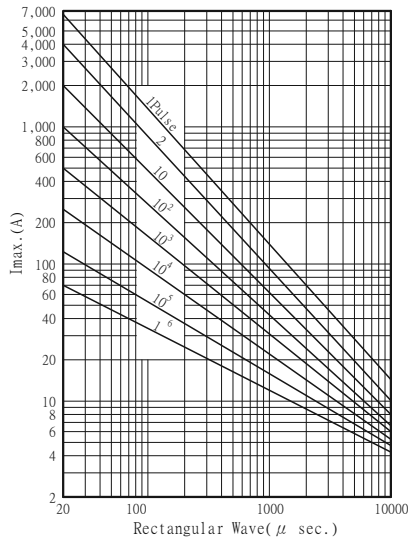
Pulse Life time Ratings-20mm
20N 220M~20N 680L



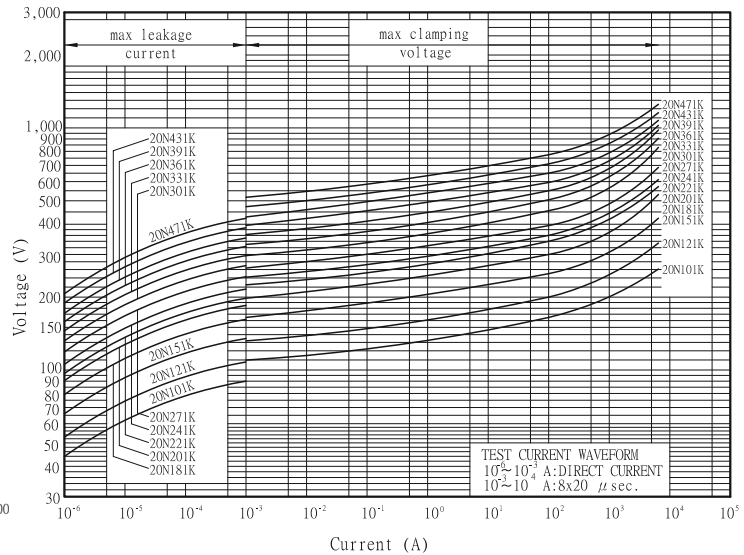
V-I Characteristic Curve-20mm
20N 220M~20N 680L



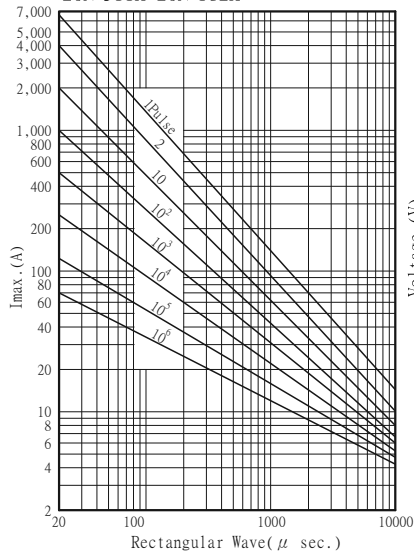
20N 101K~20N 471K



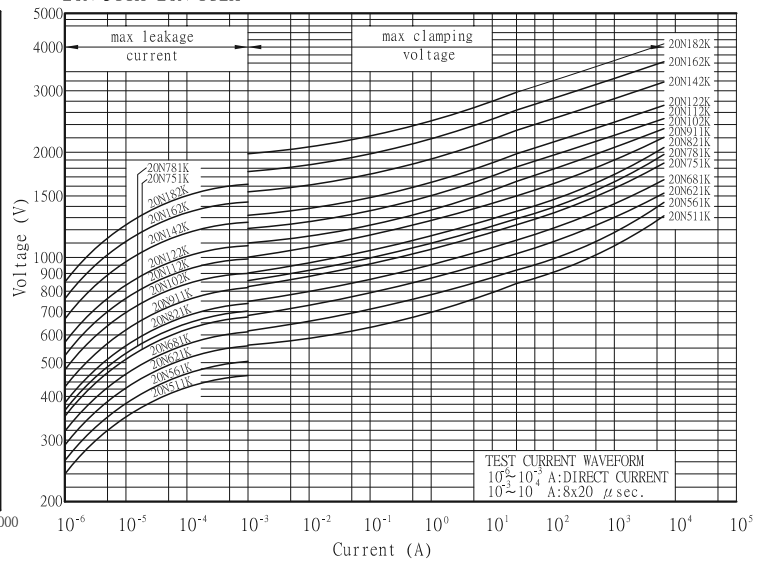
20N 101K~20N 471K



20N 511K~20N 182K



20N 511K~20N 182K



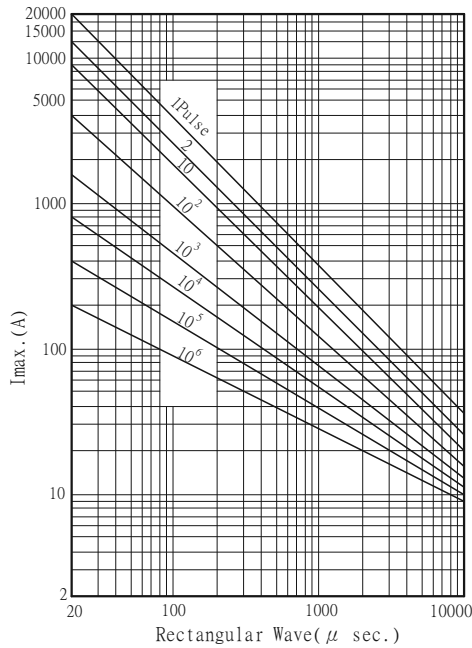


RATING AND CHARATERISTICS

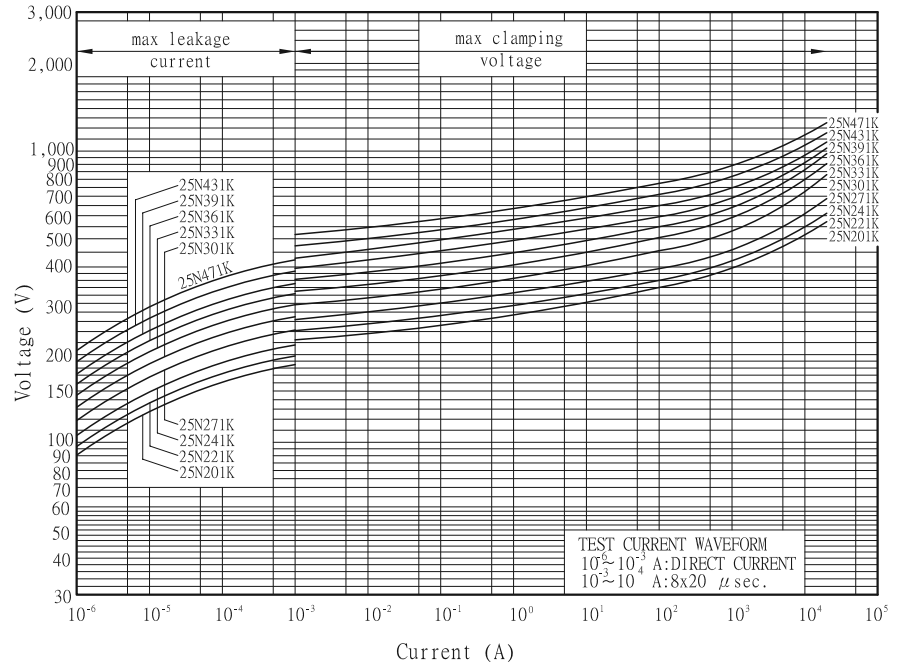
Standard Varistors - 25mm

Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification	
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)		 
JVR 25N 201K	200	±10%	130	170	355	150	20000	5	1.2	190.0	☆	★
JVR 25N 221K	220	±10%	140	180	380	150	20000	5	1.2	205.0	☆	★
JVR 25N 241K	240	±10%	150	200	415	150	20000	5	1.2	225.0	☆	★
JVR 25N 271K	270	±10%	175	225	445	150	20000	5	1.2	255.0	☆	★
JVR 25N 301K	300	±10%	195	250	495	150	20000	5	1.2	280.0	☆	★
JVR 25N 331K	330	±10%	210	275	545	150	20000	5	1.2	305.0	☆	★
JVR 25N 361K	360	±10%	230	300	595	150	20000	5	1.2	330.0	☆	★
JVR 25N 391K	390	±10%	250	320	645	150	20000	5	1.2	360.0	☆	★
JVR 25N 431K	430	±10%	275	350	710	150	20000	5.0	1.2	380.0	☆	★
JVR 25N 471K	470	±10%	300	385	775	150	20000	5.0	1.2	400.0	☆	★
JVR 25N 511K	510	±10%	320	418	840	150	20000	5.0	1.2	420.0	☆	★
JVR 25N 561K	560	±10%	350	460	925	150	20000	5.0	1.2	440.0	☆	★
JVR 25N 621K	620	±10%	385	505	1025	150	20000	5.0	1.2	460.0	☆	★
JVR 25N 681K	680	±10%	420	560	1125	150	20000	5.0	1.2	480.0	☆	★
JVR 25N 751K	750	±10%	460	615	1240	150	20000	5.0	1.2	520.0	☆	★
JVR 25N 781K	780	±10%	485	640	1290	150	20000	5.0	1.2	540.0	☆	★
JVR 25N 821K	820	±10%	510	670	1360	150	20000	5.0	1.2	570	☆	★
JVR 25N 911K	910	±10%	550	745	1500	150	20000	5.0	1.2	620.0	☆	★

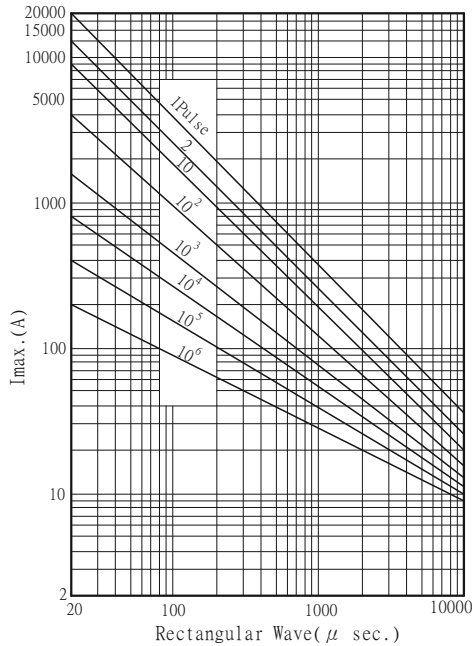
Pulse Life time Ratings-25mm
25N 201K-25N 471K



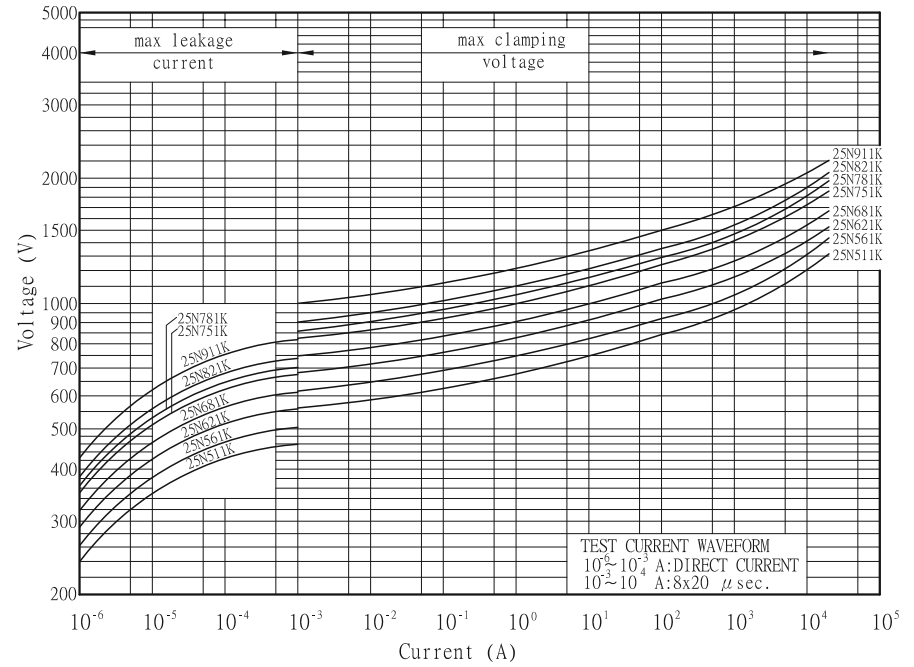
V-I Characteristic Curve-25mm
25N 201K-25N 471K



25N 511K~25N 911K



25N 511K~25N 911K

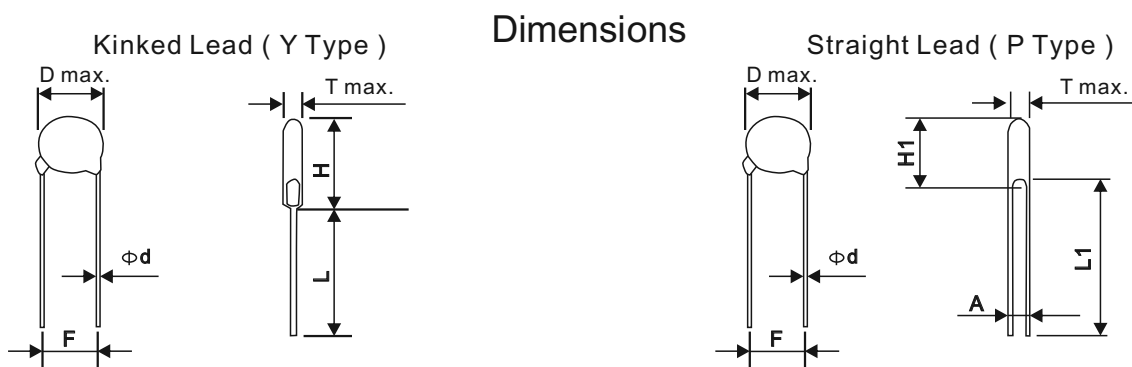


JOYIN CO., LTD

Metal Oxide Varistor

Reliability-JVR

Test description	Standard	Test condition	Test requirement						
Tensile Strength of Terminals	IEC60068-2-21	After gradually applying the load specified below and keeping the unit fixed for 10±1 seconds. <table><tr><td>Terminal diameter (mm)</td><td>Force (Kg)</td></tr><tr><td>0.5<d≤0.8</td><td>1.0</td></tr><tr><td>0.8<d≤1.25</td><td>2.0</td></tr></table>	Terminal diameter (mm)	Force (Kg)	0.5<d≤0.8	1.0	0.8<d≤1.25	2.0	No visible damage △Vb%≤±5%
Terminal diameter (mm)	Force (Kg)								
0.5<d≤0.8	1.0								
0.8<d≤1.25	2.0								
Bending Strength of Terminals	IEC60068-2-21	Hold specimen and apply the force specified below to each lead. Bend the specimen to 90°, then return to the original position. Repeat the procedure in the opposite direction. <table><tr><td>Terminal diameter (mm)</td><td>Force (Kg)</td></tr><tr><td>0.5<d≤0.8</td><td>0.5</td></tr><tr><td>0.8<d≤1.25</td><td>1.0</td></tr></table>	Terminal diameter (mm)	Force (Kg)	0.5<d≤0.8	0.5	0.8<d≤1.25	1.0	No visible damage △Vb%≤±5%
Terminal diameter (mm)	Force (Kg)								
0.5<d≤0.8	0.5								
0.8<d≤1.25	1.0								
Vibration	IEC60068-2-6	Frequency range : 10Hz~55Hz Amplitude : 0.75mm or 98 m/s ² Direction : 3 mutually perpendicular directions,2hrs each.	No visible damage △Vb%≤±5%						
Solderability	IEC60068-2-20	Bath temperature : 245±3℃ Immersion time : 3±0.3 sec	At least 95% of terminal electrode is covered by new solder						
Resistance to soldering heat	IEC60068-2-20	Bath temperature : 260±3℃ Immersion time : 10±1 sec (5N series 5±0.5s)	No visible damage △Vb(1mA)≤±5%						
Voltage Proof	IEC61051-1	The specified voltage is applied between both terminals of the component connected together for 1 minute . <table><tr><td>2500Vrms(AC)</td><td>Test Voltage(AC)</td></tr></table>	2500Vrms(AC)	Test Voltage(AC)	No visible damage				
2500Vrms(AC)	Test Voltage(AC)								
Rapid change of temperature	IEC60068-2-14	Temperature cycle shall be repeated 5 cycles 1.- 40±3℃ keeping 30±3min 2.Room temperature keeping 5±3min 3.125±2℃ keeping 30±3min 4.Room temperature keeping 5±3min	No visible damage △Vb%≤±5%						
Damp heat load	IEC60068-2-78	Temperature 40±2℃ R.H.90~95% and the maximum Allowable voltage for 1000±24 hours	No visible damage △Vb%≤±10%						
Damp heat	IEC60068-2-78	Temperature 40±2℃ R.H.90~95% for 1000±24 hours	No visible damage △Vb%≤±5%						
High temperature load	MIL-STD-202 Method 108	After being continuously applied the max allowable voltage at 85±2℃ for 1000±24 hours	No visible damage △Vb%≤±10%						
High temperature storage	IEC60068-2-2	125±5℃ for 1000±24 hours	No visible damage △Vb%≤±5%						
Low temperature storage	IEC60068-2-1	-40±2℃ for 1000±24 hours	No visible damage △Vb%≤±5%						
Varistor Voltage Temp.Coefficient	Specification Standard	Measure V1mA at -40℃ 、 25℃ 、 125℃	-0.05≤TC≤0.05(%/℃)						
8/20μs Surge Life	IEC61051-1	8/20μs waveform,10 surge current,unipolar,interval 30 secs, amplitude corresponding to max. surge current derating curves for 20 μs.	No visible damage △Vb%≤±10%						
10/1000μs Surge Life	IEC61051-1	10/1000μs waveform,10 surge current,unipolar,interval 2 mins, amplitude corresponding to max. surge current derating curves for 1000 μs.	No visible damage △Vb%≤±10%						



Dimensions Table

unit : mm

Diameter	5mm	7mm	10mm	14mm	20mm	25mm
D max.	7.5	9.0	12.5	16.5	23	29
d ± 0.05	0.6	0.6	0.8	0.8	1.0	1.0
F ± 1.0	5.0	5.0	7.5	7.5	10.0	10.0
H max.	11.0	12.5	17/*19	22/*23	28/*29	36
L1 min.	25.0	25.0	25.0	25.0	25.0	25.0
L min.	24.0	24.0	24.0	24.0	24.0	20.0

*Just for 182K

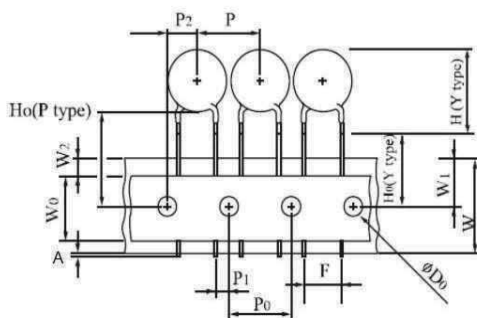
Table of Tmax, A&H1 max.

unit : mm

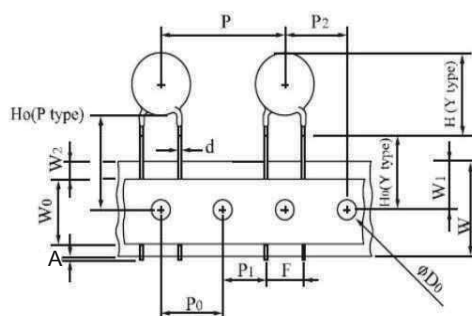
Diameter	5mm			7mm			10mm			14mm			20mm			25mm		
TypeNo.	T max.	A± 0.8	H1max.	T max.	A± 0.8	H1max.	T max.	A± 0.8	H1max.	T max.	A± 0.8	H1max.	T max.	A± 0.8	H1max.	T max.	A± 0.8	H1max.
180M	3.9	0.8	10.5	3.9	0.8	12.0	4.3	0.8	15.0	4.3	0.9	19.5	/	/	/	/	/	/
220M/L	4.1	0.9	10.5	4.1	0.9	12.0	4.5	0.9	15.0	4.5	1.0	19.5	4.9	1.0	26.5	/	/	/
270M/K	4.3	0.9	10.5	4.3	0.9	12.0	4.7	0.9	15.0	4.7	1.0	19.5	5.1	1.1	26.5	/	/	/
330M/K	4.5	1.0	10.5	4.5	1.0	12.0	4.9	1.0	15.0	4.9	1.2	19.5	5.3	1.2	26.5	/	/	/
390L/K	4.5	1.2	10.5	4.5	1.2	12.0	5.1	1.2	15.0	5.1	1.4	19.5	5.4	1.4	26.5	/	/	/
470L/K	4.8	1.2	10.5	4.8	1.2	12.0	5.3	1.2	15.0	5.4	1.4	19.5	5.6	1.4	26.5	/	/	/
560L/K	4.8	1.4	10.5	4.8	1.4	12.0	5.5	1.4	15.0	5.6	1.6	19.5	5.6	1.6	26.5	/	/	/
680L/K	5.1	1.7	10.5	5.1	1.7	12.0	5.7	1.6	15.0	5.6	1.9	19.5	5.9	1.9	26.5	/	/	/
820K	3.8	0.8	10.5	3.8	0.8	12.0	4.3	0.8	15.0	4.3	1.0	19.5	4.7	1.1	26.5	/	/	/
101K	3.9	0.8	10.5	3.9	0.8	12.0	4.4	0.8	15.0	4.5	1.0	19.5	4.9	1.2	26.5	/	/	/
121K	4.1	0.9	10.5	4.1	0.9	12.0	4.5	0.9	15.0	4.6	1.1	19.5	5.1	1.3	26.5	/	/	/
151K	4.5	1.2	10.5	4.5	1.2	12.0	4.9	1.2	15.0	5.0	1.4	19.5	5.4	1.6	26.5	/	/	/
181K	3.9	1.0	10.5	3.9	1.0	12.0	4.3	1.0	15.0	4.3	1.2	19.5	5.0	1.4	26.5	/	/	/
201K	4.0	1.0	10.5	4.0	1.0	12.0	4.4	1.0	15.0	4.4	1.2	19.5	5.1	1.4	26.5	5. 4	2. 5	35
221K	4.0	1.1	10.5	4.0	1.1	12.0	4.4	1.1	15.0	4.4	1.3	19.5	5.2	1.5	26.5	5. 6	2. 6	35
241K	4.2	1.1	10.5	4.2	1.3	12.0	4.6	1.3	15.0	4.6	1.5	19.5	5.3	1.7	26.5	5. 7	2. 8	35
271K	4.4	1.3	10.5	4.4	1.4	12.0	4.8	1.4	15.0	4.8	1.5	19.5	5.5	1.9	26.5	6. 0	3. 0	35
301K	4.4	1.3	10.5	4.4	1.5	12.0	4.8	1.6	15.0	4.8	1.7	19.5	5.7	2.1	26.5	6. 3	3. 2	35
331K	4.5	1.3	10.5	4.5	1.5	12.0	4.9	1.6	15.0	4.9	1.7	19.5	5.8	2.1	26.5	6. 6	3. 4	35
361K	4.7	1.8	10.5	4.6	1.9	12.0	5.0	1.9	15.0	5.0	2.1	19.5	6.0	2.3	26.5	6. 8	3. 6	35
391K	4.8	2.0	11.0	4.8	2.0	12.5	5.2	2.2	15.0	5.2	2.2	19.5	6.2	2.4	26.5	7. 1	3. 9	35
431K	5.1	2.1	11.0	5.1	2.0	12.5	5.5	2.5	15.0	5.5	2.5	19.5	6.6	2.7	26.5	7. 2	3. 3	35
471K	5.2	2.2	11.0	5.2	2.3	12.5	5.6	2.6	15.0	5.6	2.7	19.5	6.8	2.9	27.0	7. 4	3. 5	35
511K	5.6	2.5	11.5	5.6	2.5	12.5	5.8	3.1	15.0	5.8	3.1	20.0	7.0	3.3	27.0	7. 6	3. 8	35
561K	5.7	2.8	11.5	5.7	2.8	12.5	6.1	3.4	15.0	6.1	3.4	20.0	7.3	3.6	27.0	7. 9	4. 0	35
621K	6.0	3.1	11.5	6.0	3.1	12.5	6.4	4.0	15.0	6.4	3.8	20.0	7.6	4.1	27.0	8. 2	4. 4	35
681K	6.3	3.4	11.5	6.3	3.4	12.5	6.8	4.4	15.0	6.8	4.1	20.0	8.0	4.4	27.0	8. 3	4. 7	35
751K	6.7	3.7	11.5	6.8	3.7	12.5	7.2	4.4	15.0	7.2	4.3	20.0	8.4	4.5	27.0	8. 7	5. 0	35
781K	/	/	/	7.0	3.9	12.5	7.3	4.6	15.0	7.3	4.6	20.0	8.6	4.8	27.0	8. 9	5. 2	35
821K	/	/	/	7.2	4.1	12.5	7.6	4.6	15.0	7.6	4.6	20.0	8.8	4.8	27.0	9. 1	5. 4	35
911K	/	/	/	/	/	/	8.2	5.4	16.0	8.2	5.4	20.5	9.3	5.7	27.0	9. 6	5. 9	35
102K	/	/	/	/	/	/	8.5	5.4	16.0	8.6	5.6	20.5	9.9	5.8	27.0	/	/	/
112K	/	/	/	/	/	/	9.1	5.7	16.0	9.1	6.1	20.5	10.3	6.3	27.0	/	/	/
122K	/	/	/	/	/	/	9.9	6.3	17.0	10.0	6.7	21.0	11.3	6.9	27.5	/	/	/
142K	/	/	/	/	/	/	10.7	7.4	17.5	10.9	7.8	21.5	12.8	8.0	28.0	/	/	/
162K	/	/	/	/	/	/	11.5	8.6	17.5	11.8	9.0	21.5	13.0	9.2	28.5	/	/	/
182K	/	/	/	/	/	/	12.6	9.8	17.5	12.8	10.2	21.5	13.5	10.4	29.0	/	/	/

Tape and Reel Dimensions

1/2" pitch



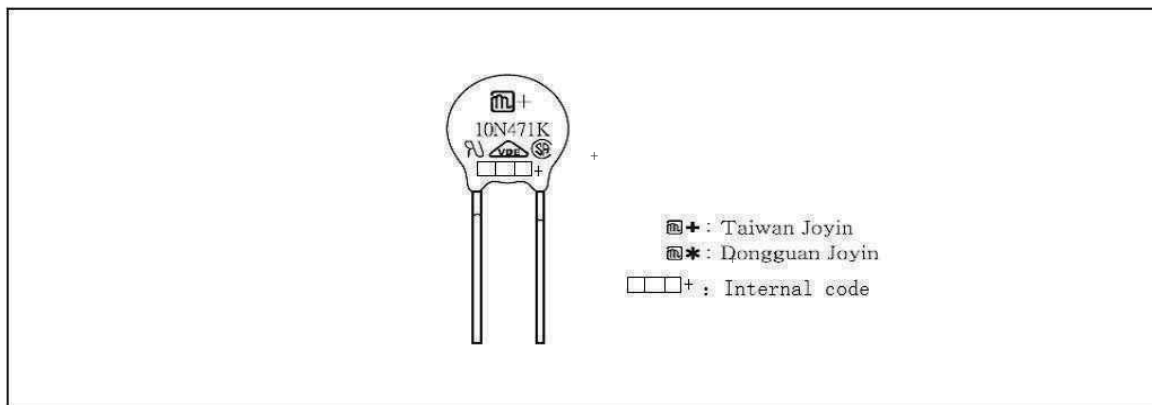
1.0" pitch



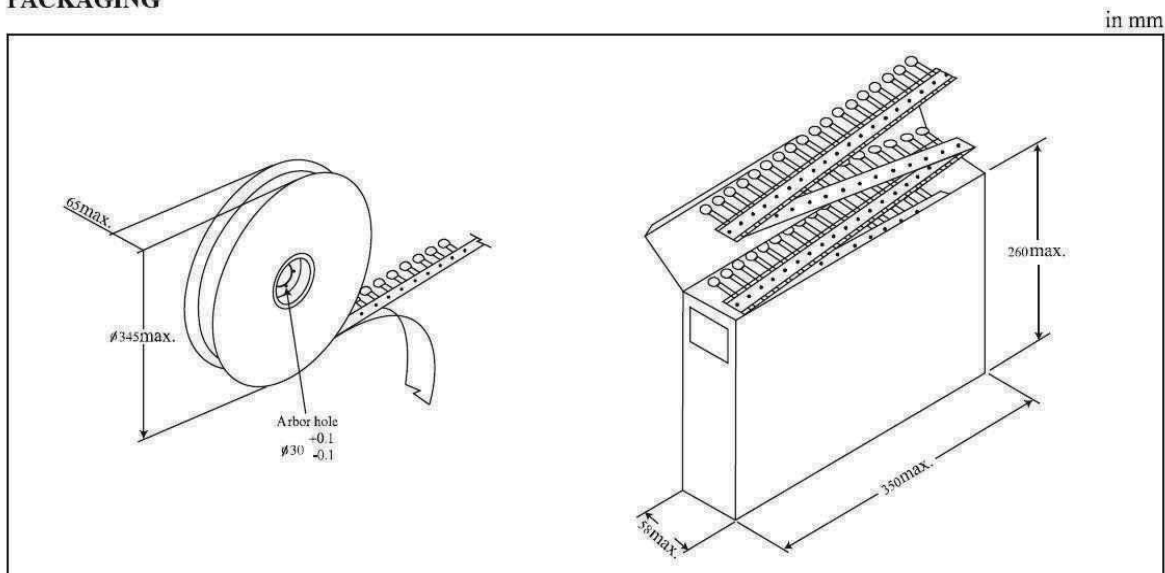
Symbols	Item	5/ 7 mm	10 / 14 mm	20 mm
A	Cut out length	1.1 mm max.	1.1 mm max.	
H (Y type)	Height of Top	See H max. table		
H0(Y type)	Height to seating plane	16.0± 0.5 mm (* ± 1.0 mm)	16.0± 0.5mm(* ± 1.0 mm)	
H0(P type)	Height of component from hole center	16.0 ~ 21.0 mm	16.0 ~ 21.0mm	
△h	Front to back deviation	0 ± 2.0 mm	0 ± 2.0 mm	
W	Carrier tape width	18 ^{+1.0} _{-0.5} mm	18 ^{+1.0} _{-0.5} mm	
W0	Hold downtape width	10.0 mm	12.0 mm	
W1	Sprocket hole position	9.0 ^{+0.75} _{-0.5} mm	9.0 ^{+0.75} _{-0.5} mm	
W2	Adhesive tape position	3.0 mm max.	3.0 mm max.	
F	Component lead spacing	5.0± 1.0 mm	7.5 ± 1.0mm	10.0±1.0mm
P	Pitch of component	12.7± 1.0 mm	25.4 ± 1.0 mm	
P0	Sprocket hole pitch	12.7± 0.3 mm	12.7 ± 0.3 mm	
P1	Lead length from hole center to lead	3.85± 0.7 mm	8.95 ± 0.7 mm	7.7 ± 0.7 mm
P2	Length from hole center to disk center	6.35± 1.3 mm	12.7 ± 1.3 mm	
D0	Sprocket hole diameter	4.0± 0.2 mm	4.0 ± 0.2 mm	
d	Lead wire diameter	0.6 ± 0.05mm	0.8 ± 0.05 mm	1.0± 0.05 mm
T	Disk thickness	See Tmax. table	See T max. table	
t1	Total thickness tape	0.7 ± 0.05mm	0.7± 0.05 mm	
t2	Total thickness	1.6 mm max.	1.8 mm max.	

Marking & packaging

MARKING



PACKAGING



Quantity per Packing Unit

in Pcs

Series Part No.	5 mm			7 mm			10 mm			14 mm			20 mm			25 mm
	Bulk (Box)	Reel	Ammo	Bulk (Box)	Reel	Ammo	Bulk (Box)	Reel	Ammo	Bulk (Box)	Reel	Ammo	Bulk (Box)	Reel	Ammo	Bulk (Box)
180M ~ 470K	5000	1500	1500	5000	1500	1500	2500	1000	500	1500	750	500	750	500	500	-
560K ~ 680K	5000	1500	1000	5000	1500	1000	2500	1000	500	1500	750	500	750	500	500	-
820K ~ 391K	5000	1500	1500	5000	1500	1500	2500	1000	500	1500	750	500	750	500	500	750
431K ~ 471K	5000	1500	1000	5000	1000	1000	2000	750	500	1500	750	500	750	500	500	750
511K ~ 821K	4000	1000	1000	4000	1000	1000	1500	500	500	750	500	500	450	500	500	450
911K ~ 122K	-	-	-	-	-	-	1500	500	350	750	500	350	450	-	-	450
142K ~ 182K	-	-	-	-	-	-	750	-	-	450	-	-	300	-	-	-

Packaging	Bulk (Box)	Reel	Reel (14 mm, 20mm)	Ammo (5 mm, 7 mm)	Ammo (10 mm, 14 mm)	Ammo (20 mm)
Box size (mm)	290×155×110	350×350×105	346×346×72	335×245×43	347×246×50	348×255×60
Carton size (mm)	328×310×250	370×370×590	370×370×468	515×354×258	515×364×246	535×365×275
One carton with	4 Boxes	5 Boxes (10 reels)	6 Boxes (6 reels)	10 Boxes	8 Boxes	8 Boxes