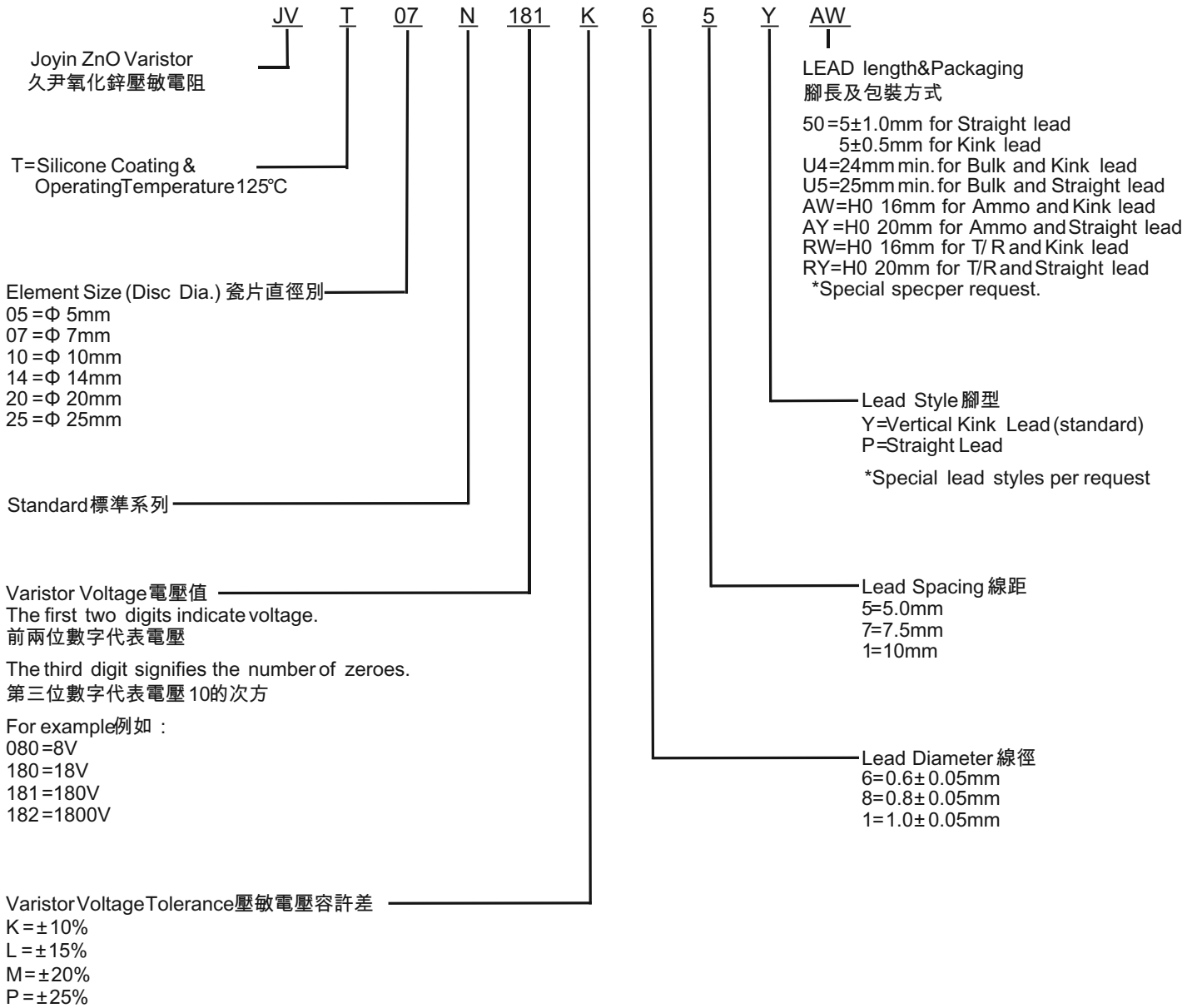




ORDERING CODE



RATING AND CHARACTERISTICS

Standard Varistors-5mm

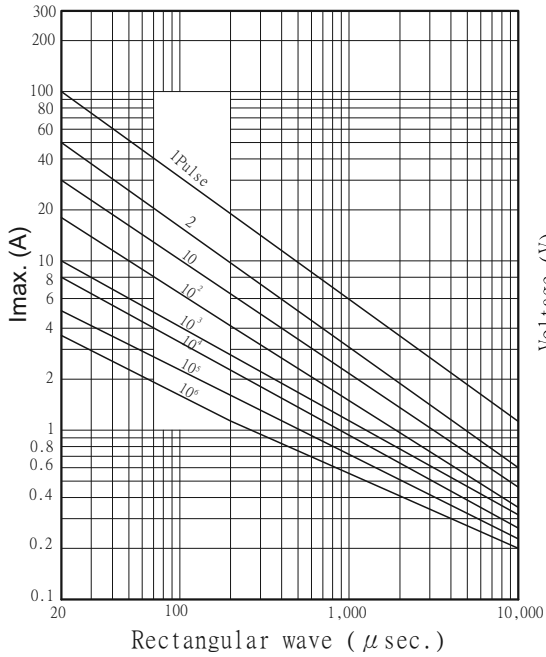
Part No.	Varistor Voltage at 0.1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)	  
JVT 05N 180M	18	±20%	11	14	40	1	100	0.1	0.01	0.6	☆ ☆ ☆
JVT 05N 220L	22	±15%	14	18	48	1	100	0.1	0.01	0.7	☆ ☆ ☆
JVT 05N 270K	27	±10%	17	22	60	1	100	0.1	0.01	0.9	☆ ☆ ☆
JVT 05N 330K	33	±10%	20	26	73	1	100	0.1	0.01	1.1	☆ ☆ ☆
JVT 05N 390K	39	±10%	25	31	86	1	100	0.1	0.01	1.2	☆ ☆ ☆
JVT 05N 470K	47	±10%	30	38	104	1	100	0.1	0.01	1.5	☆ ☆ ☆
JVT 05N 560K	56	±10%	35	45	123	1	100	0.1	0.01	1.8	☆ ☆ ☆
JVT 05N 680K	68	±10%	40	56	150	1	100	0.1	0.01	2.1	☆ ☆ ☆
JVT 05N 820K	82	±10%	50	65	145	5	400	0.1	0.1	2.8	☆ ☆ ☆
JVT 05N 101K	100	±10%	60	85	175	5	400	0.1	0.1	3.5	☆ ☆ ☆
JVT 05N 121K	120	±10%	75	100	210	5	400	0.1	0.1	4.0	☆ ☆ ☆
JVT 05N 151K	150	±10%	95	125	260	5	400	0.1	0.1	5.5	☆ ☆ ☆
JVT 05N 181K	180	±10%	115	150	320	5	400	0.1	0.1	6.5	☆ ☆ ☆
JVT 05N 201K	200	±10%	130	170	355	5	400	0.1	0.1	7.1	☆ ☆ ☆
JVT 05N 221K	220	±10%	140	180	380	5	400	0.1	0.1	7.8	☆ ☆ ☆
JVT 05N 241K	240	±10%	150	200	415	5	400	0.1	0.1	8.4	☆ ☆ ☆
JVT 05N 271K	270	±10%	175	225	475	5	400	0.1	0.1	9.9	☆ ☆ ☆
JVT 05N 301K	300	±10%	195	250	525	5	400	0.1	0.1	10.5	☆ ☆ ☆
JVT 05N 331K	330	±10%	210	275	575	5	400	0.1	0.1	11.5	☆ ☆ ☆
JVT 05N 361K	360	±10%	230	300	620	5	400	0.1	0.1	13	☆ ☆ ☆
JVT 05N 391K	390	±10%	250	320	675	5	400	0.1	0.1	15	☆ ☆ ☆
JVT 05N 431K	430	±10%	275	350	745	5	400	0.1	0.1	16.5	☆ ☆ ☆
JVT 05N 471K	470	±10%	300	385	810	5	400	0.1	0.1	17.5	☆ ☆ ☆
JVT 05N 511K	510	±10%	320	418	880	5	400	0.1	0.1	18.5	☆ ☆ ☆
JVT 05N 561K	560	±10%	350	460	940	5	400	0.1	0.1	19.5	☆ ☆ ☆
JVT 05N 621K	620	±10%	385	505	1050	5	400	0.1	0.1	20.5	☆ ☆ ☆
JVT 05N 681K	680	±10%	420	560	1150	5	400	0.1	0.1	21.5	☆ ☆ ☆
JVT 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

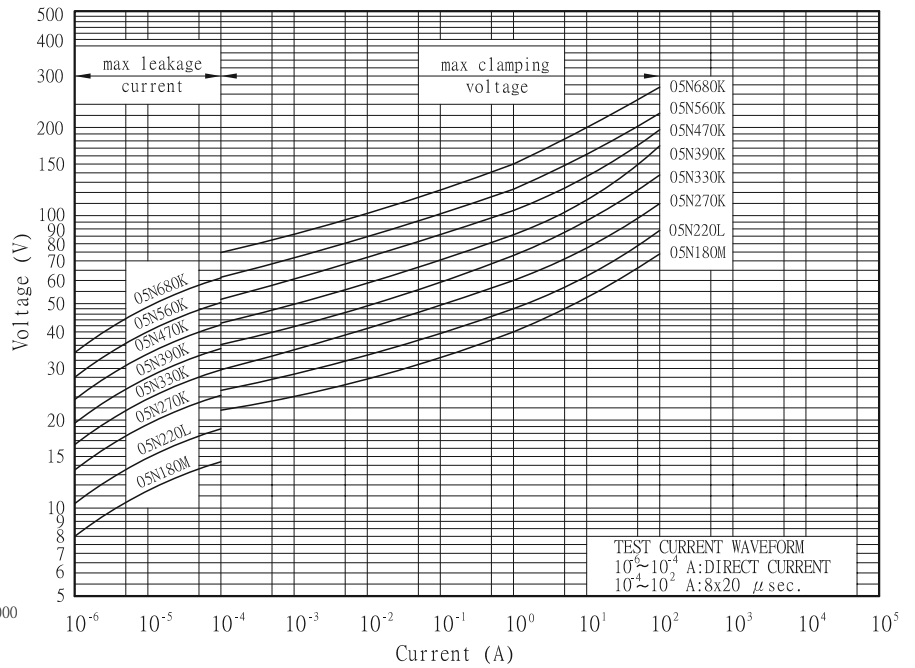
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	UL 1449 4 TH Edition	CSA22.2 No.269.5	IEC61051-1 IEC61051-2 IEC61051-2-2	IEC61051-1 IEC61051-2 IEC61051-2-2 IEC60950-1:2013AnnexQ IEC62368-1:2014/ G.8.2	GB/T1093-1997 GB/T10194-1997	GB4943.1-2011 GB/T1093-1997 GB/T10194-1997 GB8898 -2011
Title	Transient 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		CQC15001130702/0703/0700/1017/0699	
Symbols	☆		★	★	★	⊗



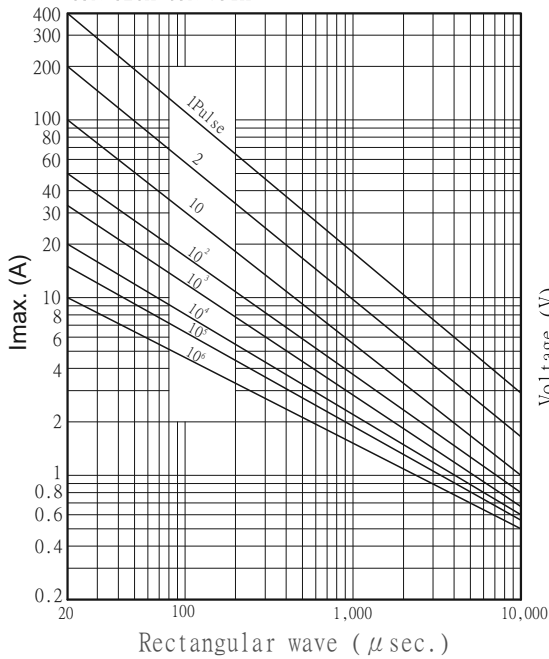
Pulse Life time Ratings-5mm
05N 180M~05N 680K



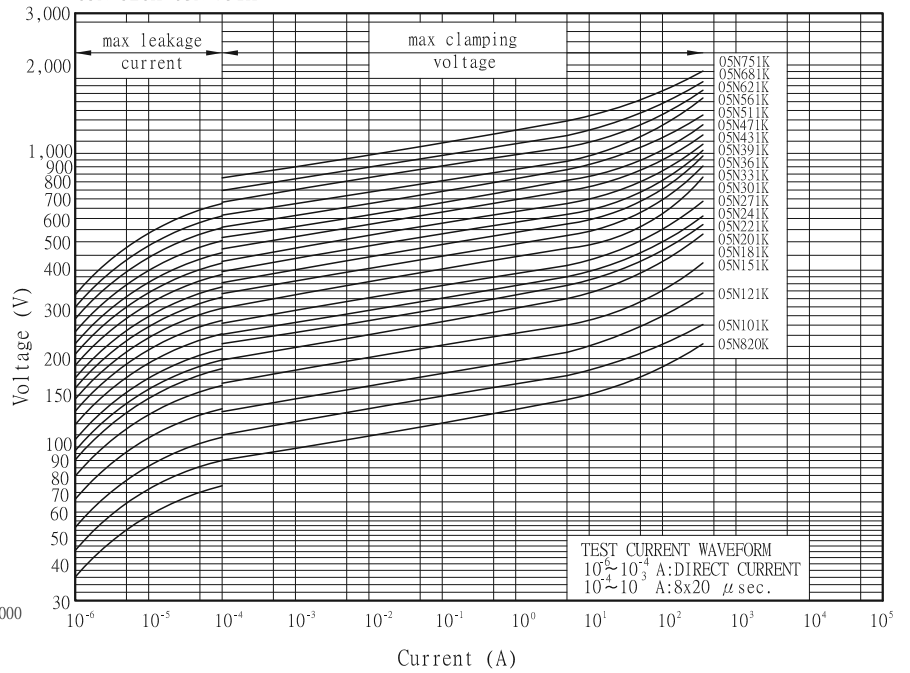
V-I Characteristic Curve-5mm
05N 180M~05N 680K



05N 820K~05N 751K



05N 820K~05N 751K



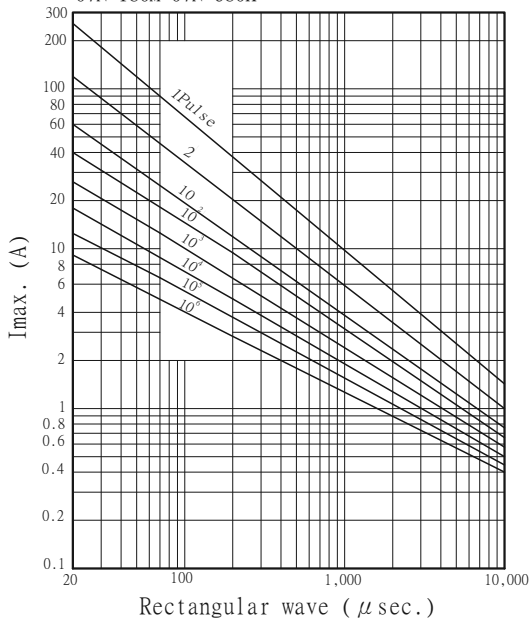
RATING AND CHARACTERISTICS

Standard Varistors-7mm

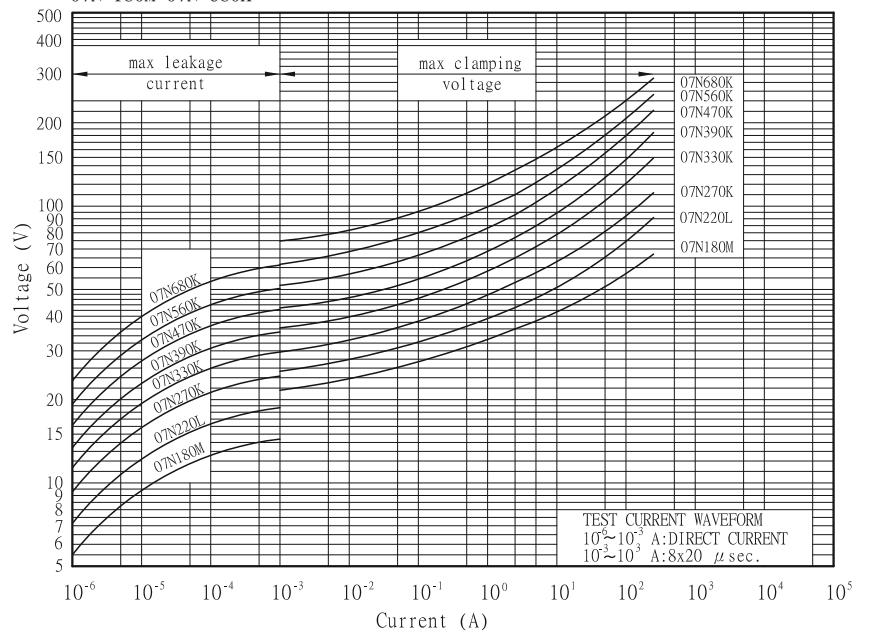
Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)			
JVT 07N 180M	18	±20%	11	14	36	2.5	250	0.2	0.02	1.2	☆	☆	☆
JVT 07N 220L	22	±15%	14	18	43	2.5	250	0.2	0.02	1.4	☆	☆	☆
JVT 07N 270K	27	±10%	17	22	53	2.5	250	0.2	0.02	1.7	☆	☆	☆
JVT 07N 330K	33	±10%	20	26	65	2.5	250	0.2	0.02	2.2	☆	☆	☆
JVT 07N 390K	39	±10%	25	31	77	2.5	250	0.2	0.02	2.4	☆	☆	☆
JVT 07N 470K	47	±10%	30	38	93	2.5	250	0.2	0.02	3.0	☆	☆	☆
JVT 07N 560K	56	±10%	35	45	110	2.5	250	0.2	0.02	3.5	☆	☆	☆
JVT 07N 680K	68	±10%	40	56	135	2.5	250	0.2	0.02	4.3	☆	☆	☆
JVT 07N 820K	82	±10%	50	65	135	10	1200	0.5	0.25	5.5	☆	☆	☆
JVT 07N 101K	100	±10%	60	85	165	10	1200	0.5	0.25	7.0	☆	☆	☆
JVT 07N 121K	120	±10%	75	100	200	10	1200	0.5	0.25	8.0	☆	☆	☆
JVT 07N 151K	150	±10%	95	125	250	10	1200	0.5	0.25	11.0	☆	☆	☆
JVT 07N 181K	180	±10%	115	150	300	10	1200	0.5	0.25	13.0	☆	☆	☆
JVT 07N 201K	200	±10%	130	170	340	10	1200	0.5	0.25	14.3	☆	☆	☆
JVT 07N 221K	220	±10%	140	180	360	10	1200	0.5	0.25	15.5	☆	☆	☆
JVT 07N 241K	240	±10%	150	200	395	10	1200	0.5	0.25	16.8	☆	☆	☆
JVT 07N 271K	270	±10%	175	225	455	10	1200	0.5	0.25	19.8	☆	☆	☆
JVT 07N 301K	300	±10%	195	250	505	10	1200	0.5	0.25	21.0	☆	☆	☆
JVT 07N 331K	330	±10%	210	275	550	10	1200	0.5	0.25	23	☆	☆	☆
JVT 07N 361K	360	±10%	230	300	595	10	1200	0.5	0.25	26	☆	☆	☆
JVT 07N 391K	390	±10%	250	320	650	10	1200	0.5	0.25	30	☆	☆	☆
JVT 07N 431K	430	±10%	275	350	710	10	1200	0.5	0.25	33	☆	☆	☆
JVT 07N 471K	470	±10%	300	385	775	10	1200	0.5	0.25	35	☆	☆	☆
JVT 07N 511K	510	±10%	320	418	842	10	1200	0.5	0.25	37	☆	☆	☆
JVT 07N 561K	560	±10%	350	460	920	10	1200	0.5	0.25	39	☆	☆	☆
JVT 07N 621K	620	±10%	385	505	1025	10	1200	0.5	0.25	41	☆	☆	☆
JVT 07N 681K	680	±10%	420	560	1120	10	1200	0.5	0.25	43	☆	☆	☆
JVT 07N 751K	750	±10%	460	615	1240	10	1200	0.5	0.25	45	☆	☆	☆
JVT 07N 781K	780	±10%	485	640	1290	10	1200	0.5	0.25	46	☆	☆	☆
JVT 07N 821K	820	±10%	510	670	1355	10	1200	0.5	0.25	47	☆	☆	☆



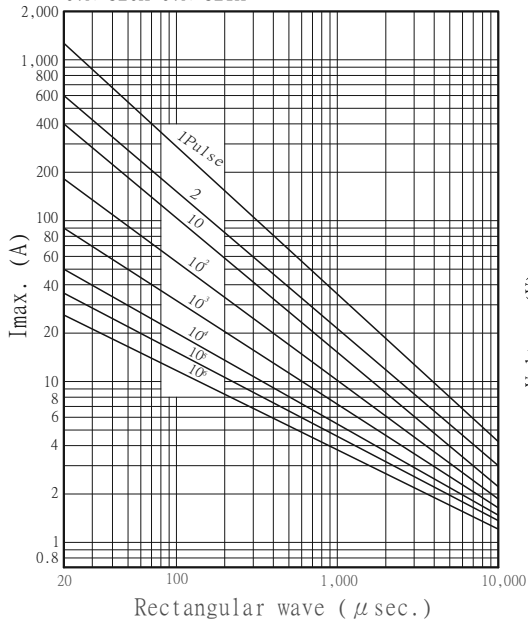
Pulse Life time Ratings-7mm
07N 180M-07N 680K



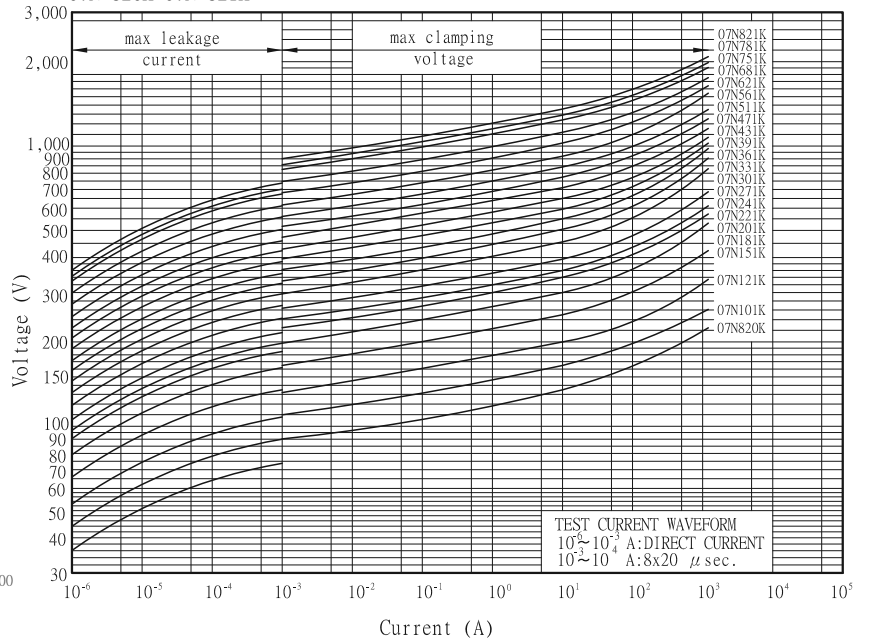
V-I Characteristic Curve-7mm
07N 180M-07N 680K



07N 820K-07N 821K



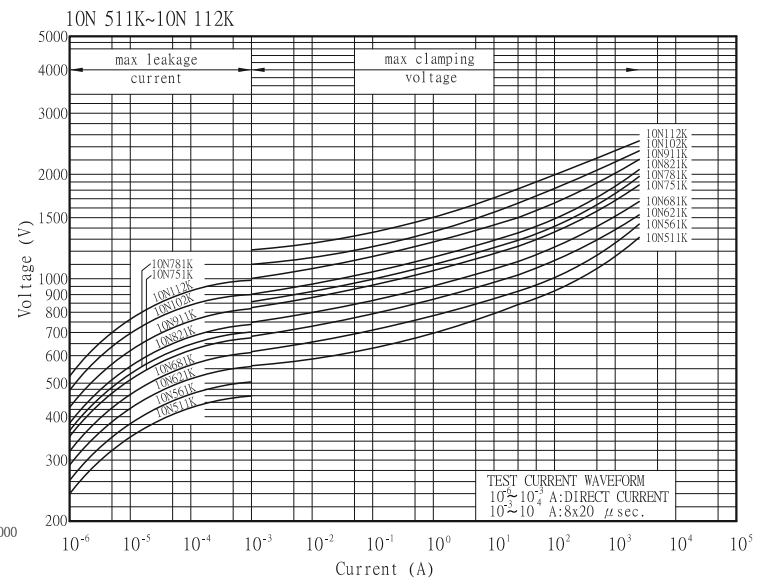
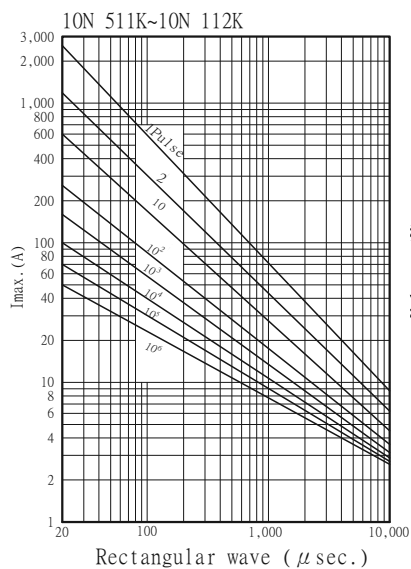
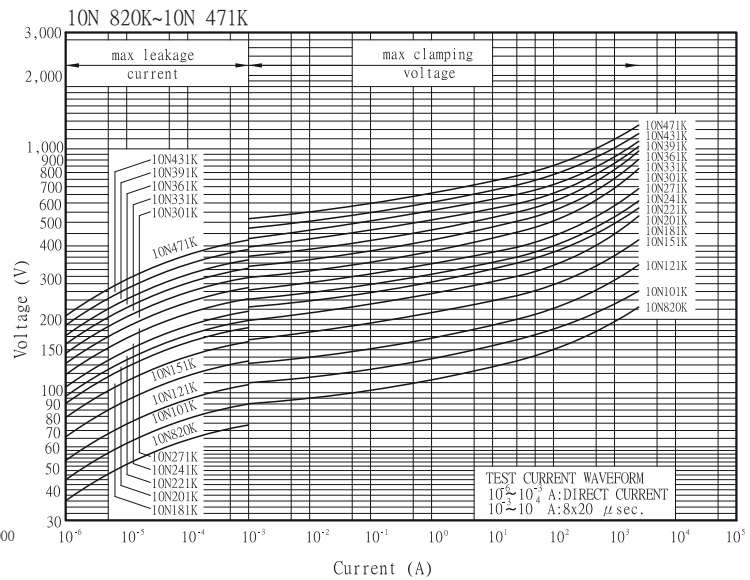
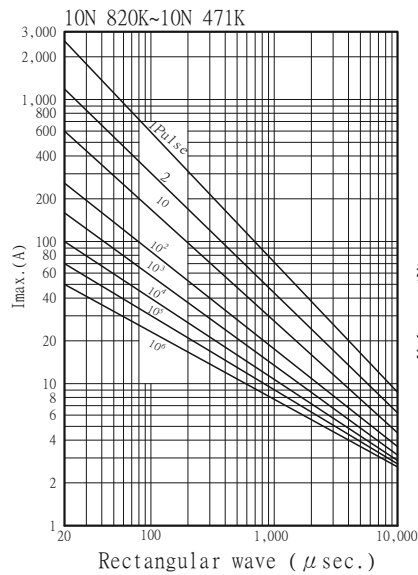
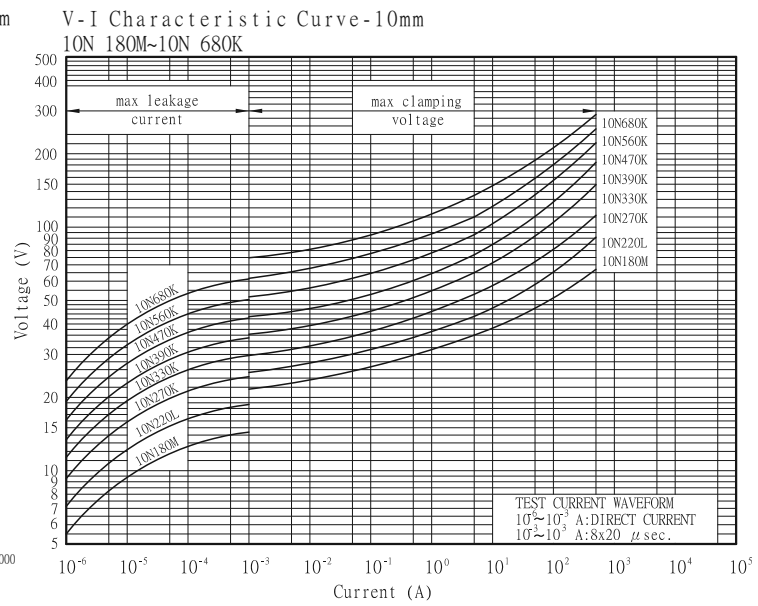
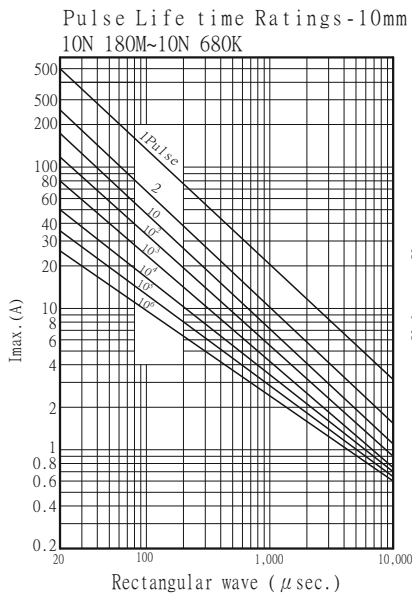
07N 820K-07N 821K



RATING AND CHARACTERISTICS

Standard Varistors - 10mm

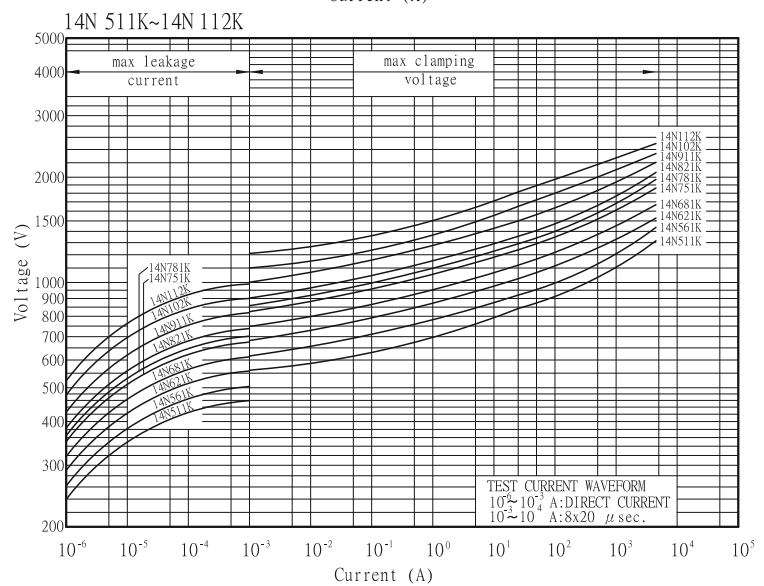
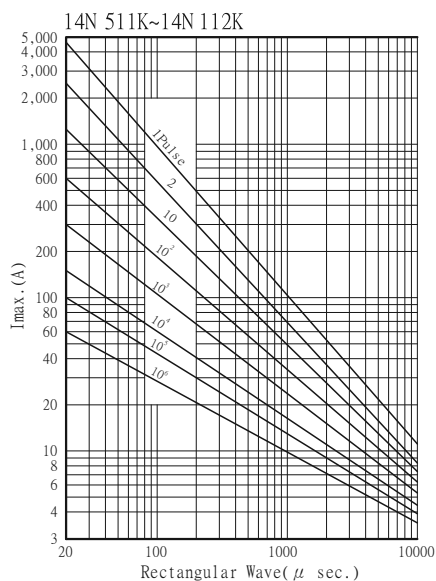
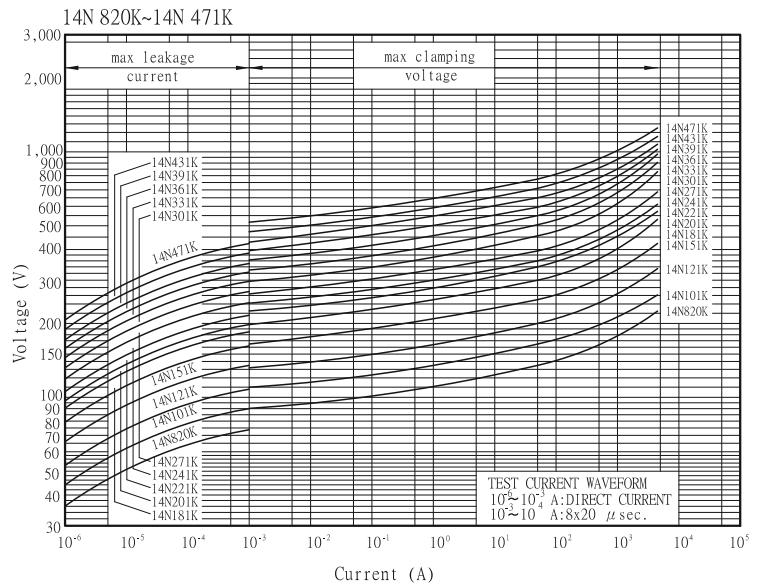
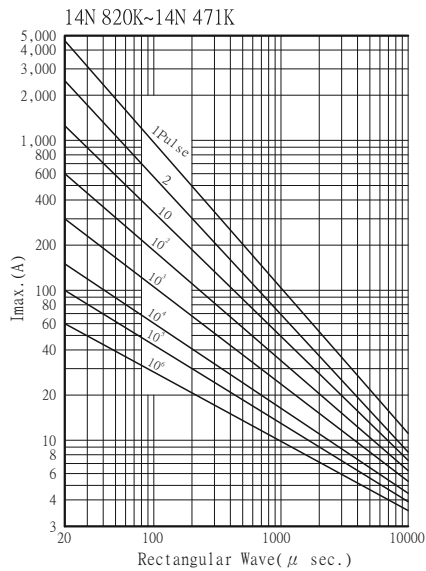
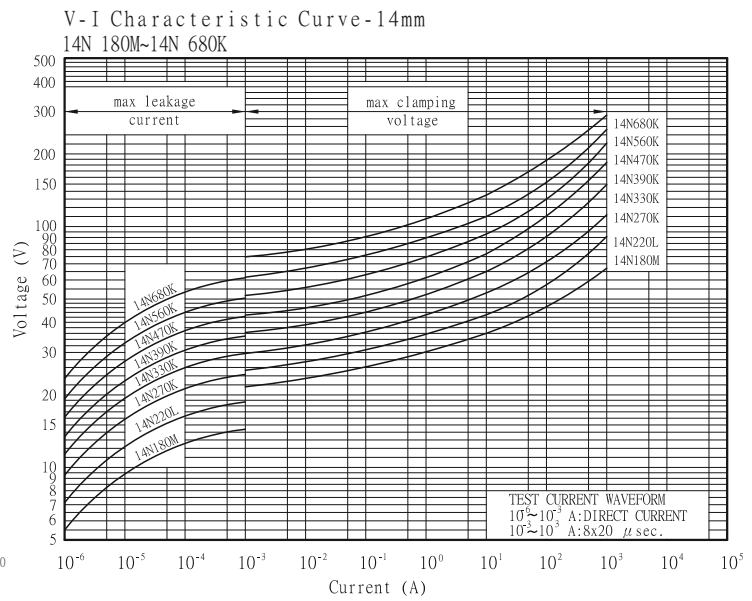
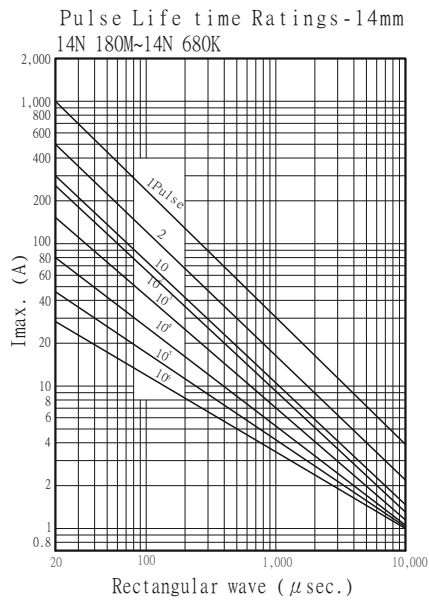
Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)	UL	CE	CQC
JVT 10N 180M	18	±20%	11	14	36	5	500	0.3	0.05	2.4	☆	★	☆
JVT 10N 220L	22	±15%	14	18	43	5	500	0.3	0.05	2.7	☆	★	☆
JVT 10N 270K	27	±10%	17	22	53	5	500	0.3	0.05	3.5	☆	★	☆
JVT 10N 330K	33	±10%	20	26	65	5	500	0.3	0.05	4.4	☆	★	☆
JVT 10N 390K	39	±10%	25	31	77	5	500	0.3	0.05	4.7	☆	★	☆
JVT 10N 470K	47	±10%	30	38	93	5	500	0.3	0.05	6.0	☆	★	☆
JVT 10N 560K	56	±10%	35	45	110	5	500	0.3	0.05	7.0	☆	★	☆
JVT 10N 680K	68	±10%	40	56	135	5	500	0.3	0.05	8.5	☆	★	☆
JVT 10N 820K	82	±10%	50	65	135	25	2500	1.5	0.4	11.0	☆	★	☆
JVT 10N 101K	100	±10%	60	85	165	25	2500	1.5	0.4	14.0	☆	★	☆
JVT 10N 121K	120	±10%	75	100	200	25	2500	1.5	0.4	16.0	☆	★	☆
JVT 10N 151K	150	±10%	95	125	250	25	2500	1.5	0.4	22.0	☆	★	☆
JVT 10N 181K	180	±10%	115	150	300	25	2500	1.5	0.4	26.0	☆	★	☆
JVT 10N 201K	200	±10%	130	170	340	25	2500	1.5	0.4	28.5	☆	★	☆
JVT 10N 221K	220	±10%	140	180	360	25	2500	1.5	0.4	31.0	☆	★	☆
JVT 10N 241K	240	±10%	150	200	395	25	2500	1.5	0.4	33.5	☆	★	☆
JVT 10N 271K	270	±10%	175	225	455	25	2500	1.5	0.4	39.5	☆	★	☆
JVT 10N 301K	300	±10%	195	250	505	25	2500	1.5	0.4	42.0	☆	★	☆
JVT 10N 331K	330	±10%	210	275	550	25	2500	1.5	0.4	46	☆	★	☆
JVT 10N 361K	360	±10%	230	300	595	25	2500	1.5	0.4	52	☆	★	☆
JVT 10N 391K	390	±10%	250	320	650	25	2500	1.5	0.4	60	☆	★	☆
JVT 10N 431K	430	±10%	275	350	710	25	2500	1.5	0.4	66	☆	★	☆
JVT 10N 471K	470	±10%	300	385	775	25	2500	1.5	0.4	70	☆	★	☆
JVT 10N 511K	510	±10%	320	418	842	25	2500	1.5	0.4	74	☆	★	☆
JVT 10N 561K	560	±10%	350	460	920	25	2500	1.5	0.4	78	☆	★	☆
JVT 10N 621K	620	±10%	385	505	1025	25	2500	1.5	0.4	82	☆	★	☆
JVT 10N 681K	680	±10%	420	560	1120	25	2500	1.5	0.4	86	☆	★	☆
JVT 10N 751K	750	±10%	460	615	1240	25	2500	1.5	0.4	90	☆	★	☆
JVT 10N 781K	780	±10%	485	640	1290	25	2500	1.5	0.4	92	☆	★	☆
JVT 10N 821K	820	±10%	510	670	1355	25	2500	1.5	0.4	94	☆	★	☆
JVT 10N 911K	910	±10%	550	745	1500	25	2500	1.5	0.4	102	☆	★	☆
JVT 10N 102K	1000	±10%	625	825	1650	25	2500	1.5	0.4	112	☆	★	☆
JVT 10N 112K	1100	±10%	680	895	1815	25	2500	1.5	0.4	124	☆	★	☆



RATING AND CHARACTERISTICS

Standard Varistors- 14mm

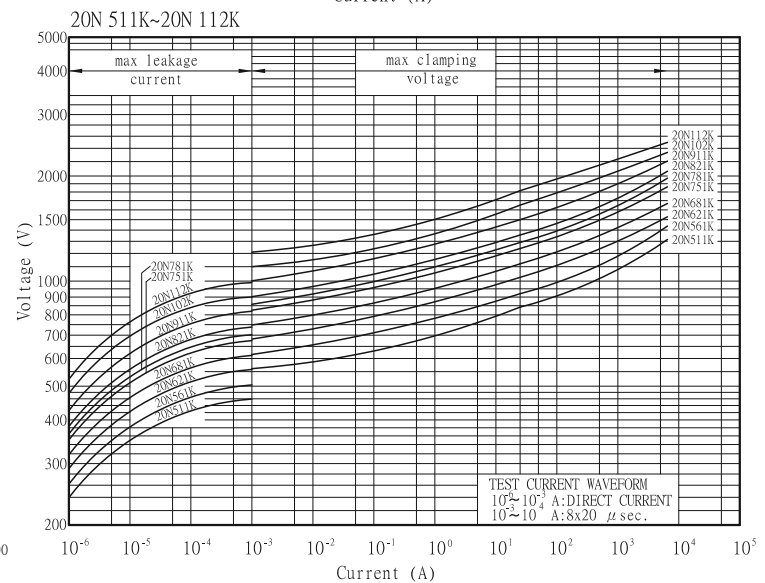
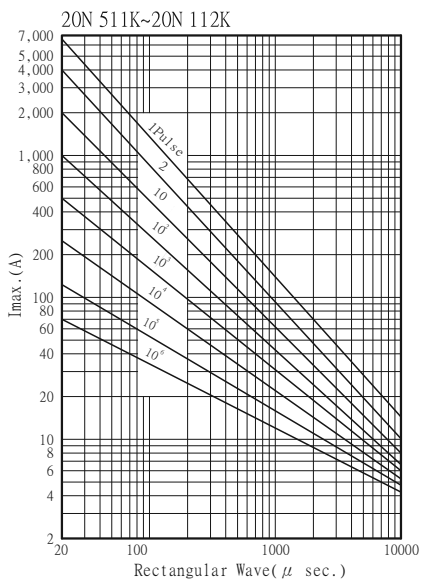
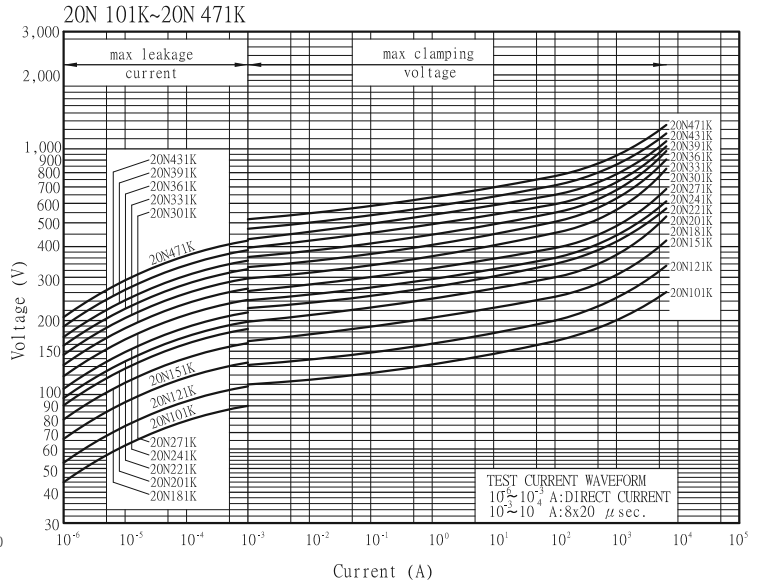
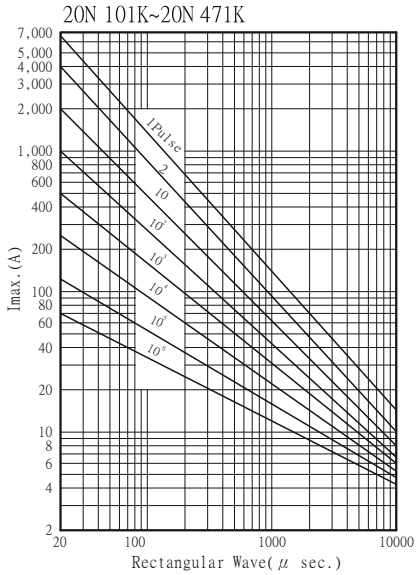
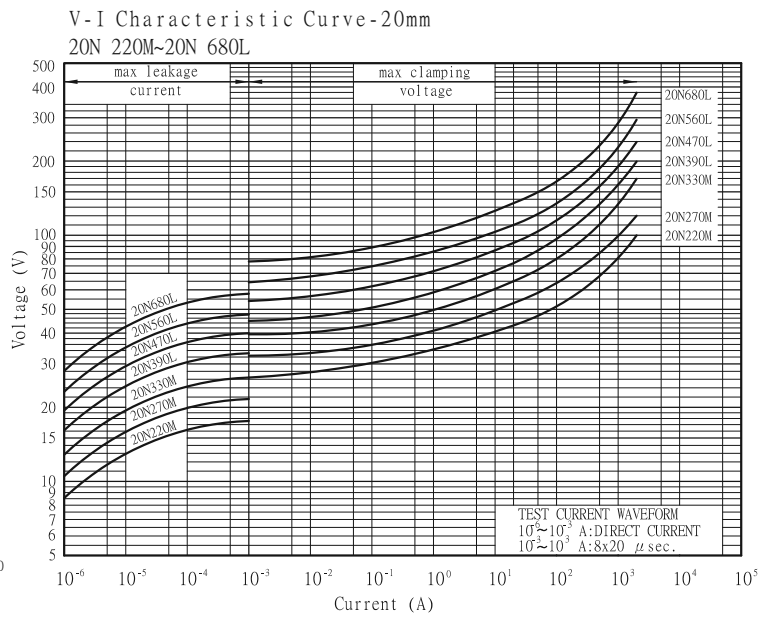
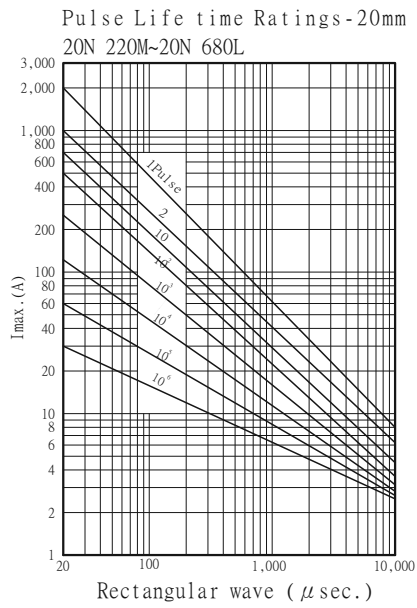
Part No.	Varistor Voltage at 1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification		
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)	UL	UL	CQC
JVT 14N 180M	18	±20%	11	14	36	10	1000	1	0.1	4.7	☆	☆	☆
JVT 14N 220L	22	±15%	14	18	43	10	1000	1	0.1	5.4	☆	☆	☆
JVT 14N 270K	27	±10%	17	22	53	10	1000	1	0.1	6.9	☆	☆	☆
JVT 14N 330K	33	±10%	20	26	65	10	1000	1	0.1	8.8	☆	☆	☆
JVT 14N 390K	39	±10%	25	31	77	10	1000	1	0.1	9.4	☆	☆	☆
JVT 14N 470K	47	±10%	30	38	93	10	1000	1	0.1	12.0	☆	☆	☆
JVT 14N 560K	56	±10%	35	45	110	10	1000	1	0.1	14.0	☆	☆	☆
JVT 14N 680K	68	±10%	40	56	135	10	1000	1	0.1	17.0	☆	☆	☆
JVT 14N 820K	82	±10%	50	65	135	50	4500	3.0	0.6	22.0	☆	☆	☆
JVT 14N 101K	100	±10%	60	85	165	50	4500	3.0	0.6	28.0	☆	☆	☆
JVT 14N 121K	120	±10%	75	100	200	50	4500	3.0	0.6	32.0	☆	☆	☆
JVT 14N 151K	150	±10%	95	125	250	50	4500	3.0	0.6	44.0	☆	☆	☆
JVT 14N 181K	180	±10%	115	150	300	50	4500	3.0	0.6	52.0	☆	★	☆
JVT 14N 201K	200	±10%	130	170	340	50	4500	3.0	0.6	57.0	☆	★	★
JVT 14N 221K	220	±10%	140	180	360	50	4500	3.0	0.6	62.0	☆	★	★
JVT 14N 241K	240	±10%	150	200	395	50	4500	3.0	0.6	67.0	☆	★	★
JVT 14N 271K	270	±10%	175	225	455	50	4500	3.0	0.6	79	☆	★	★
JVT 14N 301K	300	±10%	195	250	505	50	4500	3.0	0.6	84.0	☆	★	★
JVT 14N 331K	330	±10%	210	275	550	50	4500	3.0	0.6	92	☆	★	★
JVT 14N 361K	360	±10%	230	300	595	50	4500	3.0	0.6	104	☆	★	★
JVT 14N 391K	390	±10%	250	320	650	50	4500	3.0	0.6	120	☆	★	★
JVT 14N 431K	430	±10%	275	350	710	50	4500	3.0	0.6	132	☆	★	★
JVT 14N 471K	470	±10%	300	385	775	50	4500	3.0	0.6	140	☆	★	★
JVT 14N 511K	510	±10%	320	418	842	50	4500	3.0	0.6	148	☆	★	★
JVT 14N 561K	560	±10%	350	460	920	50	4500	3.0	0.6	156	☆	★	★
JVT 14N 621K	620	±10%	385	505	1025	50	4500	3.0	0.6	164	☆	★	★
JVT 14N 681K	680	±10%	420	560	1120	50	4500	3.0	0.6	172	☆	★	★
JVT 14N 751K	750	±10%	460	615	1240	50	4500	3.0	0.6	180	☆	★	★
JVT 14N 781K	780	±10%	485	640	1290	50	4500	3.0	0.6	184	☆	★	★
JVT 14N 821K	820	±10%	510	670	1355	50	4500	3.0	0.6	188	☆	★	★
JVT 14N 911K	910	±10%	550	745	1500	50	4500	3.0	0.6	204	☆	★	★
JVT 14N 102K	1000	±10%	625	825	1650	50	4500	3.0	0.6	224	☆	★	★
JVT 14N 112K	1100	±10%	680	895	1815	50	4500	3.0	0.6	248	☆	★	★



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 (A)	(W)	(J)			
JVT 20N 220M	22	±20%	14	18	43	20	2000	2	0.2	8.0	☆	★	★
JVT 20N 270M	27	±20%	17	22	53	20	2000	2	0.2	10.0	☆	★	★
JVT 20N 330M	33	±20%	20	26	65	20	2000	2	0.2	12.0	☆	★	★
JVT 20N 390L	39	±15%	25	31	77	20	2000	2	0.2	14.0	☆	★	★
JVT 20N 470L	47	±15%	30	38	93	20	2000	2	0.2	17.0	☆	★	★
JVT 20N 560L	56	±15%	35	45	110	20	2000	2	0.2	20.0	☆	★	★
JVT 20N 680L	68	±15%	40	56	135	20	2000	2	0.2	24.0	☆	★	★
JVT 20N 820L	82	±15%	50	65	135	100	6500	4	1	44.0	☆	★	★
JVT 20N 101K	100	±10%	60	85	165	100	6500	4.0	1	56.0	☆	★	★
JVT 20N 121K	120	±10%	75	100	200	100	6500	4.0	1	64.0	☆	★	★
JVT 20N 151K	150	±10%	95	125	250	100	6500	4.0	1	88.0	☆	★	★
JVT 20N 181K	180	±10%	115	150	300	100	6500	4.0	1	104.0	☆	★	★
JVT 20N 201K	200	±10%	130	170	340	100	6500	4.0	1	114.0	☆	★	★
JVT 20N 221K	220	±10%	140	180	360	100	6500	4.0	1	124.0	☆	★	★
JVT 20N 241K	240	±10%	150	200	395	100	6500	4.0	1	134.0	☆	★	★
JVT 20N 271K	270	±10%	175	225	455	100	6500	4.0	1	158.0	☆	★	★
JVT 20N 301K	300	±10%	195	250	505	100	6500	4.0	1	168	☆	★	★
JVT 20N 331K	330	±10%	210	275	550	100	6500	4.0	1	184.0	☆	★	★
JVT 20N 361K	360	±10%	230	300	595	100	6500	4.0	1	208	☆	★	★
JVT 20N 391K	390	±10%	250	320	650	100	6500	4.0	1	240	☆	★	★
JVT 20N 431K	430	±10%	275	350	710	100	6500	4.0	1	264	☆	★	★
JVT 20N 471K	470	±10%	300	385	775	100	6500	4.0	1	280	☆	★	★
JVT 20N 511K	510	±10%	320	418	842	100	6500	4.0	1	296	☆	★	★
JVT 20N 561K	560	±10%	350	460	920	100	6500	4.0	1	312	☆	★	★
JVT 20N 621K	620	±10%	385	505	1025	100	6500	4.0	1	328	☆	★	★
JVT 20N 681K	680	±10%	420	560	1120	100	6500	4.0	1	344	☆	★	★
JVT 20N 751K	750	±10%	460	615	1240	100	6500	4.0	1	360	☆	★	★
JVT 20N 781K	780	±10%	485	640	1290	100	6500	4.0	1	368	☆	★	★
JVT 20N 821K	820	±10%	510	670	1355	100	6500	4.0	1	376	☆	★	★
JVT 20N 911K	910	±10%	550	745	1500	100	6500	4.0	1	408	☆	★	★
JVT 20N 102K	1000	±10%	625	825	1650	100	6500	4.0	1	448	☆	★	★
JVT 20N 112K	1100	±10%	680	895	1815	100	6500	4.0	1	496	☆	★	★



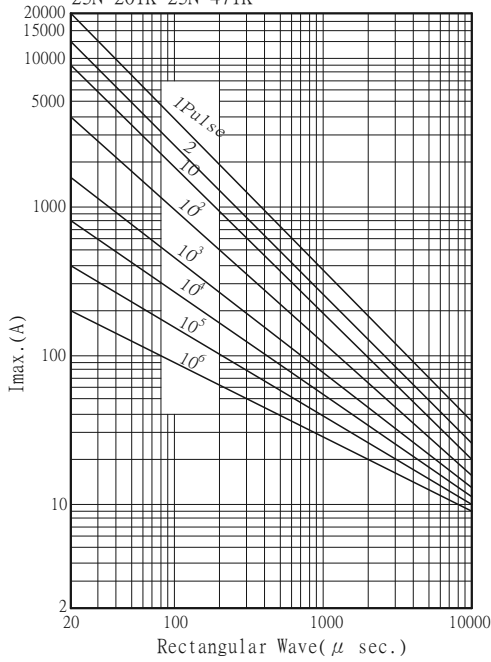
RATING AND CHARACTERISTICS

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)	UL	CEC
JVT 25N 201K	200	±10%	130	170	355	150	20000	5	1.2	190.0	☆	★
JVT 25N 221K	220	±10%	140	180	380	150	20000	5	1.2	205.0	☆	★
JVT 25N 241K	240	±10%	150	200	415	150	20000	5	1.2	225.0	☆	★
JVT 25N 271K	270	±10%	175	225	445	150	20000	5	1.2	255.0	☆	★
JVT 25N 301K	300	±10%	195	250	495	150	20000	5	1.2	280.0	☆	★
JVT 25N 331K	330	±10%	210	275	545	150	20000	5	1.2	305.0	☆	★
JVT 25N 361K	360	±10%	230	300	595	150	20000	5	1.2	330.0	☆	★
JVT 25N 391K	390	±10%	250	320	645	150	20000	5	1.2	360.0	☆	★
JVT 25N 431K	430	±10%	275	350	710	150	20000	5.0	1.2	380.0	☆	★
JVT 25N 471K	470	±10%	300	385	775	150	20000	5.0	1.2	400.0	☆	★
JVT 25N 511K	510	±10%	320	418	840	150	20000	5.0	1.2	420.0	☆	★
JVT 25N 561K	560	±10%	350	460	925	150	20000	5.0	1.2	440.0	☆	★
JVT 25N 621K	620	±10%	385	505	1025	150	20000	5.0	1.2	460.0	☆	★
JVT 25N 681K	680	±10%	420	560	1125	150	20000	5.0	1.2	480.0	☆	★
JVT 25N 751K	750	±10%	460	615	1240	150	20000	5.0	1.2	520.0	☆	★
JVT 25N 781K	780	±10%	485	640	1290	150	20000	5.0	1.2	540.0	☆	★
JVT 25N 821K	820	±10%	510	670	1360	150	20000	5.0	1.2	570	☆	★
JVT 25N 911K	910	±10%	550	745	1500	150	20000	5.0	1.2	620.0	☆	★

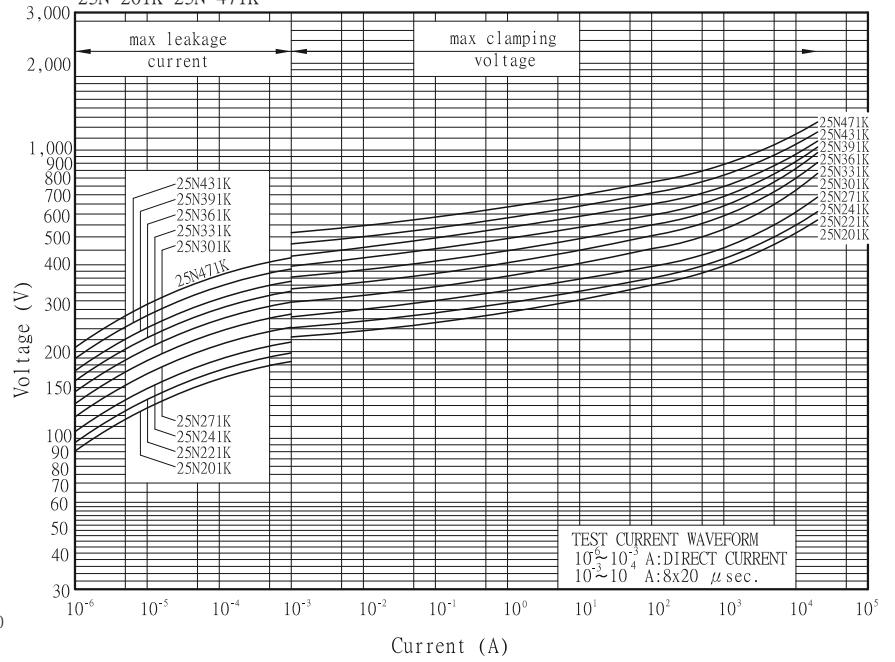
Pulse Life time Ratings-25mm

25N 201K~25N 471K

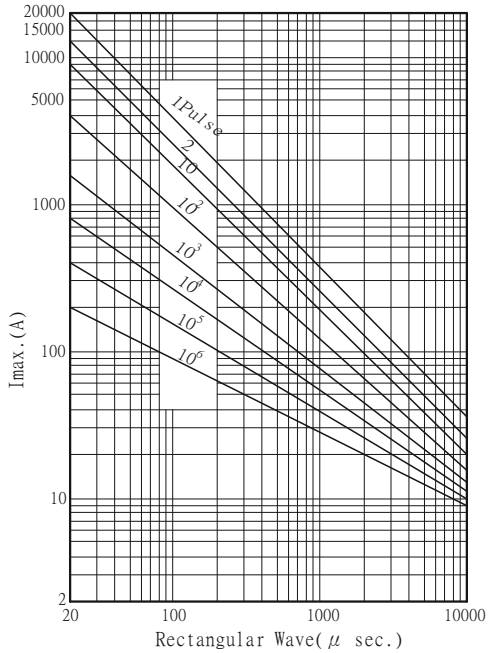


V-I Characteristic Curve-25mm

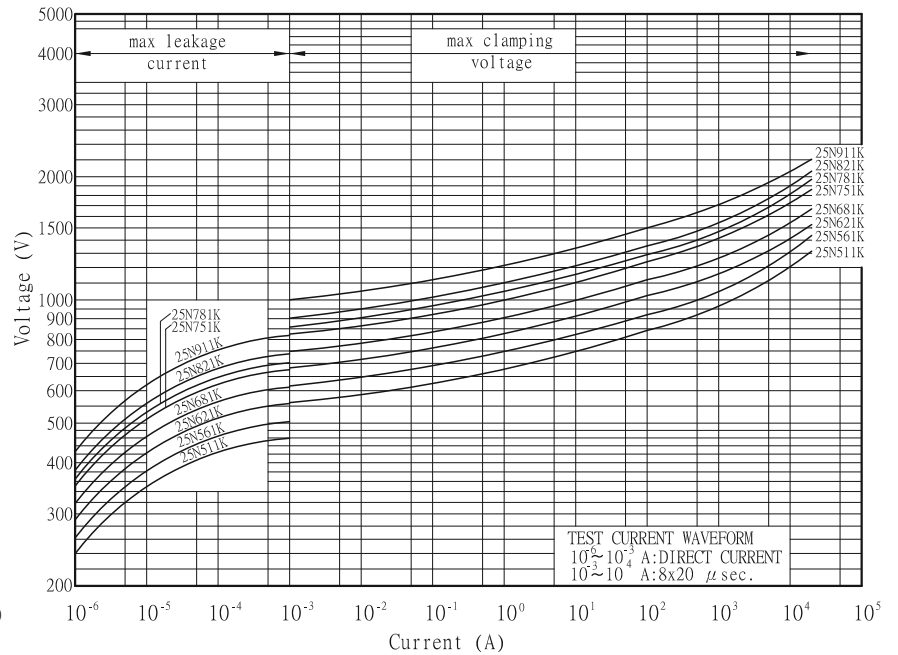
25N 201K~25N 471K



25N 511K~25N 911K



25N 511K~25N 911K



JOYIN CO., LTD

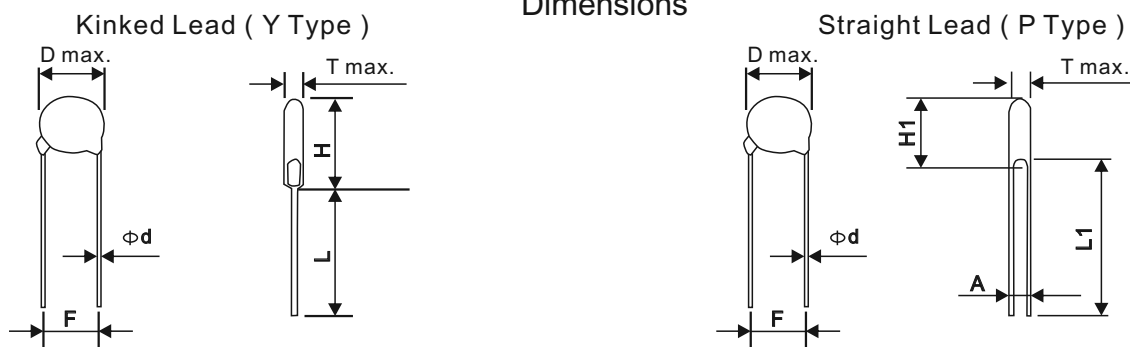
Metal Oxide Varistor

■ Reliability-JVT

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>1000Vrms(AC)</td><td>Test Voltage(AC)</td></tr></table>	1000Vrms(AC)	Test Voltage(AC)	No visible damage				
1000Vrms(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, Steady State	IEC60068-2-78	Temperature 40±2℃ R.H.90~95% and the maximum Allowable voltage for 1000±24 hours <table><tr><td>Temperature 40±2℃ R.H.90~95% for 1000±24 hours</td></tr></table>	Temperature 40±2℃ R.H.90~95% for 1000±24 hours	No visible damage △Vb%≤±5% No visible damage △Vb%≤±5%					
Temperature 40±2℃ R.H.90~95% for 1000±24 hours									
High temperature load	MIL-STD-202 Method 108	After being continuously applied the max allowable voltage at 125±5℃ for 1000±24 hours	No visible damage △Vb%≤±5%						
High temperature storage	IEC60068-2-2	125±3℃ 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 20μs.	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 1000μs.	No visible damage △Vb%≤±10%						



Dimensions



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	13.0	18/*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

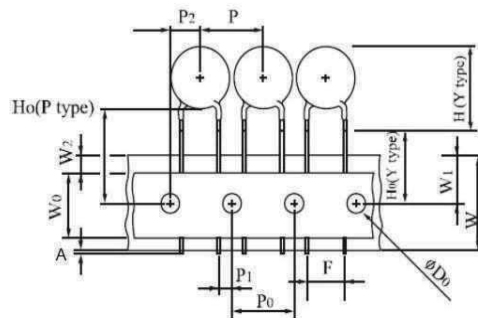
Table of T max., A & H1 max.

unit : mm

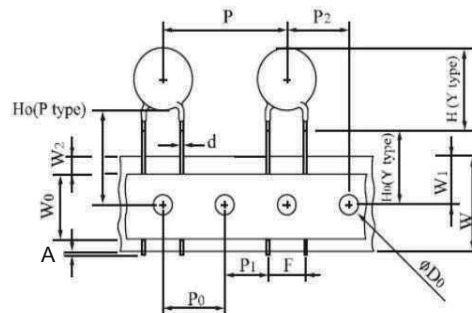
Diameter	5mm			7mm			10mm			14mm			20mm			25mm		
TypeNo.	T max.	A ± 0.8	H1 max.	T max.	A ± 0.8	H1 max.	T max.	A ± 0.8	H1 max.	T max.	A ± 0.8	H1 max.	T max.	A ± 0.8	H1 max.	T max.	A ± 0.8	H1 max.
180M	4.5	0.8	10.5	4.5	0.8	12.0	4.9	0.8	15.5	5.0	0.9	19.5	/	/	/	/	/	/
220M/L	4.5	0.9	10.5	4.5	0.9	12.0	4.9	0.9	15.5	5.0	1.0	19.5	5.3	1.0	26.5	/	/	/
270M/K	4.7	0.9	10.5	4.7	0.9	12.0	5.1	0.9	15.5	5.2	1.1	19.5	5.4	1.1	26.5	/	/	/
330M/K	4.7	1.0	10.5	4.7	1.0	12.0	5.1	1.0	15.5	5.2	1.2	19.5	5.4	1.2	26.5	/	/	/
390L/K	4.7	1.2	10.5	4.7	1.2	12.0	5.1	1.2	15.5	5.2	1.4	19.5	5.4	1.4	26.5	/	/	/
470L/K	5.0	1.2	10.5	5.0	1.2	12.0	5.5	1.2	15.5	5.6	1.4	19.5	5.6	1.4	26.5	/	/	/
560L/K	5.0	1.4	10.5	5.0	1.4	12.0	5.5	1.4	15.5	5.6	1.6	19.5	5.6	1.6	26.5	/	/	/
680L/K	5.5	1.7	10.5	5.5	1.7	12.0	6.0	1.7	15.5	6.1	1.9	19.5	6.1	1.9	26.5	/	/	/
820K	3.8	0.8	10.5	3.8	0.8	12.0	4.3	0.8	15.5	4.4	1.0	19.5	5.0	1.1	26.5	/	/	/
101K	3.9	0.8	10.5	3.9	0.8	12.0	4.4	0.8	15.5	4.5	1.0	19.5	5.1	1.2	26.5	/	/	/
121K	4.1	0.9	10.5	4.1	0.9	12.0	4.5	0.9	15.5	4.6	1.1	19.5	5.3	1.3	26.5	/	/	/
151K	4.5	1.2	10.5	4.5	1.2	12.0	4.9	1.2	15.5	5.1	1.4	19.5	5.6	1.6	26.5	/	/	/
181K	4.1	1.0	10.5	4.1	1.0	12.0	4.5	1.0	15.5	4.7	1.2	19.5	5.2	1.4	26.5	/	/	/
201K	4.2	1.0	10.5	4.2	1.0	12.0	4.6	1.0	15.5	4.8	1.2	19.5	5.3	1.4	26.5	5.6	2.5	35
221K	4.3	1.1	10.5	4.3	1.1	12.0	4.7	1.1	15.5	4.9	1.3	19.5	5.4	1.5	26.5	5.8	2.6	35
241K	4.4	1.1	10.5	4.4	1.3	12.0	4.8	1.3	15.5	5.0	1.5	19.5	5.5	1.7	26.5	6.0	2.8	35
271K	4.6	1.3	10.5	4.6	1.4	12.0	5.0	1.4	15.5	5.2	1.5	19.5	5.7	1.9	26.5	6.2	3.0	35
301K	4.8	1.3	10.5	4.8	1.5	12.0	5.2	1.6	15.5	5.4	1.7	19.5	5.9	2.1	26.5	6.6	3.2	35
331K	4.9	1.3	10.5	4.9	1.5	12.0	5.3	1.6	15.5	5.5	1.7	19.5	6.0	2.1	26.5	6.8	3.4	35
361K	5.1	1.8	10.5	5.1	1.9	12.0	5.5	1.9	15.5	5.7	2.1	19.5	6.2	2.3	26.5	7.0	3.6	35
391K	5.3	2.0	11.0	5.3	2.0	12.5	5.7	2.2	16.0	5.9	2.2	20.0	6.4	2.4	26.5	7.3	3.9	35
431K	6.1	2.1	11.0	6.1	2.0	12.5	6.5	2.5	16.0	6.7	2.5	20.0	7.2	2.7	26.5	7.5	3.3	35
471K	6.4	2.2	11.0	6.4	2.3	12.5	6.8	2.6	16.0	7.0	2.7	20.0	7.5	2.9	27.0	8.1	3.5	35
511K	6.6	2.5	11.5	6.6	2.5	13.0	7.0	3.1	16.5	7.2	3.1	20.5	7.7	3.3	27.0	8.3	3.8	35
561K	6.9	2.8	11.5	6.9	2.8	13.0	7.3	3.4	16.5	7.5	3.4	20.5	8.0	3.6	27.0	8.6	4.0	35
621K	7.2	3.1	11.5	7.2	3.1	13.0	7.6	4.0	16.5	7.8	3.8	20.5	8.3	4.1	27.0	8.9	4.4	35
681K	7.5	3.4	11.5	7.5	3.4	13.0	8.0	4.4	16.5	8.2	4.1	20.5	8.7	4.4	27.0	9.3	4.7	35
751K	7.9	3.7	11.5	7.9	3.7	13.0	8.4	4.4	16.5	8.6	4.3	20.5	9.1	4.5	27.0	9.7	5.0	35
781K	/	/	/	8.1	3.9	13.0	8.6	4.6	16.5	8.8	4.6	20.5	9.3	4.8	27.0	9.9	5.2	35
821K	/	/	/	8.3	4.1	13.0	8.8	4.6	16.5	9.0	4.6	20.5	9.5	4.8	27.0	10.3	5.4	35
911K	/	/	/	/	/	/	9.4	5.4	16.5	9.6	5.4	20.5	10.1	5.7	27.0	11.2	5.9	35
102K	/	/	/	/	/	/	9.9	5.4	16.5	10.1	5.6	20.5	10.7	5.8	27.0	/	/	/
112K	/	/	/	/	/	/	10.5	5.7	16.5	10.7	6.1	20.5	11.2	6.3	27.0	/	/	/
122K	/	/	/	/	/	/	10.9	6.3	17.0	10.9	6.7	21.0	11.3	6.9	27.5	/	/	/
142K	/	/	/	/	/	/	11.9	7.4	17.5	11.9	7.8	21.5	12.8	8.0	28.0	/	/	/
162K	/	/	/	/	/	/	13.1	8.6	18.0	13.1	9.0	22.0	13.7	9.2	28.5	/	/	/
182K	/	/	/	/	/	/	14.3	9.8	18.5	14.3	10.2	22.5	14.7	10.4	29.0	/	/	/

Tape and Reel Dimensions

1/2" pitch



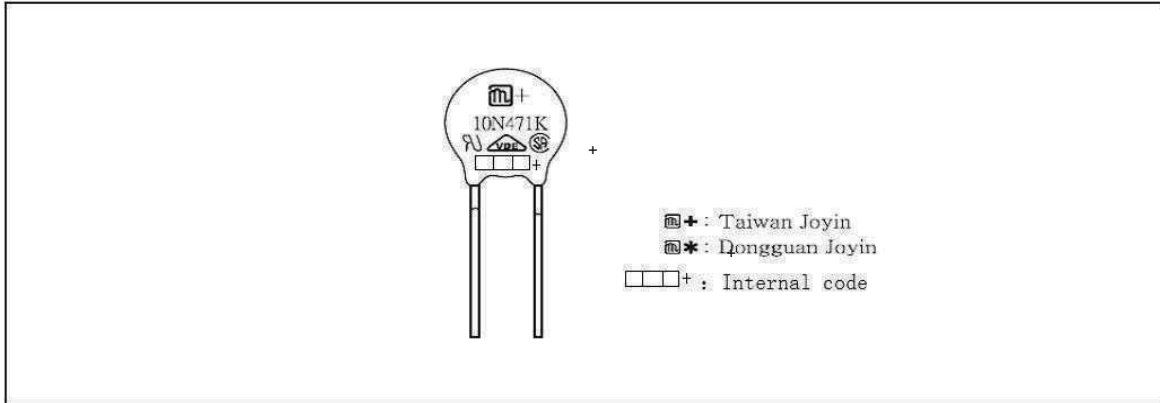
1.0" pitch



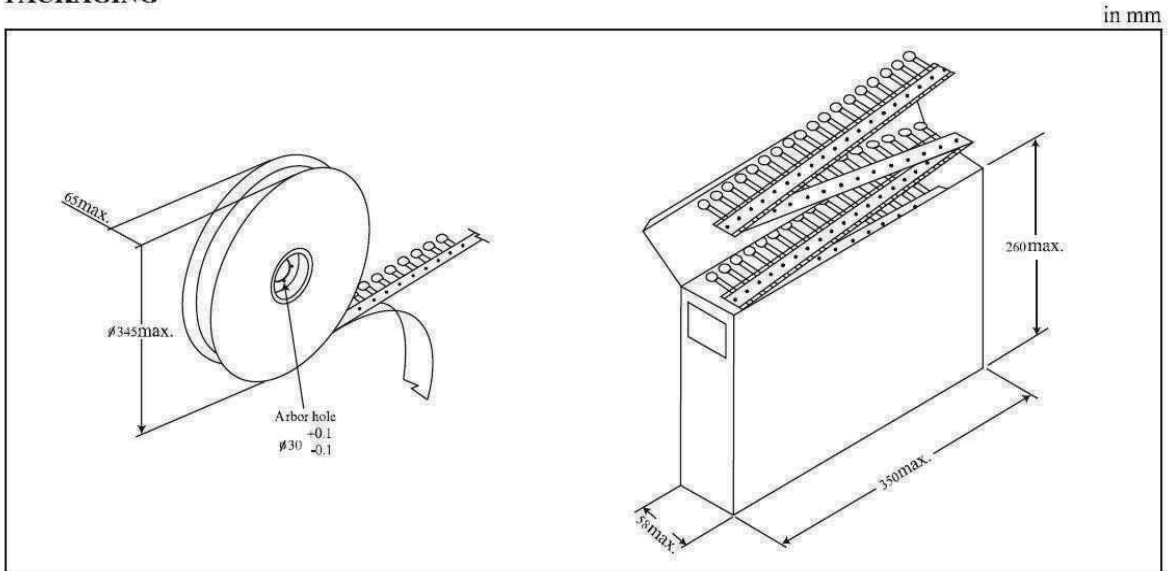
Symbols	Item	5/ 7 mm	10 / 14 mm	20 mm
A	Cut out length	1.1 mm max.	1.1 mm max.	
H (Y type)	Height of Top	See H max. table		
H0(Y type)	Height to seating plane	16.0 ± 0.5 mm (* ± 1.0 mm)	16.0 ± 0.5mm(* ± 1.0 mm)	
H0(P type)	Height of component from hole center	16.0 ~ 21.0 mm	16.0~ 21.0 mm	
△h	Front to 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 down tape 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 ± 1.0 mm	10.0 ± 1.0 mm
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 ± 0.05 mm	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 ± 0.05 mm	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			25mm
	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, 7mm)	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