



ORDERING CODE

JV R 07 N 181 K 6 5 Y AW

Joyin ZnO Varistor
久尹氧化鋅壓敏電阻

R / H = EPOXY Coating &
Operating Temperature 85°C
C = EPOXY Coating, Copper electrode &
Operating Temperature 85°C
T = Silicone Coating &
Operating Temperature 125°C

Element Size (disc dia.)
瓷片直徑別

05 = ϕ 5mm
07 = ϕ 7mm
10 = ϕ 10mm
14 = ϕ 14mm
20 = ϕ 20mm
25 = ϕ 25mm

Series 系列別

N = Standard 標準系列
S = High Surge 高突波電流系列
U = Ultra Surge 超高突波電流系列

Varistor Voltage 電壓值

The first two digits indicate voltage.
前兩位數字代表電壓

The third digit signifies the number of zeroes.
第三位數字代表電壓0的次數

for example 例如：

080 = 8V
180 = 18V
181 = 180V
182 = 1800V

Varistor Voltage Tolerance

壓敏電壓容許差

K = $\pm 10\%$
L = $\pm 15\%$
M = $\pm 20\%$
P = $\pm 25\%$

Lead Diameter

線徑

6 = $0.6 \pm 0.05\text{mm}$
8 = $0.8 \pm 0.05\text{mm}$
1 = $1.0 \pm 0.05\text{mm}$

Lead Length & Packaging
腳長及包裝方式

50 = $5 \pm 1.0\text{mm}$ for Straight lead

5 $\pm 0.5\text{mm}$ for Kink lead

U4 = 24mm min. for Bulk and Kink lead

U5 = 25mm min. for Bulk and Straight lead

AW = H0 16mm for Ammo and Kink lead

AY = H0 20mm for Ammo and Straight lead

RW = H0 16mm for T/R and Kink lead

RY = H0 20mm for T/R and Straight lead

* Special spec per request.

Lead Style 腳型

Y = Vertical Kink Lead (standard)

P = Straight Lead

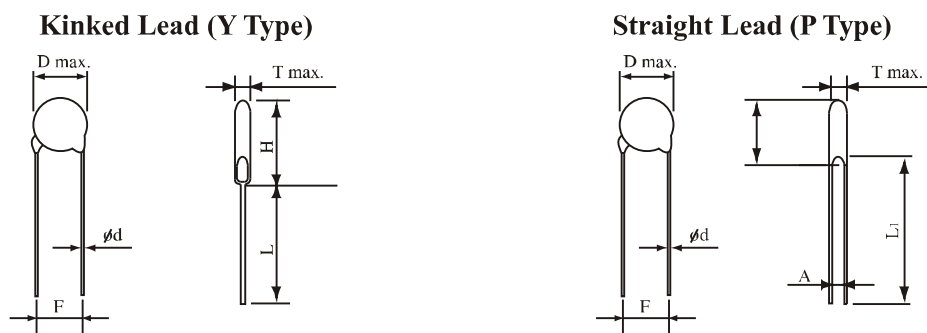
* Special lead styles per request

Lead Spacing 線距

5 = 5.0mm

7 = 7.5mm

1 = 10mm



Dimension Table

unit:mm

Diameter	5mm	7mm	10mm	14mm	20mm
D max.	7.5	9.0	12.5	16.5	23
$d \pm 0.05$	0.6	0.6	0.8	0.8	1.0
$F \pm 1.0$	5.0	5.0	7.5	7.5	10.0
H max.	11.0	13	18/*19	22/*23	28/*29
L_1 min.	25.0	25.0	25.0	25.0	25.0
L min.	24.0	24.0	24.0	24.0	24.0

*Just for 182K

Table of T max., A & H₁ max.

unit:mm

Diameter	5mm			7mm			10mm			14mm			20mm		
Type No.	T max.	A ± 0.8	H ₁ max.	T max.	A ± 0.8	H ₁ max.	T max.	A ± 0.8	H ₁ max.	T max.	A ± 0.8	H ₁ max.	T max.	A ± 0.8	H ₁ 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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
911K	-	-	-	-	-	-	9.4	5.4	16.5	9.6	5.4	20.5	10.1	5.7	27.0
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	10.9	6.7	21	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



RATING AND CHARACTERISTICS

Standard Varistors - 5mm

Ordering Code	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 (ref to p.20)
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (kA)	(W)	(J)	  
JV◇05N180M65□△△	18	±20%	11	14	40	1	100	0.1	0.01	0.6	☆ ★ ★
JV◇05N220L65□△△	22	±15%	14	18	48					0.7	☆ ★ ★
JV◇05N270K65□△△	27	±10%	17	22	60					0.9	☆ ★ ★
JV◇05N330K65□△△	33		20	26	73					1.1	☆ ★ ★
JV◇05N390K65□△△	39		25	31	86					1.2	☆ ★ ★
JV◇05N470K65□△△	47		30	38	104					1.5	☆ ★ ★
JV◇05N560K65□△△	56		35	45	123					1.8	☆ ★ ★
JV◇05N680K65□△△	68		40	56	150					2.1	☆ ★ ★
JV◇05N820K65□△△	82		50	65	145	5	400	0.1	0.1	2.8	☆ ★ ★
JV◇05N101K65□△△	100		60	85	175					3.5	☆ ★ ★
JV◇05N121K65□△△	120		75	100	210					4	☆ ★ ★
JV◇05N151K65□△△	150		95	125	260					5.5	☆ ★ ★
JV◇05N181K65□△△	180		115	150	320					6.5	☆ ★ ★
JV◇05N201K65□△△	200		130	170	355					7.1	☆ ★ ★
JV◇05N221K65□△△	220		140	180	380					7.8	☆ ★ ★
JV◇05N241K65□△△	240		150	200	415					8.4	☆ ★ ★
JV◇05N271K65□△△	270		175	225	475					9.9	☆ ★ ★
JV◇05N301K65□△△	300		195	250	525					10.5	☆ ★ ★
JV◇05N331K65□△△	330		210	275	575					11.5	☆ ★ ★
JV◇05N361K65□△△	360		230	300	620					13	☆ ★ ★
JV◇05N391K65□△△	390		250	320	675					15	☆ ★ ★
JV◇05N431K65□△△	430		275	350	745					16.5	☆ ★ ★
JV◇05N471K65□△△	470		300	385	810					17.5	☆ ★ ★
JV◇05N511K65□△△	510		320	418	880					18.5	☆ ★ ★
JV◇05N561K65□△△	560		350	460	940					19.5	☆ ★ ★
JV◇05N621K65□△△	620		385	505	1050					20.5	☆ ★ ★
JV◇05N681K65□△△	680		420	560	1150					21.5	☆ ★ ★
JV◇05N751K65□△△	750		460	615	1290					22.5	☆ ★ ★

◇: R / H = EPOXY Coating & Operating Temperature 85°C

□: Lead Style (Y = Vertical Kink , P = Straight)

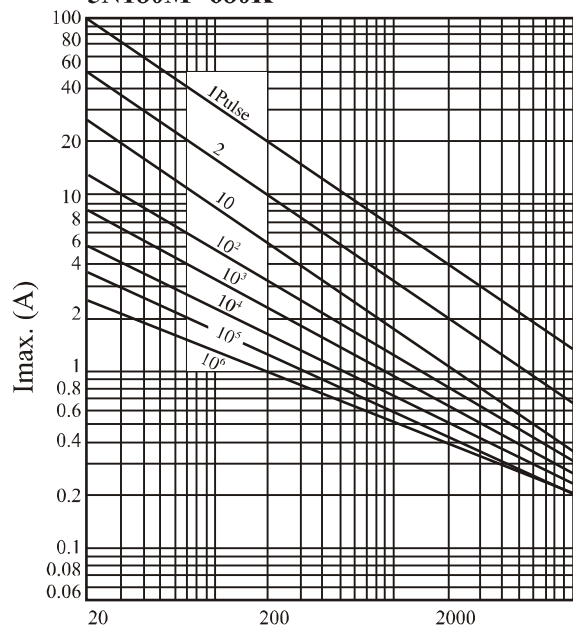
△△: Lead Length & Packing

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

Standard NO.	UL	CUL	VDE	CQC	
	UL 1449 4 TH Edition	CSA 22.2 N0. 8-13	IEC61051-1 IEC61051-2 IEC61051-2-2	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	
File No.	VZCA2.E325508	VZCA8.E325508	1900600-4790-0002/209089	CQC07001019159/9161/9162/9163/9164	
Symbols	☆		★	★	⊙

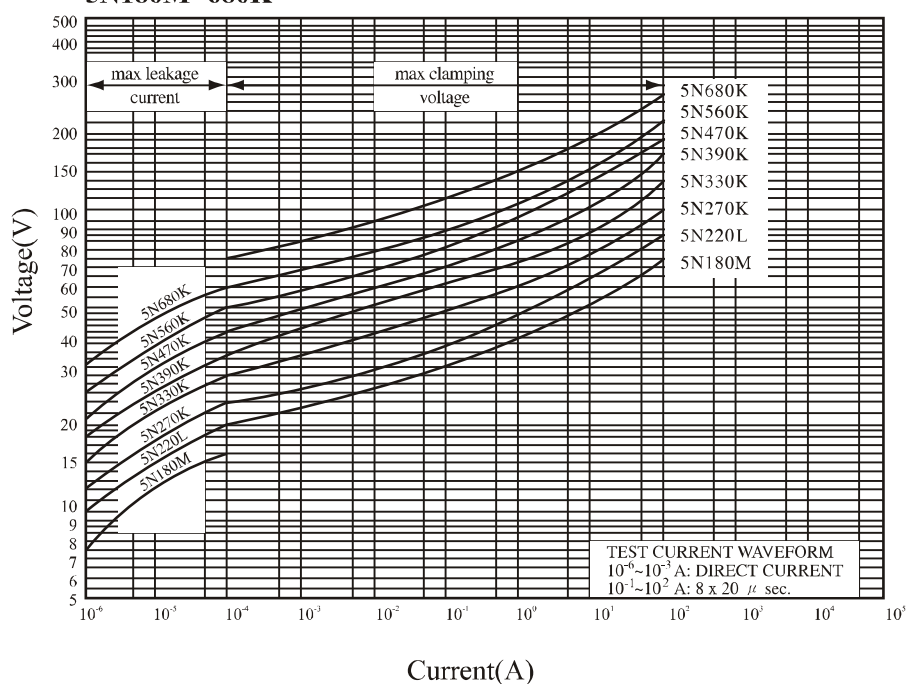
PULSE LIFETIME RATINGS - 5mm

5N180M~680K

Rectangular Wave (μ sec.)

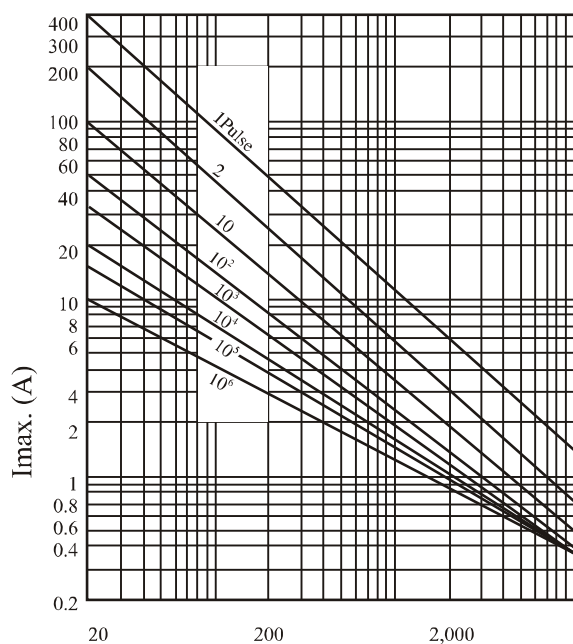
V-I CHARACTERISTIC CURVE - 5mm

5N180M~680K

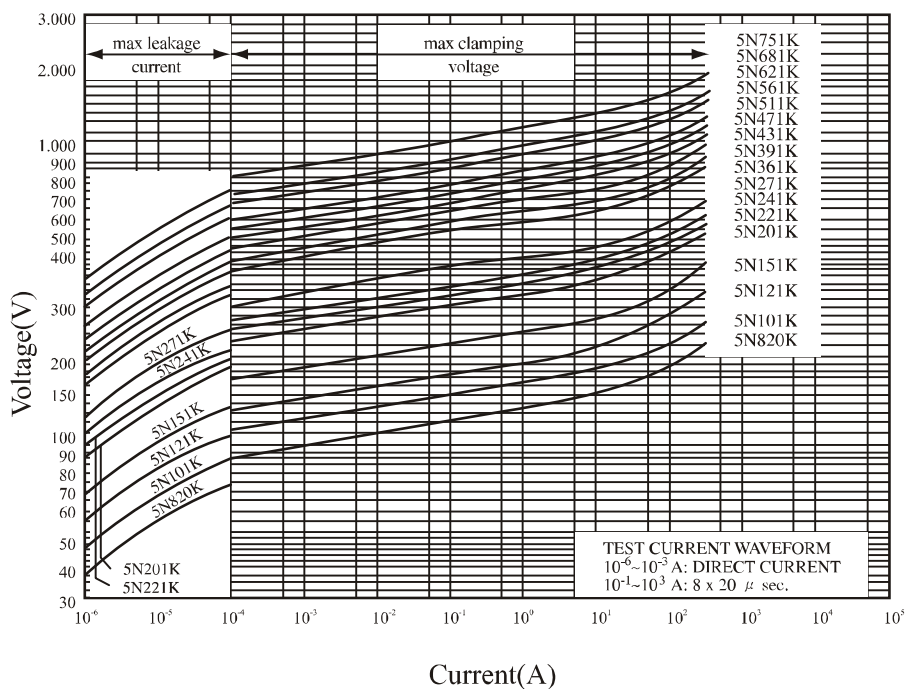


Current (A)

5N820K~751K

Rectangular Wave (μ sec.)

5N820K~751K



Current (A)



RATING AND CHARACTERISTICS

Standard Varistors - 7mm

Ordering Code	Varistor Voltage at 1 mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification (ref to p.20)
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (kA)	(W)	(J)	  
JV◇07N180M65□△△	18	±20%	11	14	36	2.5	250	0.2	0.02	1.2	☆☆☆
JV◇07N220L65□△△	22	±15%	14	18	43					1.4	☆☆☆
JV◇07N270K65□△△	27	±10%	17	22	53					1.7	☆☆☆
JV◇07N330K65□△△	33		20	26	65					2.2	☆☆☆
JV◇07N390K65□△△	39		25	31	77					2.4	☆☆☆
JV◇07N470K65□△△	47		30	38	93					3.0	☆☆☆
JV◇07N560K65□△△	56		35	45	110					3.5	☆☆☆
JV◇07N680K65□△△	68		40	56	135					4.3	☆☆☆
JV◇07N820K65□△△	82		50	65	135	10	1200	0.5	0.25	5.5	☆☆☆
JV◇07N101K65□△△	100		60	85	165					7.0	☆☆☆
JV◇07N121K65□△△	120		75	100	200					8.0	☆☆☆
JV◇07N151K65□△△	150		95	125	250					11.0	☆☆☆
JV◇07N181K65□△△	180		115	150	300					13.0	☆☆☆
JV◇07N201K65□△△	200		130	170	340					14.3	☆☆☆
JV◇07N221K65□△△	220		140	180	360					15.5	☆☆☆
JV◇07N241K65□△△	240		150	200	395					16.8	☆☆☆
JV◇07N271K65□△△	270		175	225	455					19.8	☆☆☆
JV◇07N301K65□△△	300		195	250	505					21.0	☆☆☆
JV◇07N331K65□△△	330		210	275	550					23.0	☆☆☆
JV◇07N361K65□△△	360		230	300	595					26.0	☆☆☆
JV◇07N391K65□△△	390		250	320	650					30.0	☆☆☆
JV◇07N431K65□△△	430		275	350	710					33.0	☆☆☆
JV◇07N471K65□△△	470		300	385	775					35.0	☆☆☆
JV◇07N511K65□△△	510		320	418	842					37.0	☆☆☆
JV◇07N561K65□△△	560		350	460	920					39.0	☆☆☆
JV◇07N621K65□△△	620		385	505	1025					41.0	☆☆☆
JV◇07N681K65□△△	680		420	560	1120					43.0	☆☆☆
JV◇07N751K65□△△	750		460	615	1240					45.0	☆☆☆
JV◇07N781K65□△△	780		485	640	1290					46.0	☆☆☆
JV◇07N821K65□△△	820		510	670	1355					47.0	☆☆☆

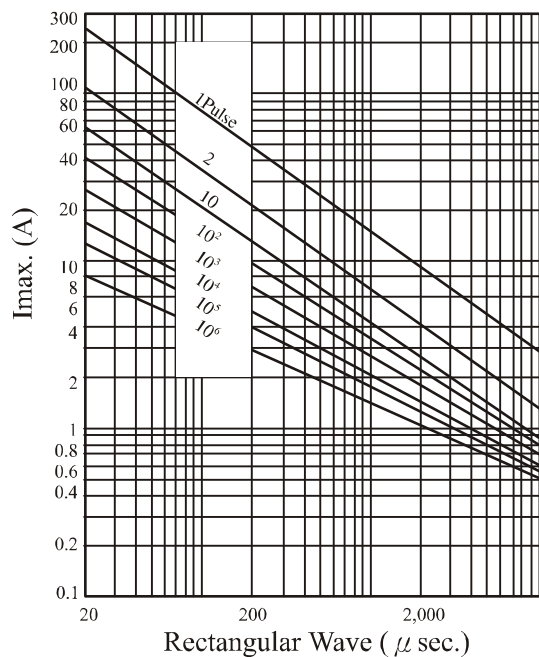
◇: R / H = EPOXY Coating & Operating Temperature 85°C

□: Lead Style (Y = Vertical Kink, P = Straight)

△△: Lead Length & Packing

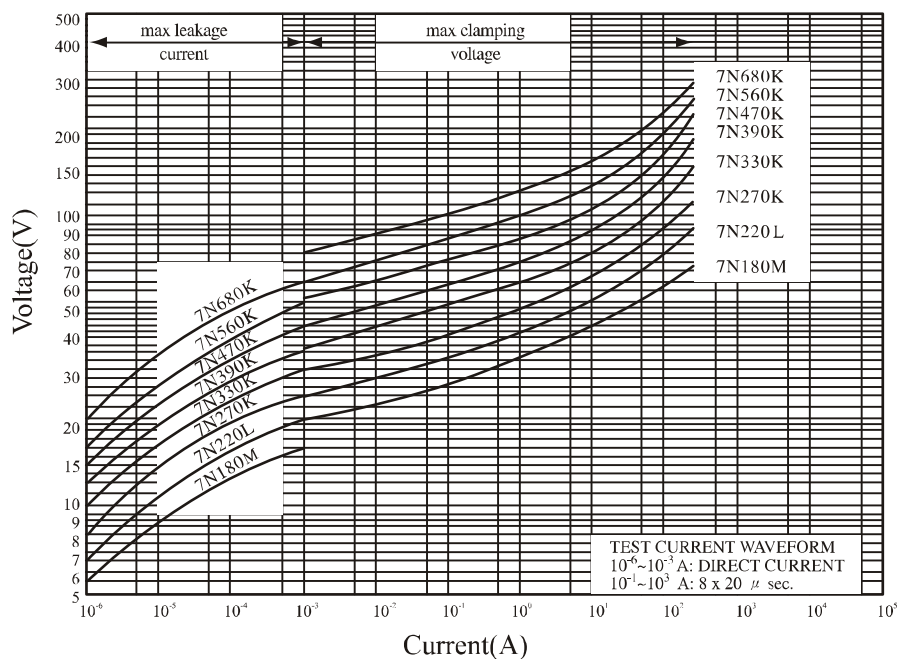
PULSE LIFETIME RATINGS -7mm

7N180M~680K

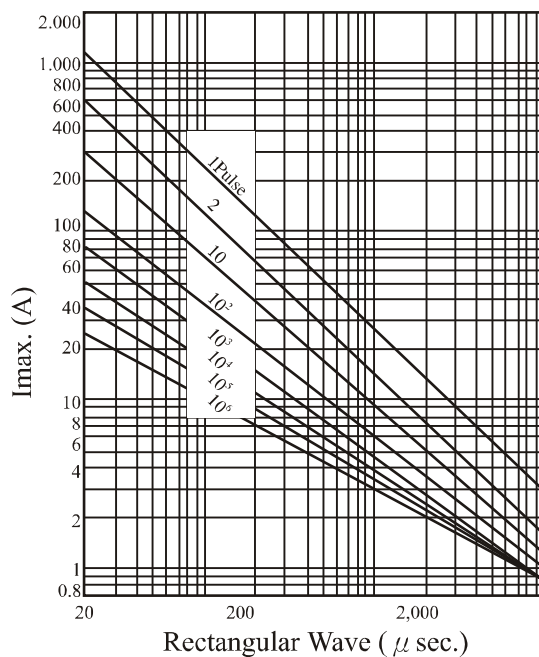


V-I CHARACTERISTIC CURVE -7mm

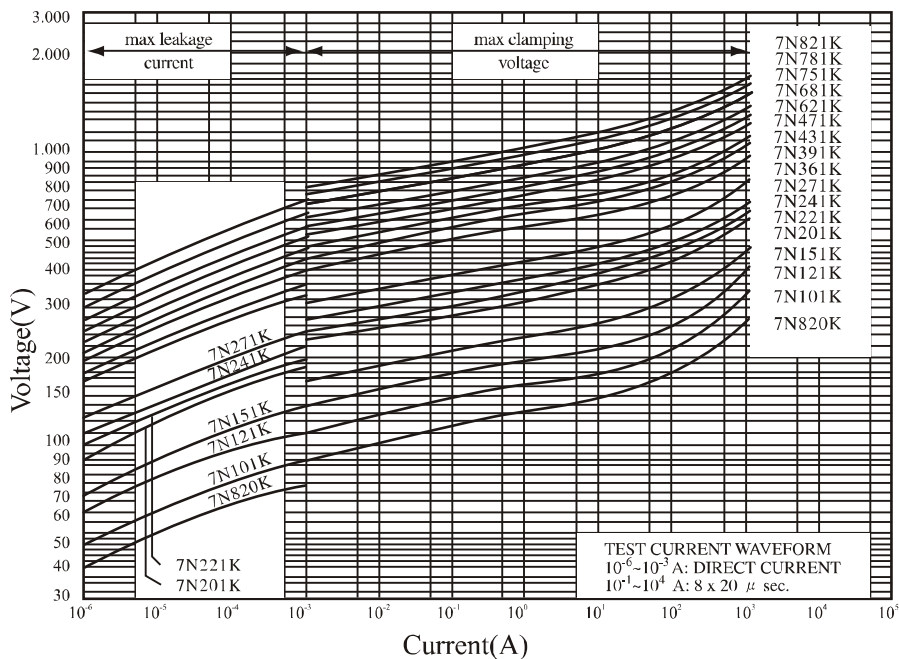
7N180M~680K



7N820K~821K



7N820K~821K





RATING AND CHARACTERISTICS

Standard Varistors - 10mm

Ordering Code	Varistor Voltage at 1 mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification (ref to p.20)
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (kA)	(W)	(J)	  
JV◇10N180M87□△△	18	±20%	11	14	36	5	500	0.3	0.05	2.4	☆☆☆
JV◇10N220L87□△△	22	±15%	14	18	43					2.7	☆☆☆
JV◇10N270K87□△△	27	±10%	17	22	53					3.5	☆☆☆
JV◇10N330K87□△△	33		20	26	65					4.4	☆☆☆
JV◇10N390K87□△△	39		25	31	77					4.7	☆☆☆
JV◇10N470K87□△△	47		30	38	93					6.0	☆☆☆
JV◇10N560K87□△△	56		35	45	110					7.0	☆☆☆
JV◇10N680K87□△△	68		40	56	135					8.5	☆☆☆
JV◇10N820K87□△△	82		50	65	135	25	2500	1.5	0.4	11.0	☆☆☆
JV◇10N101K87□△△	100		60	85	165					14.0	☆☆☆
JV◇10N121K87□△△	120		75	100	200					16.0	☆☆☆
JV◇10N151K87□△△	150		95	125	250					22.0	☆☆☆
JV◇10N181K87□△△	180		115	150	300					26.0	☆☆☆
JV◇10N201K87□△△	200		130	170	340					28.5	☆☆☆
JV◇10N221K87□△△	220		140	180	360					31.0	☆☆☆
JV◇10N241K87□△△	240		150	200	395					33.5	☆☆☆
JV◇10N271K87□△△	270		175	225	455					39.5	☆☆☆
JV◇10N301K87□△△	300		195	250	505					42.0	☆☆☆
JV◇10N331K87□△△	330		210	275	550					46.0	☆☆☆
JV◇10N361K87□△△	360		230	300	595					52.0	☆☆☆
JV◇10N391K87□△△	390		250	320	650					60.0	☆☆☆
JV◇10N431K87□△△	430		275	350	710					66.0	☆☆☆
JV◇10N471K87□△△	470		300	385	775					70.0	☆☆☆
JV◇10N511K87□△△	510		320	418	842					74.0	☆☆☆
JV◇10N561K87□△△	560		350	460	920					78.0	☆☆☆
JV◇10N621K87□△△	620		385	505	1025					82.0	☆☆☆
JV◇10N681K87□△△	680		420	560	1120					86.0	☆☆☆
JV◇10N751K87□△△	750		460	615	1240					90.0	☆☆☆
JV◇10N781K87□△△	780		485	640	1290					92.0	☆☆☆
JV◇10N821K87□△△	820		510	670	1355					94.0	☆☆☆
JV◇10N911K87□△△	910		550	745	1500					102.0	☆☆☆
JV◇10N102K87□△△	1000		625	825	1650					112.0	☆☆☆
JV◇10N112K87□△△	1100		680	895	1815					124.0	☆☆☆
JV◇10N122K87□△△	1200		720	975	1980					134.0	☆☆☆
JV◇10N142K87□△△	1400		825	1135	2310					148.0	☆☆☆
JV◇10N162K87□△△	1600		920	1300	2640					162.0	☆☆☆
JV◇10N182K87□△△	1800		1000	1465	2970					174.0	☆☆☆

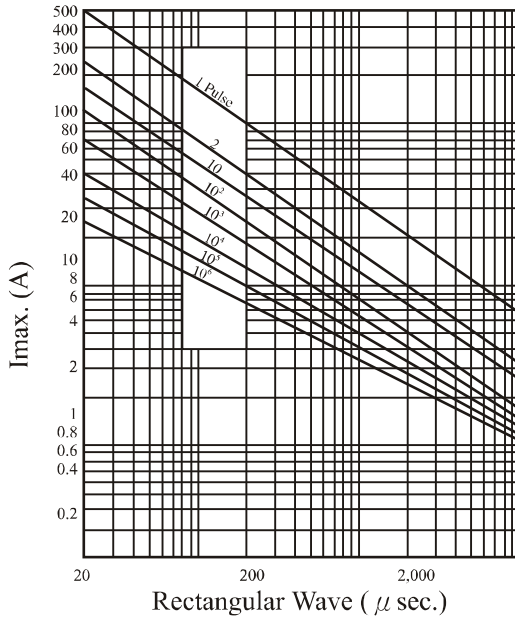
◇: R / H = EPOXY Coating & Operating Temperature 85°C

□: Lead Style (Y = Vertical Kink, P = Straight)

△△: Lead Length & Packing

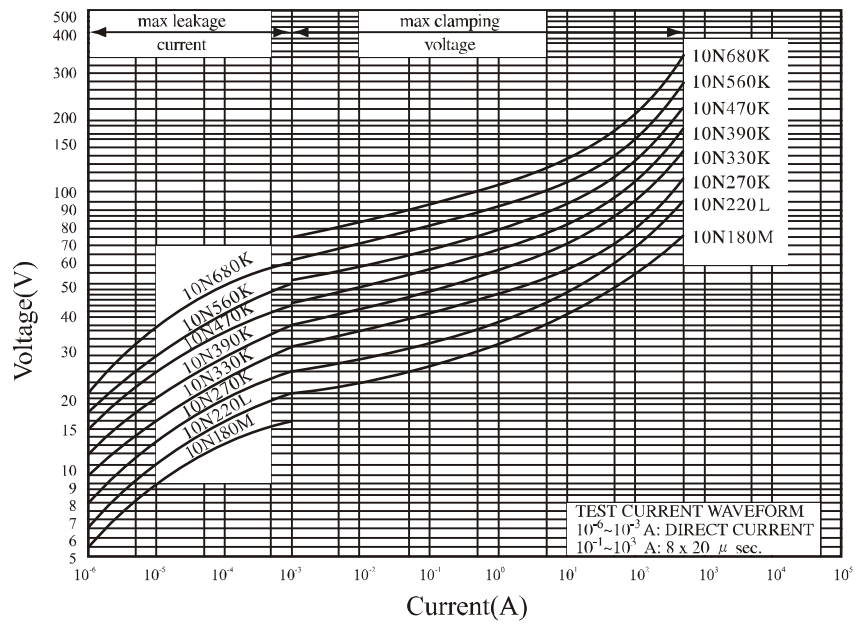
PULSE LIFETIME RATINGS - 10mm

10N180M~680K

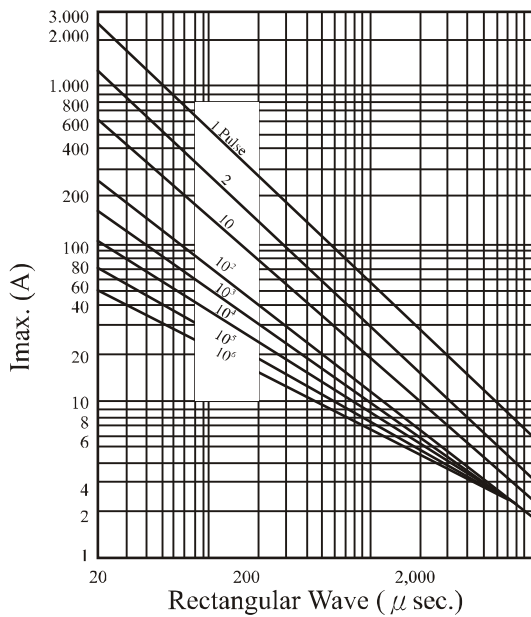


V-I CHARACTERISTIC CURVE - 10mm

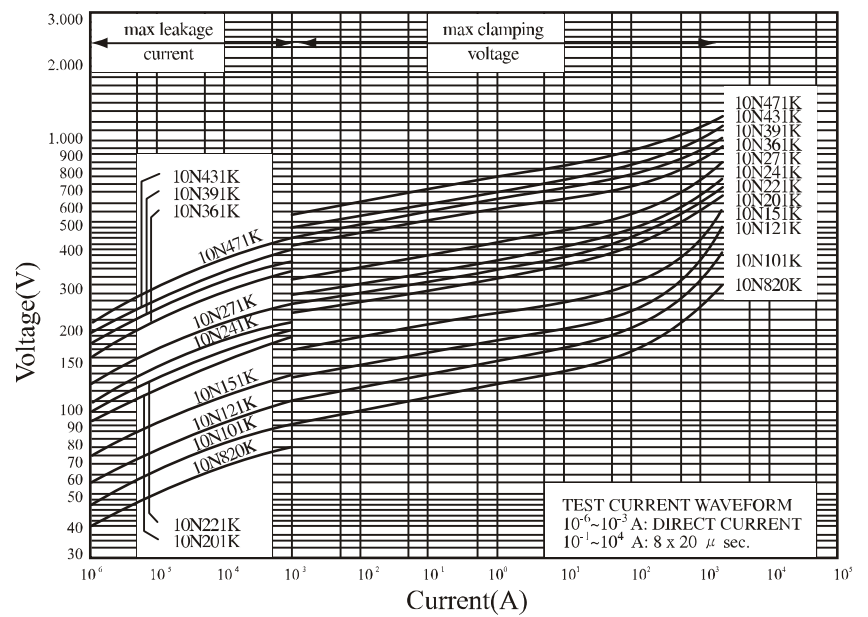
10N180M~680K



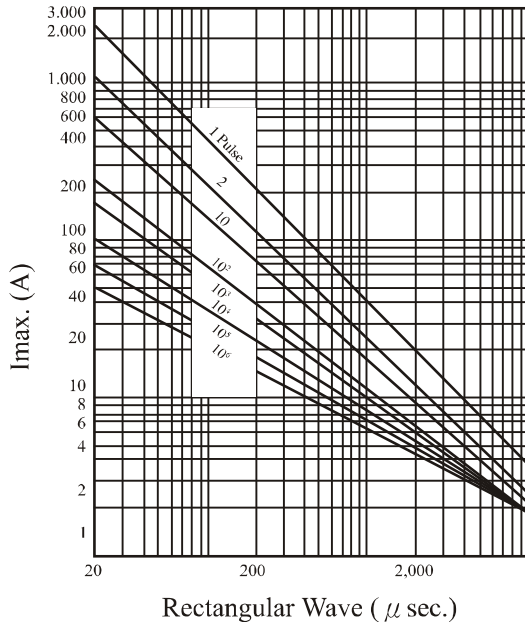
10N820K~471K



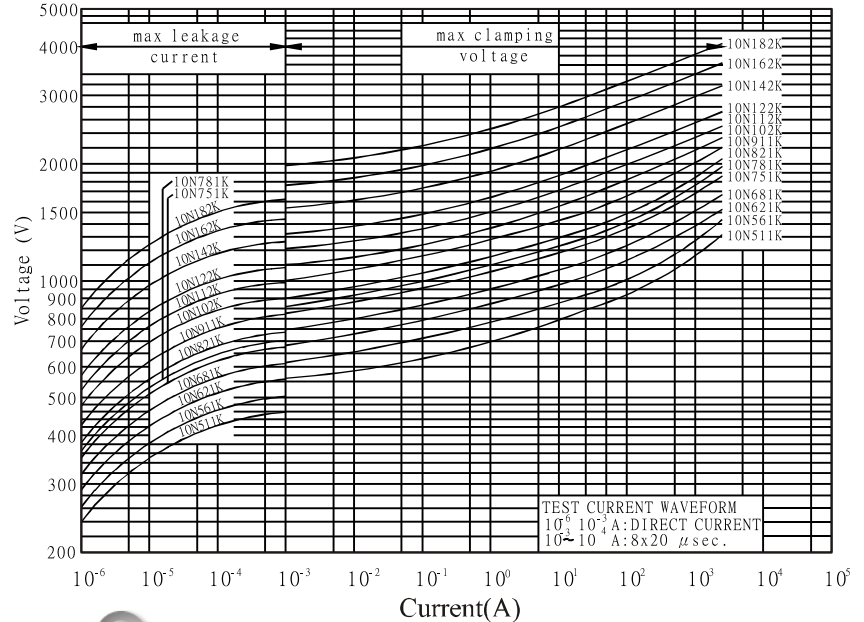
10N820K~471K



10N511K~182K



10N511K~182K





RATING AND CHARACTERISTICS

Standard Varistors - 14mm

Ordering Code	Varistor Voltage at 1 mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification (ref to p.20)
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (kA)	(W)	(J)	  
JV◇14N180M87□△△	18	±20%	11	14	36	10	1000	1	0.1	4.7	☆☆☆
JV◇14N220L87□△△	22	±15%	14	18	43					5.4	☆☆☆
JV◇14N270K87□△△	27	±10%	17	22	53					6.9	☆☆☆
JV◇14N330K87□△△	33		20	26	65					8.8	☆☆☆
JV◇14N390K87□△△	39		25	31	77					9.4	☆☆☆
JV◇14N470K87□△△	47		30	38	93					12.0	☆☆☆
JV◇14N560K87□△△	56		35	45	110					14.0	☆☆☆
JV◇14N680K87□△△	68		40	56	135					17.0	☆☆☆
JV◇14N820K87□△△	82		50	65	135	50	4500	3	0.6	22.0	☆☆☆
JV◇14N101K87□△△	100		60	85	165					28.0	☆☆☆
JV◇14N121K87□△△	120		75	100	200					32.0	☆☆☆
JV◇14N151K87□△△	150		95	125	250					44.0	☆☆☆
JV◇14N181K87□△△	180		115	150	300					52.0	☆☆☆
JV◇14N201K87□△△	200		130	170	340					57.0	☆☆☆
JV◇14N221K87□△△	220		140	180	360					62.0	☆☆☆
JV◇14N241K87□△△	240		150	200	395					67.0	☆☆☆
JV◇14N271K87□△△	270		175	225	455					79.0	☆☆☆
JV◇14N301K87□△△	300		195	250	505					84.0	☆☆☆
JV◇14N331K87□△△	330		210	275	550					92.0	☆☆☆
JV◇14N361K87□△△	360		230	300	595					104.0	☆☆☆
JV◇14N391K87□△△	390		250	320	650					120.0	☆☆☆
JV◇14N431K87□△△	430		275	350	710					132.0	☆☆☆
JV◇14N471K87□△△	470		300	385	775					140.0	☆☆☆
JV◇14N511K87□△△	510		320	418	842					148.0	☆☆☆
JV◇14N561K87□△△	560		350	460	920					156.0	☆☆☆
JV◇14N621K87□△△	620		385	505	1025					164.0	☆☆☆
JV◇14N681K87□△△	680		420	560	1120					172.0	☆☆☆
JV◇14N751K87□△△	750		460	615	1240					180.0	☆☆☆
JV◇14N781K87□△△	780		485	640	1290					184.0	☆☆☆
JV◇14N821K87□△△	820		510	670	1355					188.0	☆☆☆
JV◇14N911K87□△△	910		550	745	1500					204.0	☆☆☆
JV◇14N102K87□△△	1000		625	825	1650					224.0	☆☆☆
JV◇14N112K87□△△	1100		680	895	1815					248.0	☆☆☆
JV◇14N122K87□△△	1200		720	975	1980	50	4500	2	0.6	268.0	☆☆☆
JV◇14N142K87□△△	1400		825	1135	2310					300.0	☆☆☆
JV◇14N162K87□△△	1600		920	1300	2640					328.0	☆☆☆
JV◇14N182K87□△△	1800		1000	1465	2970					348.0	☆☆☆

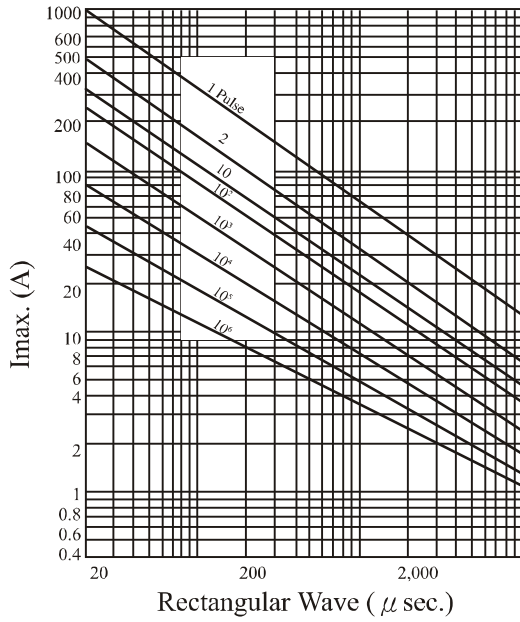
◇: R / H = EPOXY Coating & Operating Temperature 85°C

□: Lead Style (Y = Vertical Kink, P = Straight)

△△: Lead Length & Packing

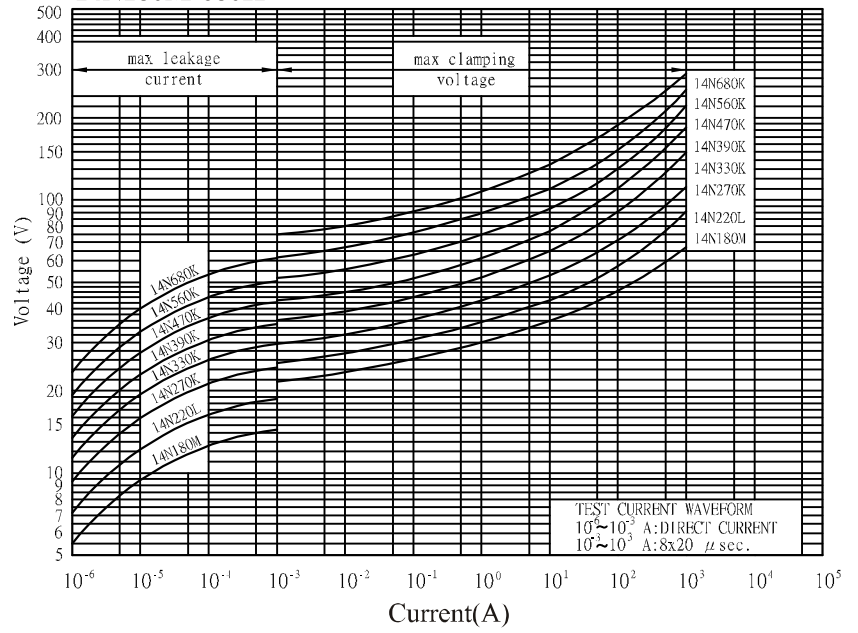
PULSE LIFETIME RATINGS - 14mm

14N180M~680K

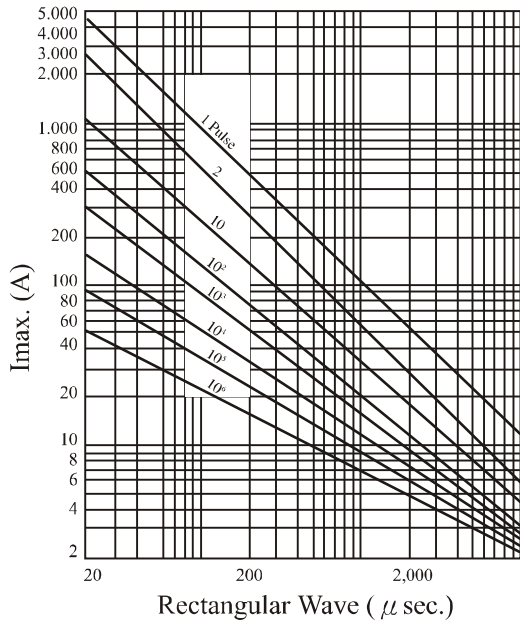


V-I CHARACTERISTIC CURVE - 14mm

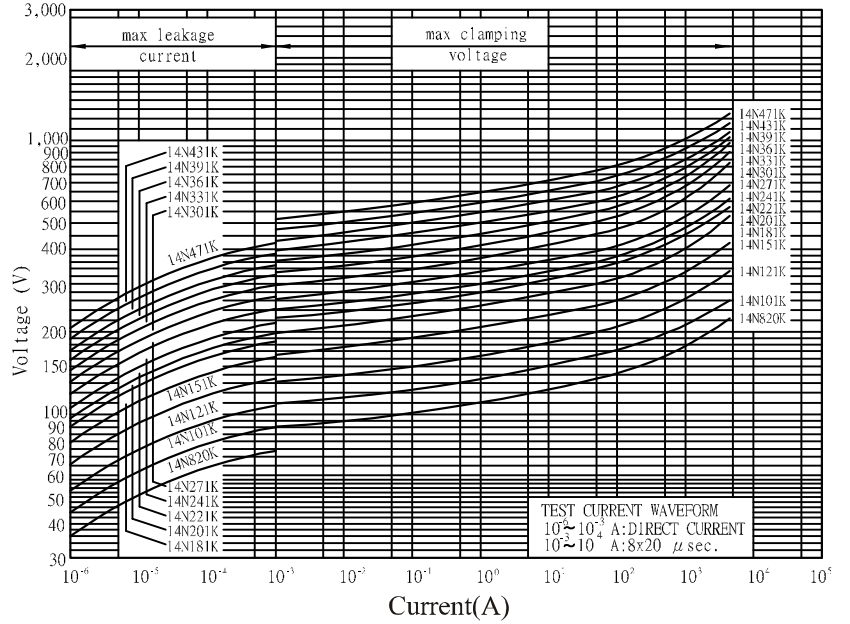
14N180M-680K



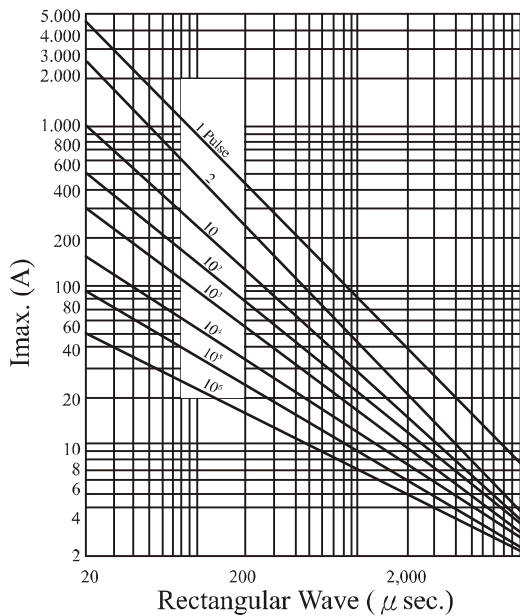
14N820K~471K



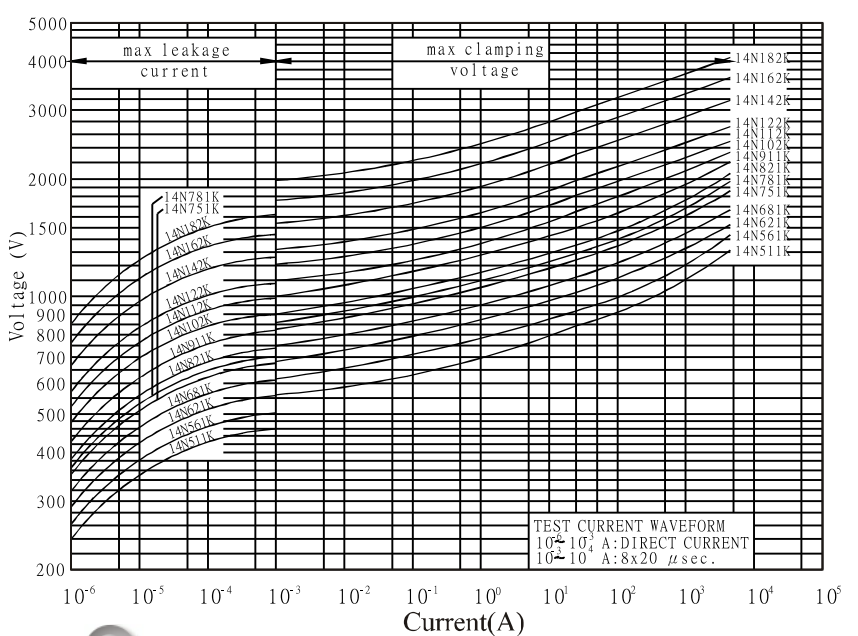
14N820K-471K



14N511K~182K



14N511K~182K





RATING AND CHARACTERISTICS

Standard Varistors - 20mm

Ordering Code	Varistor Voltage at 1 mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification (ref to p.20)
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (kA)	(W)	(J)	  
JV◇20N220M11□△△	22	±20%	14	18	43	20	2000	2	0.2	8.0	☆ ☆ ☆
JV◇20N270M11□△△	27		17	22	53					10.0	☆ ☆ ☆
JV◇20N330M11□△△	33		20	26	65					12.0	☆ ☆ ☆
JV◇20N390L11□△△	39	±15%	25	31	77					14.0	☆ ☆ ☆
JV◇20N470L11□△△	47		30	38	93					17.0	☆ ☆ ☆
JV◇20N560L11□△△	56		35	45	110					20.0	☆ ☆ ☆
JV◇20N680L11□△△	68		40	56	135					24.0	☆ ☆ ☆
JV◇20N820L11□△△	82	±10%	50	65	135	100	6500	4	1.0	44.0	☆ ☆ ☆
JV◇20N101K11□△△	100		60	85	165					56.0	☆ ☆ ☆
JV◇20N121K11□△△	120		75	100	200					64.0	☆ ☆ ☆
JV◇20N151K11□△△	150		95	125	250					88.0	☆ ☆ ☆
JV◇20N181K11□△△	180		115	150	300					104.0	☆ ☆ ☆
JV◇20N201K11□△△	200		130	170	340					114.0	☆ ☆ ☆
JV◇20N221K11□△△	220		140	180	360					124.0	☆ ☆ ☆
JV◇20N241K11□△△	240		150	200	395					134.0	☆ ☆ ☆
JV◇20N271K11□△△	270		175	225	455					158.0	☆ ☆ ☆
JV◇20N301K11□△△	300		195	250	505					168.0	☆ ☆ ☆
JV◇20N331K11□△△	330		210	275	550					184.0	☆ ☆ ☆
JV◇20N361K11□△△	360		230	300	595					208.0	☆ ☆ ☆
JV◇20N391K11□△△	390		250	320	650					240.0	☆ ☆ ☆
JV◇20N431K11□△△	430		275	350	710					264.0	☆ ☆ ☆
JV◇20N471K11□△△	470		300	385	775					280.0	☆ ☆ ☆
JV◇20N511K11□△△	510		320	418	842					296.0	☆ ☆ ☆
JV◇20N561K11□△△	560		350	460	920					312.0	☆ ☆ ☆
JV◇20N621K11□△△	620		385	505	1025					328.0	☆ ☆ ☆
JV◇20N681K11□△△	680		420	560	1120					344.0	☆ ☆ ☆
JV◇20N751K11□△△	750		460	615	1240					360.0	☆ ☆ ☆
JV◇20N781K11□△△	780		485	640	1290					368.0	☆ ☆ ☆
JV◇20N821K11□△△	820		510	670	1355					376.0	☆ ☆ ☆
JV◇20N911K11□△△	910		550	745	1500					408.0	☆ ☆ ☆
JV◇20N102K11□△△	1000		625	825	1650					448.0	☆ ☆ ☆
JV◇20N112K11□△△	1100		680	895	1815					496.0	☆ ☆ ☆
JV◇20N122K11□△△	1200		720	975	1980	100	6500	3	1.0	528.0	☆ ☆ ☆
JV◇20N142K11□△△	1400		825	1135	2310					596.0	☆ ☆ ☆
JV◇20N162K11□△△	1600		920	1300	2640					656.0	☆ ☆ ☆
JV◇20N182K11□△△	1800		1000	1465	2970					695.0	☆ ☆ ☆

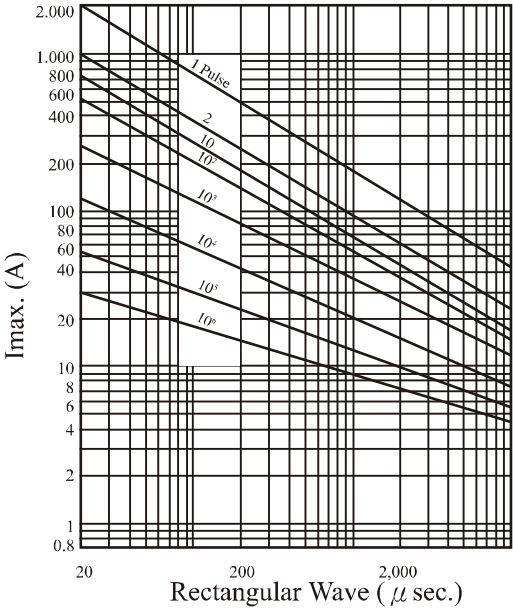
◇: R / H = EPOXY Coating & Operating Temperature 85°C

□: Lead Style (Y = Vertical Kink , P = Straight)

△△: Lead Length & Packing

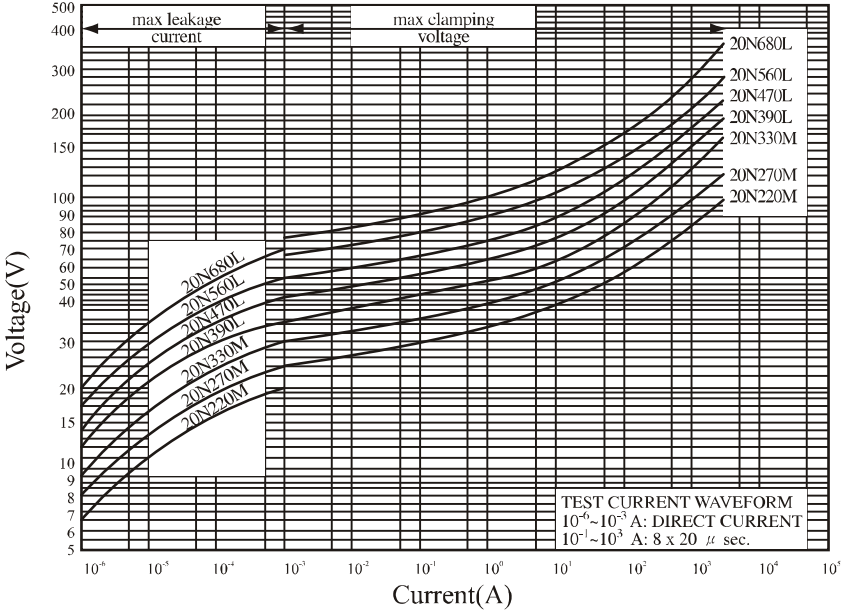
PULSE LIFETIME RATINGS - 20mm

20N220M ~ 680L

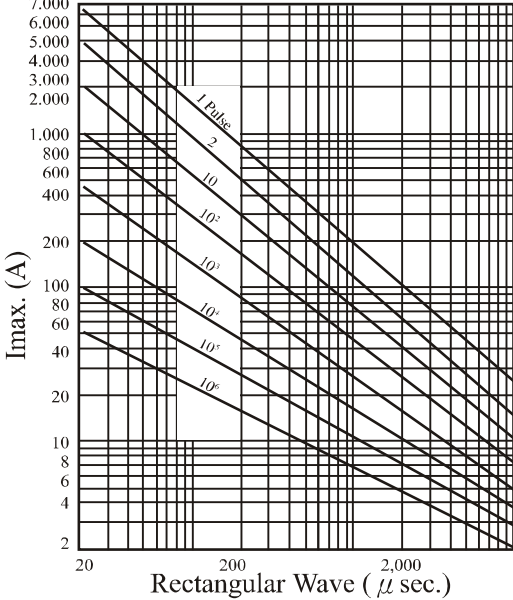


V-I CHARACTERISTIC CURVE - 20mm

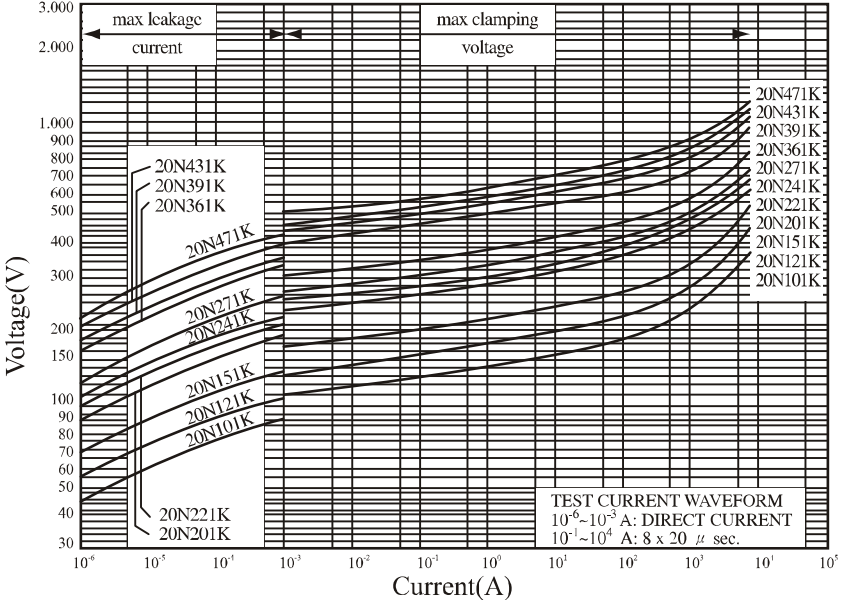
20N220M ~ 680L



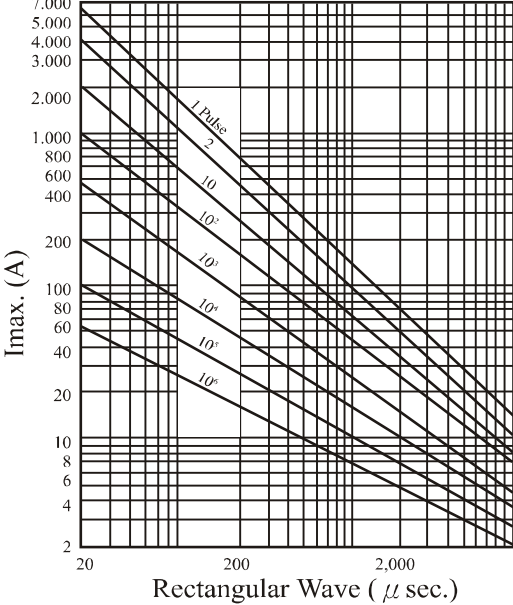
20N101K ~ 471K



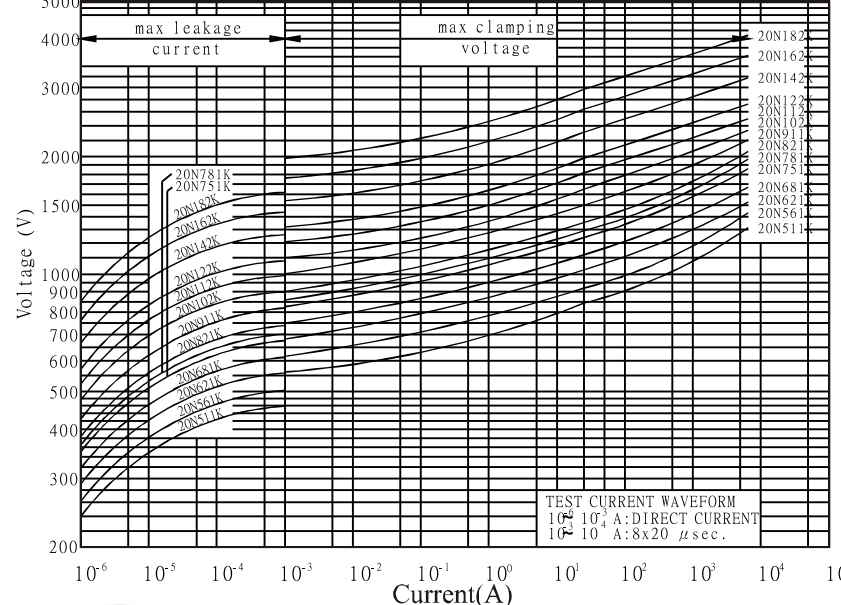
20N101K ~ 471K



20N511K ~ 182K



20N511K ~ 182K





RATING AND CHARACTERISTICS

Standard Varistors - 25mm

Ordering Code	Varistor Voltage at 1 mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20us)	Nominal Discharge Current (8/20us)	Rated Wattage	Energy (10/1000us)	Certification (ref to p.20)	
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (kA)	(W)	(J)		
JV◇25N201K11□△△	200	±10%	130	170	355	150	18000	5	1.2	190	☆	★
JV◇25N221K11□△△	220		140	180	380				1.2	205	☆	★
JV◇25N241K11□△△	240		150	200	415				1.2	225	☆	★
JV◇25N271K11□△△	270		175	225	445				1.2	255	☆	★
JV◇25N301K11□△△	300		195	250	495				1.2	280	☆	★
JV◇25N331K11□△△	330		210	275	545				1.2	305	☆	★
JV◇25N361K11□△△	360		230	300	595				1.2	330	☆	★
JV◇25N391K11□△△	390		250	320	645				1.2	360	☆	★
JV◇25N431K11□△△	430		275	350	710				1.2	380	☆	★
JV◇25N471K11□△△	470		300	385	775				1.2	400	☆	★
JV◇25N511K11□△△	510		320	418	840				1.2	420	☆	★
JV◇25N561K11□△△	560		350	460	925				1.2	440	☆	★
JV◇25N621K11□△△	620		385	505	1025				1.2	460	☆	★
JV◇25N681K11□△△	680		420	560	1125				1.2	480	☆	★
JV◇25N751K11□△△	750		460	615	1240				1.2	520	☆	★
JV◇25N781K11□△△	780		485	640	1290				1.2	540	☆	★
JV◇25N821K11□△△	820		510	670	1360				1.2	570	☆	★
JV◇25N911K11□△△	910		550	745	1500				1.2	620	☆	★

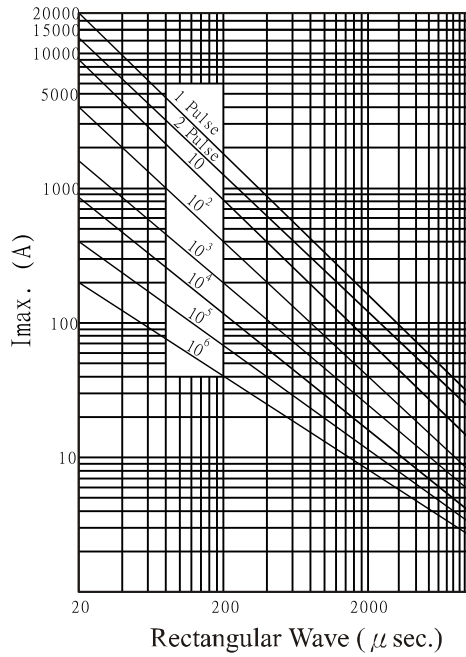
◇: R / H = EPOXY Coating & Operating Temperature 85°C

□: Lead Style (Y = Vertical Kink , P = Straight)

△△: Lead Length & Packing

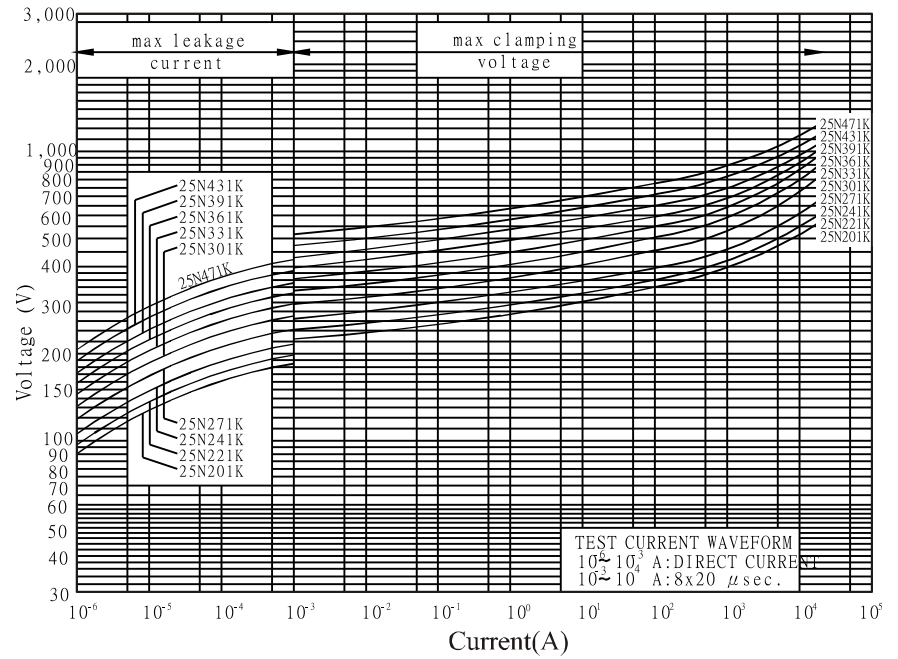
PULSE LIFETIME RATINGS-25mm

25N201K~471K

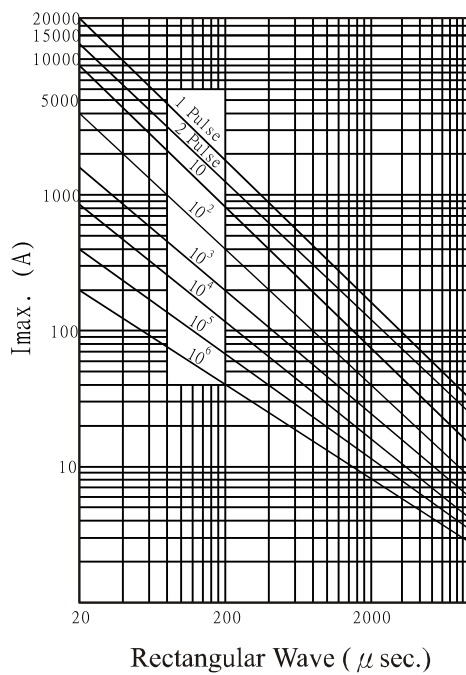


V-I CHARACTERISTIC CURVE -25mm

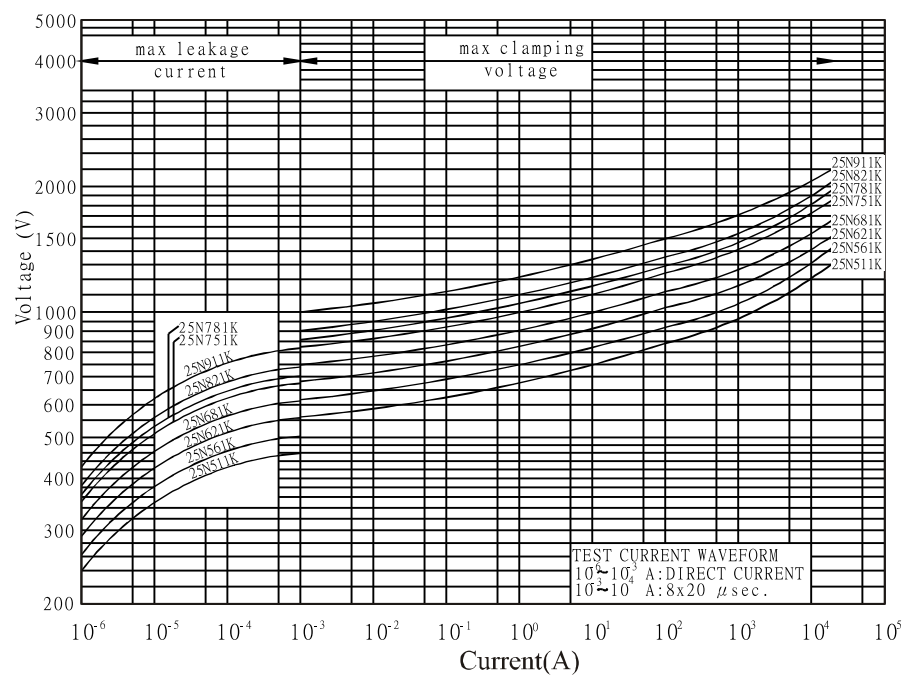
25N201K-471K



25N511K~911K

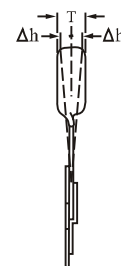
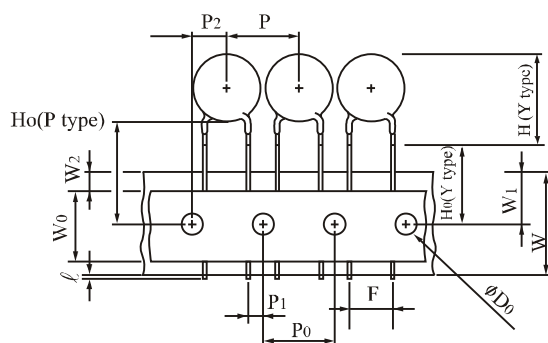


25N511K~911K

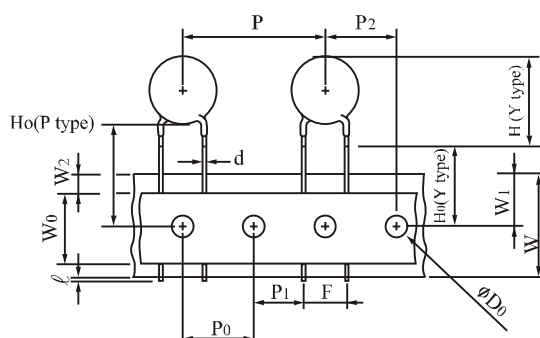


Tape and Reel Dimensions

1/2" pitch



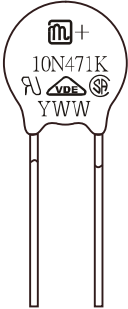
1.0" pitch



Symbols	Item	5 / 7mm	10 / 14 mm	20 mm
ℓ	Cut out length	1.1 mm max.	1.1 mm max.	
H (Y type)	Height of Top	See H max. table		
H ₀ (Y type)	Height to seating plane	16.0±0.5mm(*±1.0mm)	16.0±0.5mm(*±1.0mm)	
H ₀ (P type)	Height of component from hole center	16.0~21.0 mm	16.0~21.0 mm	
Δh	Front to back deviation	0 ± 2.0 mm	0 ± 2.0 mm	
W	Carrier tape width	18.0 $\begin{smallmatrix} +1.0 \\ -0.5 \end{smallmatrix}$ mm	18.0 $\begin{smallmatrix} +1.0 \\ -0.5 \end{smallmatrix}$ mm	
W ₀	Hold down tape width	10.0 mm	12.0 mm	
W ₁	Sprocket hole position	9.0 $\begin{smallmatrix} +0.75 \\ -0.5 \end{smallmatrix}$ mm	9.0 $\begin{smallmatrix} +0.75 \\ -0.5 \end{smallmatrix}$ mm	
W ₂	Adhesive tape position	3.0 mm max.	3.0 mm max.	
F	Component lead spacing	5.0 $\begin{smallmatrix} +0.8 \\ -0.2 \end{smallmatrix}$ mm	7.5 $\begin{smallmatrix} +0.8 \\ -0.2 \end{smallmatrix}$ mm	10.0 $\begin{smallmatrix} +0.8 \\ -0.2 \end{smallmatrix}$ mm
P	Pitch of component	12.7 ± 1.0 mm	25.4 ± 1.0 mm	
P ₀	Sprocket hole pitch	12.7 ± 0.3 mm	12.7 ± 0.3 mm	
P ₁	Lead length from hole center to lead	3.85 ± 0.7 mm	8.95 ± 0.7 mm	7.7 ± 0.7 mm
P ₂	Length from hole center to disk center	6.35 ± 1.3 mm	12.7 ± 1.3 mm	
D ₀	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 T max. table	See T max. table	
t ₁	Total thickness tape	0.7 ± 0.05 mm	0.7 ± 0.05mm	
t ₂	Total thickness	1.6 mm max.	1.8 mm max.	

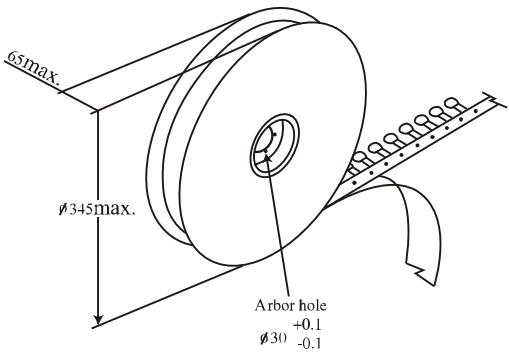
* for manual line

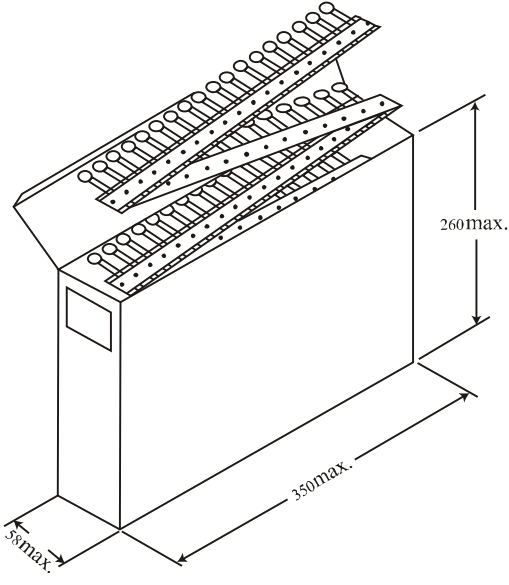
MARKING



☐+ : Taiwan Joyin
☐* : Dongguan Joyin
YWW : Date code
Y : Year
WW : Week

PACKAGING





in mm

Quantity per Packing Unit

Part No.	Series	in Pcs														
		5mm			7mm			10mm			14mm			20mm		
		Bulk (box)	Reel	Ammo	Bulk (box)	Reel	Ammo	Bulk (box)	Reel	Ammo	Bulk (box)	Reel	Ammo	Bulk (box)	Reel	Ammo
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
431K~471K		5000	1500	1000	5000	1000	1000	2000	750	500	1500	750	500	750	500	500
511K~821K		4000	1000	1000	4000	1000	1000	1500	500	500	750	500	500	450	500	500
911K-122K		-	-	-	-	-	-	1500	500	350	750	500	350	450	-	-
142K-182K		-	-	-	-	-	-	750	-	-	450	-	-	300	-	-

Packaging	Bulk (box)	Reel	Reel (14mm, 20mm)	Ammo (5mm, 7mm)	Ammo (10mm,14mm)	Ammo (20mm)
Box size (mm)	290x155x110	350x350x105	346x346x72	335x245x43	347x246x50	348x255x60
Carton size (mm)	328x310x250	370x370x590	370x370x468	515x354x258	515x364x246	535x365x275
One carton with	4 Boxes	5 Boxes (10 reels)	6 Boxes(6 reels)	10 Boxes	8 Boxes	8 Boxes