

The normal type N series of Metal Oxide Varistor (MOV) are radial lead varistors (also known as Voltage Dependent Resistors or VDRs) that are designed to be used continuously across AC line primary or DC circuit for transient voltage and surge suppression.

Operating Temperature -40°C~+125°C

■ **RECOGNITION** : made for RFE by UL shop Joyin



Agency	File Number	Monogram
UL/cUL	E325508	
VDE	Certificate No. 005937	
CQC	CQC07001019159 /9161/9162/9163/9164	

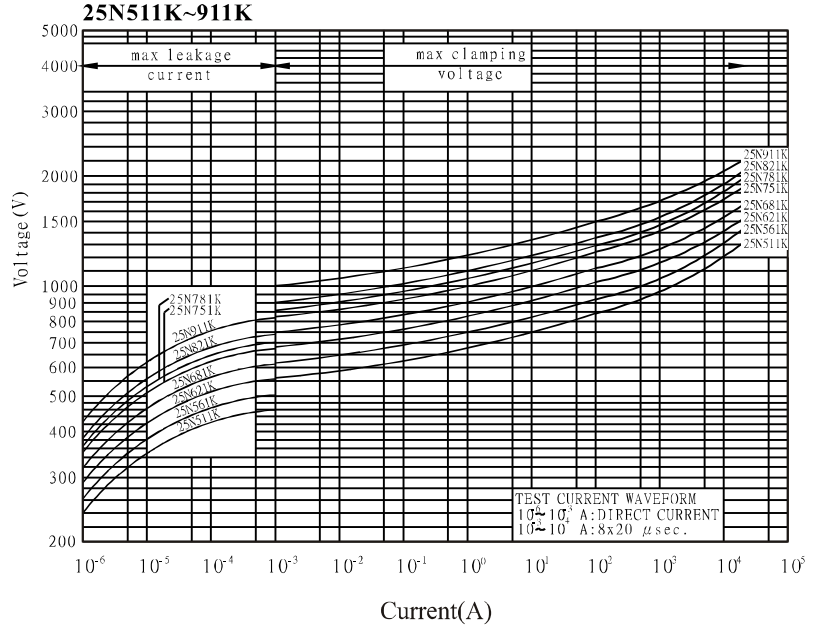
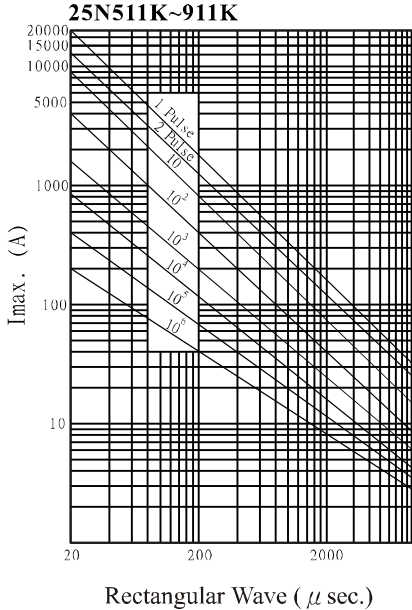
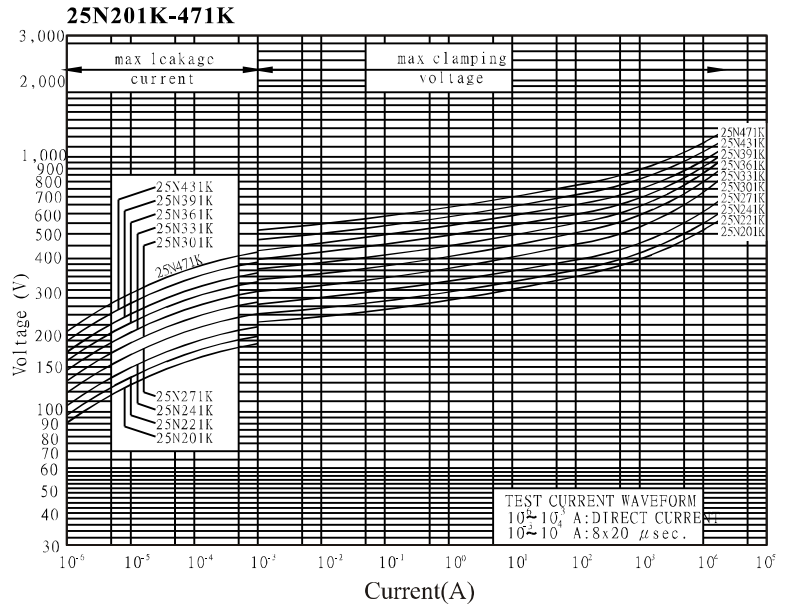
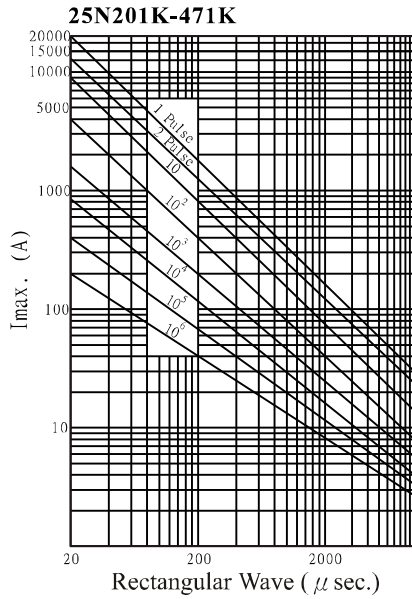
■ **CHARACTERISTICS & RATINGS**

Part Number	Varistor Voltage at 0.1mA		Maximum Allowable Voltage		Maximum Clamping Voltage		Withstanding Surge Current (8/20µs)	Nominal Discharge Current (8/20µs)	Rated Wattage	Energy (10/1000µs)
	DC (V)	Tolerance	AC rms (V)	DC (V)	V@ ic (V)	ic (A)	1 Time (A)	In (KA)	(W)	(J)
JVT25N201K11***	200	10%	130	170	355	150	18000	5	1.2	190
JVT25N221K11***	220		140	180	380					205
JVT25N241K11***	240		150	200	415					225
JVT25N271K11***	270		175	225	445					255
JVT25N301K11***	300		195	250	495					280
JVT25N331K11***	330		210	275	545					305
JVT25N361K11***	360		230	300	595					330
JVT25N391K11***	390		250	320	645					360
JVT25N431K11***	430		275	350	710					380
JVT25N471K11***	470		300	385	775					400
JVT25N511K11***	510		320	418	840					420
JVT25N561K11***	560		350	460	925					440
JVT25N621K11***	620		385	505	1025					460
JVT25N681K11***	680		420	560	1125					480
JVT25N751K11***	750		460	615	1240					520
JVT25N781K11***	780		485	640	1290					540
JVT25N821K11***	820		510	670	1360					570
JVT25N911K11***	910	550	745	1500	620					

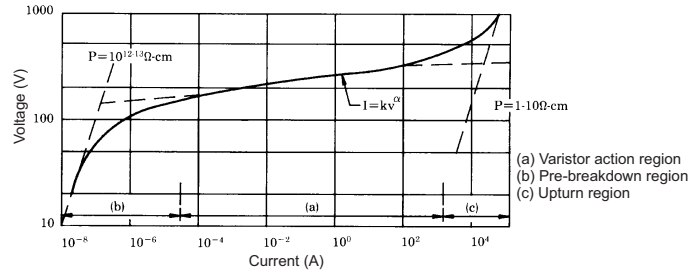
\*\*\* Replace with Lead & Packaging code

■ 25mm PULSE LIFETIME RATINGS

■ 25mm V-I CHARACTERISTIC CURVE



### CURRENT - VOLTAGE CHARACTERISTICS



Operating & Storage temperature Range : -40°C to +85°C  
 Temperature Coefficient of Voltage : 0~0.05% / °C max.

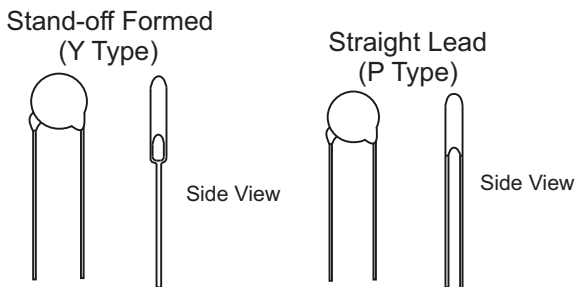
### PART NUMBER EXAMPLE

**JV R 07 N 181 K 6 5 Y AW**

- Series**: JV
- Coating**: R : Epoxy Coating, Operating Temperature 85°C  
T : Silicone Coating, Operating Temperature 125°C
- Disc Size**: 05 = φ 5mm, 14 = φ 14mm, 07 = φ 7mm, 20 = φ 20mm, 10 = φ 10mm, 25 = φ 25mm
- Surge Current**: N = Standard, S = High Surge, U = Ultra Surge
- Varistor Voltage**: 181 (180V)
- Lead Length & Packaging**: \* see chart below
- Lead Style**: Y = In-line stand-off, P = Straight Lead
- Lead Spacing**: 5 = 5.0mm, 7 = 7.5mm, 1 = 10.0mm
- Lead Diameter**: 6 = 0.6 ± 0.05mm, 8 = 0.8 ± 0.05mm, 1 = 1.0 ± 0.05mm
- Tolerance**: K = ± 10% (Standard), L = ± 15%, M = ± 20%

For example: 8V=080 18V=180 180V=181 1800V=182

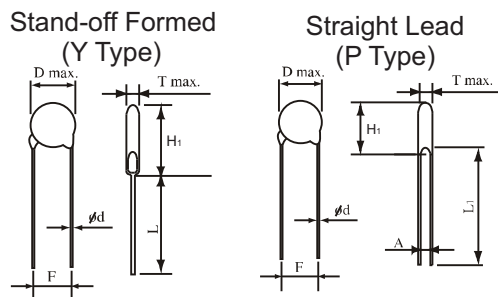
### LEAD LENGTH & PACKAGING



Lead Type	Code	Dimension	Package
Y Type Leads	50	L = 5 ± 1mm	Bulk
	U4	L = 24mm min.	Bulk
	AW	H <sub>0</sub> = 16mm	Ammo
	RW	H <sub>0</sub> = 16mm	Reel
P Type Leads	50	L = 5 ± 1mm	Bulk
	U5	L = 25mm min.	Bulk
	AY	H <sub>0</sub> = 20mm	Ammo
	RY	H <sub>0</sub> = 20mm	Reel

\* H<sub>0</sub> see the drawing on page 5

### LEAD STYLES & DIMENSIONS (mm)



Diameter	5mm	7mm	10mm	14mm	20mm
D max	7.5	9.0	12.5	16.5	23.0
$d \pm 0.05$	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	13.0	18/*19	22/*23	28/*29
L1 max.	25.0	25.0	25.0	25.0	25.0
L min.	24.0	24.0	24.0	24.0	24.0

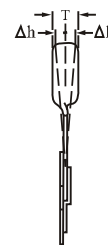
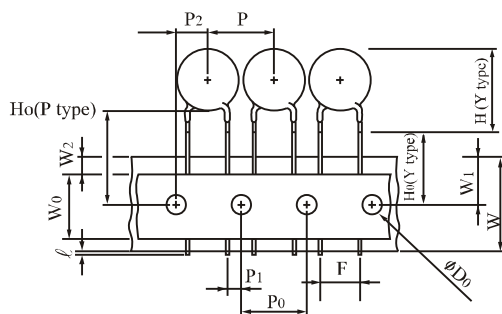
\* Just for 182K

Table of T & H<sub>1</sub> max, A ± 0.8

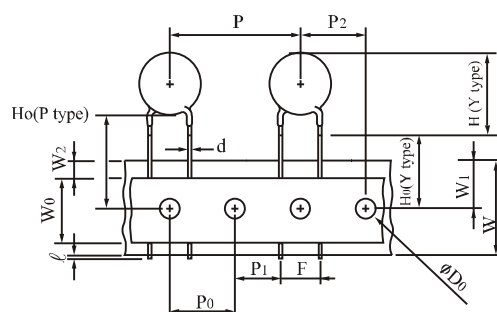
Diameter	5mm			7mm			10mm			14mm			20mm		
	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>
180M	4.5	0.8	10.5	4.5	0.8	12	4.9	0.8	15.5	5	0.9	19.5	---	---	---
220M/L	4.5	0.9	10.5	4.5	0.9	12	4.9	0.9	15.5	5	1	19.5	5.3	1	26.5
270M/K	4.7	0.9	10.5	4.7	0.9	12	5.1	0.9	15.5	5.2	1.1	19.5	5.4	1.1	26.5
330M/K	4.7	1	10.5	4.7	1	12	5.1	1	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	5.1	1.2	15.5	5.2	1.4	19.5	5.4	1.4	26.5
470L/K	5	1.2	10.5	5	1.2	12	5.5	1.2	15.5	5.6	1.4	19.5	5.6	1.4	26.5
560L/K	5	1.4	10.5	5	1.4	12	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	6	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	4.3	0.8	15.5	4.4	1	19.5	5	1.1	26.5
101K	3.9	0.8	10.5	3.9	0.8	12	4.4	0.8	15.5	4.5	1	19.5	5.1	1.2	26.5
121K	4.1	0.9	10.5	4.1	0.9	12	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	4.9	1.2	15.5	5.1	1.4	19.5	5.6	1.6	26.5
181K	4.1	1	10.5	4.1	1	12	4.5	1	15.5	4.7	1.2	19.5	5.2	1.4	26.5
201K	4.2	1	10.5	4.2	1	12	4.6	1	15.5	4.8	1.2	19.5	5.3	1.47	26.5
221K	4.3	1.1	10.5	4.3	1.1	12	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	4.8	1.3	15.5	5	1.5	19.5	5.5	1.7	26.5
271K	4.6	1.3	10.5	4.6	1.4	12	5	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	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	5.3	1.6	15.5	5.5	1.7	19.5	6	2.1	26.5
361K	5.1	1.8	10.5	5.1	1.9	12	5.5	1.9	15.5	5.7	2.1	19.5	6.2	2.3	26.5
391K	5.3	2	11	5.3	2	12.5	5.7	2.2	16	5.9	2.2	20	6.4	2.4	26.5
431K	6.1	2.1	11	6.1	2	12.5	6.5	2.5	16	6.7	2.5	20	7.2	2.7	26.5
471K	6.4	2.2	11	6.4	2.3	12.5	6.8	2.6	16	7	2.7	20	7.5	2.9	27
511K	6.6	2.5	11.5	6.6	2.5	13	7	3.1	16.5	7.2	3.1	20.5	7.7	3.3	27
561K	6.9	2.8	11.5	6.9	2.8	13	7.3	3.4	16.5	7.5	3.4	20.5	8	3.6	27
621K	7.2	3.1	11.5	7.2	3.1	13	7.6	4	16.5	7.8	3.8	20.5	8.3	4.1	27
681K	7.5	3.4	11.5	7.5	3.4	13	8	4.4	16.5	8.2	4.1	20.5	8.7	4.4	27
751K	7.9	3.7	11.5	7.9	3.7	13	8.4	4.4	16.5	8.6	4.3	20.5	9.1	4.5	27
781K	---	---	---	8.1	3.9	13	8.6	4.6	16.5	8.8	4.6	20.5	9.3	4.8	27
821K	---	---	---	8.3	4.1	13	8.8	4.6	16.5	9	4.6	20.5	9.5	4.8	27
911K	---	---	---	---	---	---	9.4	5.4	16.5	9.6	5.4	20.5	10.1	5.7	27
102K	---	---	---	---	---	---	9.9	5.4	16.5	10.1	5.6	20.5	10.7	5.8	27
112K	---	---	---	---	---	---	10.5	5.7	16.5	10.7	6.1	20.5	11.2	6.3	27
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	28
162K	---	---	---	---	---	---	13.1	8.6	18	13.1	9	22	13.7	9.2	28.5
182K	---	---	---	---	---	---	14.3	9.8	18.5	14.3	10.2	22.5	14.7	10.4	29

■ TAPING SPECIFICATIONS

1/2" pitch



1.0" pitch

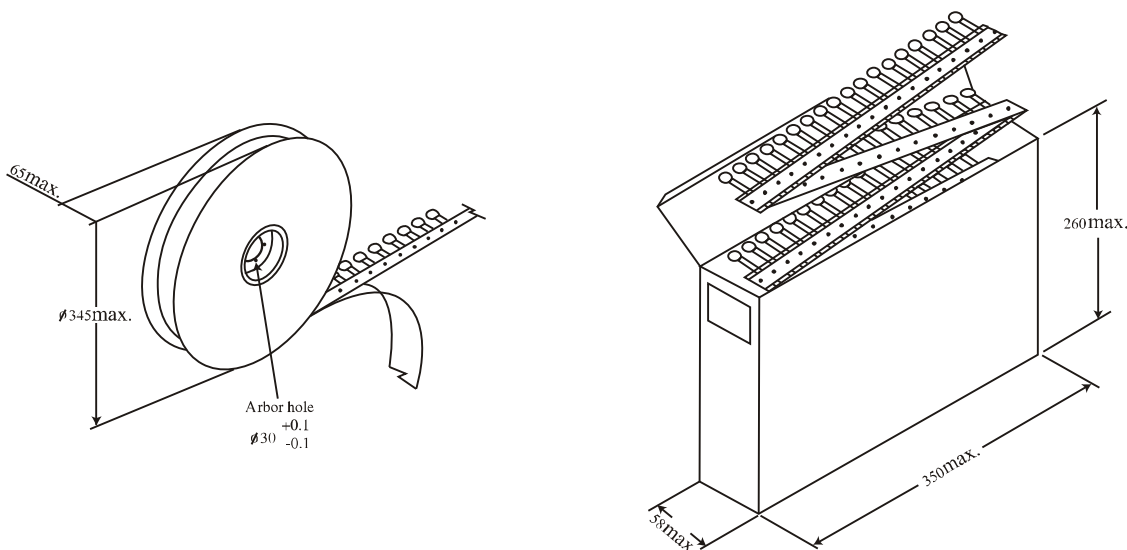


Symbols	Item	5 / 7 mm	10 / 14mm	20mm
	Cut out length	1.1 mm max.	1.1 mm max.	
H (Y Type)	Height of Top	See H Max. Table on page 4		
Ho (Y Type)	Height to seating plane	16.0 ± 0.5mm (*±1.0mm)	16.0 ± 0.5mm (*±1.0mm)	
Ho (P Type)	Height of component from hole center	16.0 ~ 21.0 mm	16.0 ~ 21.0 mm	
Δ h	Front to back deviation	0 ± 2.0 mm	0 ± 2.0 mm	
W	Carrier tape width	18.0 <sup>+1.0</sup> / <sub>-0.5</sub> mm	18.0 <sup>+1.0</sup> / <sub>-0.5</sub> mm	
W0	Hold down tape width	10.0mm	10.0mm	
W1	Sprocket hole position	9.0 <sup>+0.75</sup> / <sub>-0.5</sub> mm	9.0 <sup>+0.75</sup> / <sub>-0.5</sub> mm	
W2	Adhesive tape position	3.0 mm max.	3.0 mm max.	
F	Component head spacing	5.0 <sup>+0.8</sup> / <sub>-0.2</sub> mm	7.5 <sup>+0.8</sup> / <sub>-0.2</sub> mm	10 <sup>+0.8</sup> / <sub>-0.2</sub> 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 Table of T Max. on page 4		
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.	

\* for manual line

■ **PACKAGING**

in mm



**Quantity per Packing Unit**

in Pcs

Series Part No.	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)	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