

The high surge type JVT-S 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	

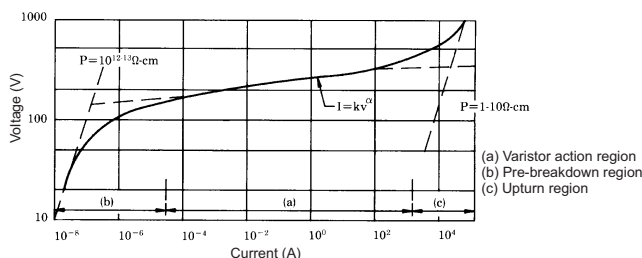
**CHARACTERISTICS & RATINGS**

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)
JVT20S220M11***	22	20%	14	18	43	20	3000	2	0.2	16
JVT20S270M11***	27		17	22	53					19
JVT20S330M11***	33		20	26	65					24
JVT20S390L11***	39	15%	25	31	77	100	10000	5	1	28
JVT20S470L11***	47		30	38	93					34
JVT20S560L11***	56		35	45	110					41
JVT20S680L11***	68		40	56	135					49
JVT20S820L11***	82	10%	50	65	135	100	10000	5	1	56
JVT20S101K11***	100		60	85	165					72
JVT20S121K11***	120		75	100	200					88
JVT20S151K11***	150		95	125	250					106
JVT20S181K11***	180		115	150	300					130
JVT20S201K11***	200		130	170	340					140
JVT20S221K11***	220		140	180	360					155
JVT20S241K11***	240		150	200	395					168
JVT20S271K11***	270		175	225	455					190
JVT20S301K11***	300		195	250	505					210
JVT20S331K11***	330	210	275	550	228					
JVT20S361K11***	360	230	300	595	255					
JVT20S391K11***	390	250	320	650	275					
JVT20S431K11***	430	275	350	710	303					
JVT20S471K11***	470	300	385	775	350					
JVT20S511K11***	510	320	418	842	382					
JVT20S561K11***	560	350	460	920	410					
JVT20S621K11***	620	385	505	1025	420					
JVT20S681K11***	680	420	560	1120	430					
JVT20S751K11***	750	460	615	1240	440					
JVT20S781K11***	780	485	640	1290	450					
JVT20S821K11***	820	510	670	1355	460					
JVT20S911K11***	910	550	745	1500	510					
JVT20S102K11***	1000	625	825	1650	566					
JVT20S112K11***	1100	680	895	1815	620					

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



**CURRENT - VOLTAGE CHARACTERISTICS**



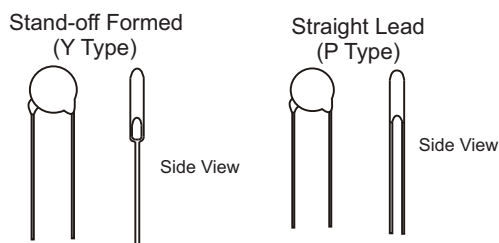
Operating & Storage Temperature Range : -40°C to +85°C  
 Temperature Coefficient of Voltage : 0~0.05% / °C max.

**PART NUMBER EXAMPLE**

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

- Series**: JV, R
- 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**: The first two digits indicate voltage. The third digit signified the number of zeros.  
 For example: 8V=080, 18V=180, 180V=181, 1800V=182
- 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%

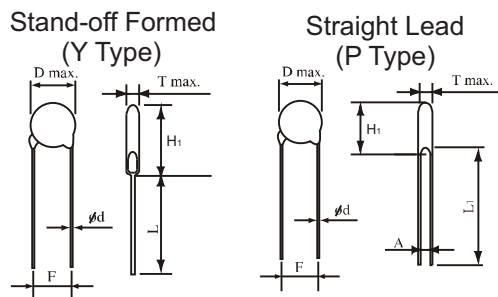
**LEAD LENGTH & PACKAGING**



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 ± 0.05	0.6	0.6	0.8	0.8	1.0
F ± 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

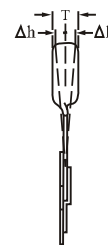
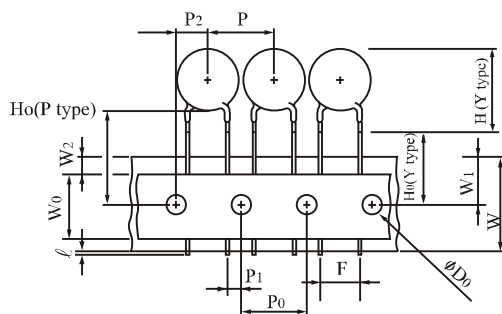
\* Just for 182K

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

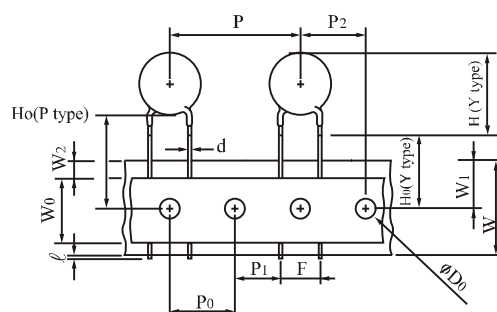
Diameter	5mm			7mm			10mm			14mm			20mm		
	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>
180M	4.5	0.8	10.5	4.5	0.8	12	4.9	0.8	15.5	5	0.9	19.5	---	---	---
220M/L	4.5	0.9	10.5	4.5	0.9	12	4.9	0.9	15.5	5	1	19.5	5.3	1	26.5
270M/K	4.7	0.9	10.5	4.7	0.9	12	5.1	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

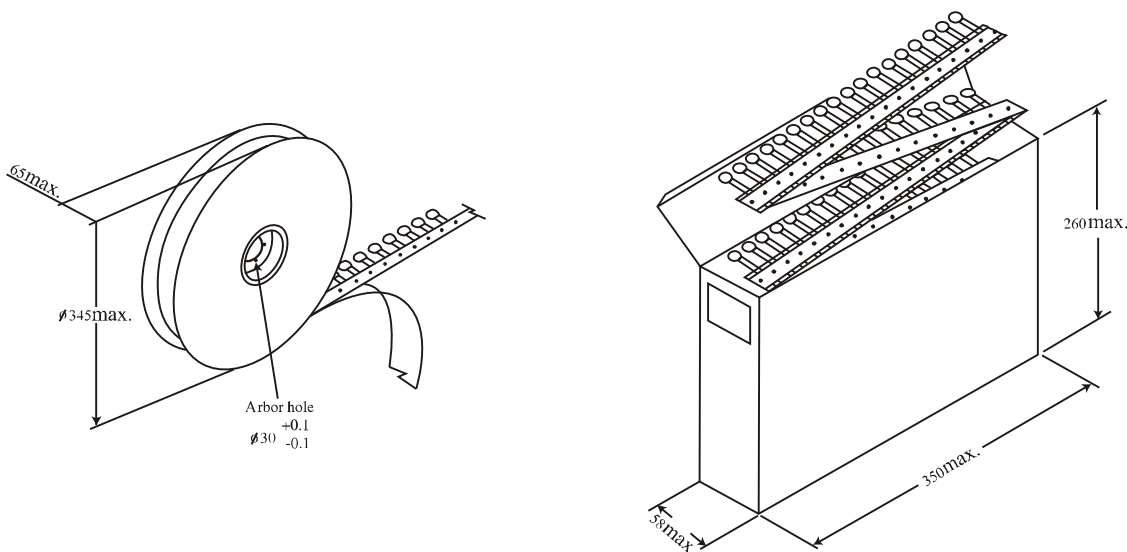


Symbols	Item	5 / 7 mm	10 / 14mm	20mm
	Cut out length	1.1 mm max.	1.1 mm max.	
H (Y Type)	Height of Top	See H Max. Table on page 4		
Ho (Y Type)	Height to seating plane	16.0 ± 0.5mm (*±1.0mm)	16.0 ± 0.5mm (*±1.0mm)	
Ho (P Type)	Height of component from hole center	16.0 ~ 21.0 mm	16.0 ~ 21.0 mm	
Δ h	Front 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	
W <sub>0</sub>	Hold down tape width	10.0mm	10.0mm	
W <sub>1</sub>	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	
W <sub>2</sub>	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	
P <sub>0</sub>	Sprocket hole pitch	12.7 ± 0.3 mm	12.7 ± 0.3 mm	
P <sub>1</sub>	Lead length from hole center to lead	3.85 ± 0.7 mm	8.95 ± 0.7 mm	7.7 ± 0.7 mm
P <sub>2</sub>	Length from hole center to disk center	6.35 ± 1.3 mm	12.7 ± 1.3 mm	
D <sub>0</sub>	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		
t <sub>1</sub>	Total thickness tape	0.7 ± 0.05 mm	0.7 ± 0.05 mm	
t <sub>2</sub>	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