

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	

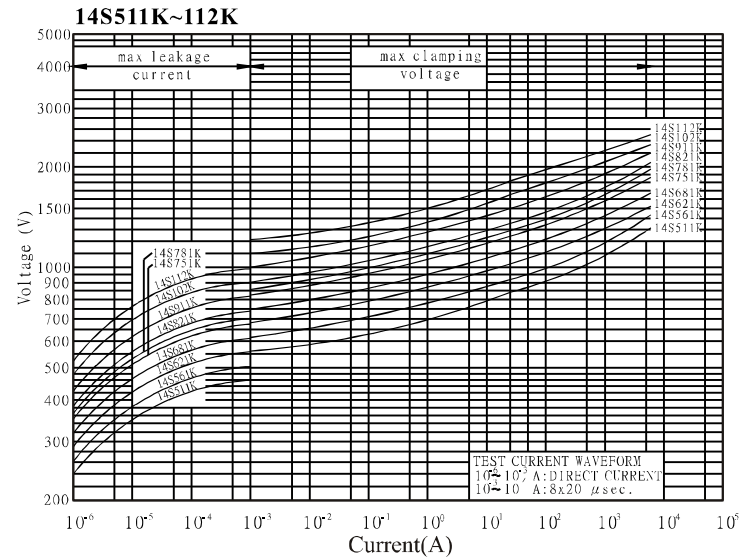
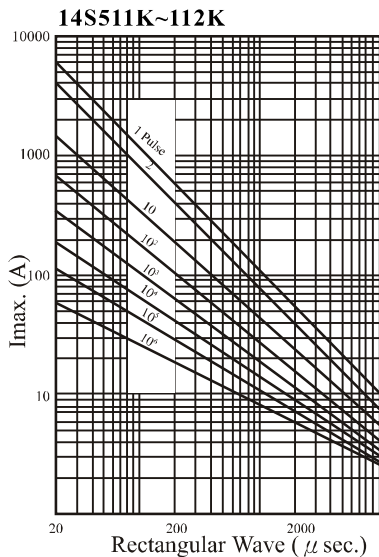
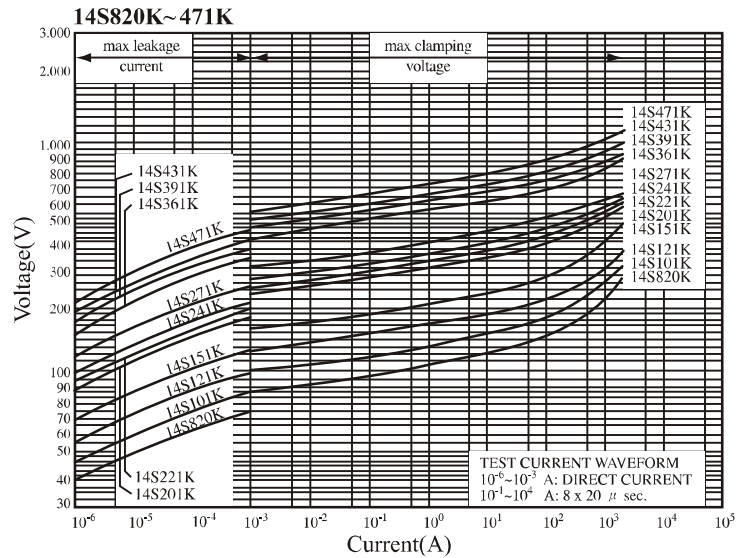
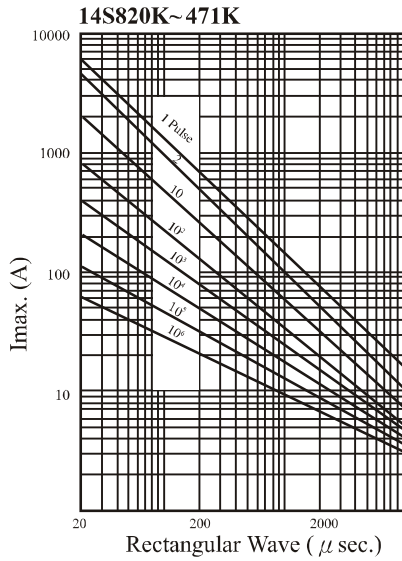
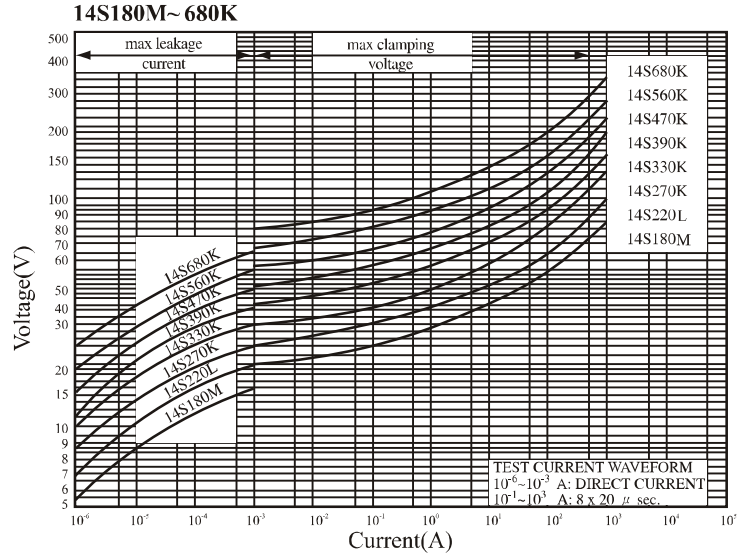
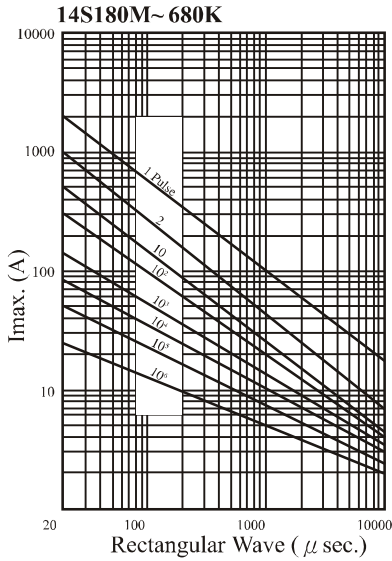
**CHARACTERISTICS & RATINGS**

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)
JVT14S180M87***	18	20%	11	14	36	10	2000	1	0.1	5.2
JVT14S220L87***	22	15%	14	18	43					6.3
JVT14S270K87***	27	10%	17	22	53					7.8
JVT14S330K87***	33		20	26	65					9.5
JVT14S390K87***	39		25	31	77					11
JVT14S470K87***	47		30	38	93					14
JVT14S560K87***	56		35	45	110					16
JVT14S680K87***	68		40	56	135					20
JVT14S820K87***	82		50	65	135					28
JVT14S101K87***	100		60	85	165					36
JVT14S121K87***	120		75	100	200	44				
JVT14S151K87***	150		95	125	250	53				
JVT14S181K87***	180	115	150	300	65					
JVT14S201K87***	200	130	170	340	70					
JVT14S221K87***	220	140	180	360	78					
JVT14S241K87***	240	150	200	395	84					
JVT14S271K87***	270	175	225	455	99					
JVT14S301K87***	300	195	250	505	105					
JVT14S331K87***	330	210	275	550	115					
JVT14S361K87***	360	230	300	595	130					
JVT14S391K87***	390	250	320	650	140					
JVT14S431K87***	430	275	350	710	155					
JVT14S471K87***	470	300	385	775	175					
JVT14S511K87***	510	320	418	842	190					
JVT14S561K87***	560	350	460	920	205					
JVT14S621K87***	620	385	505	1025	215					
JVT14S681K87***	680	420	560	1120	225					
JVT14S751K87***	750	460	615	1240	230					
JVT14S781K87***	780	485	640	1290	233					
JVT14S821K87***	820	510	670	1355	235					
JVT14S911K87***	910	550	745	1500	255					
JVT14S102K87***	1000	625	825	1650	283					
JVT14S112K87***	1100	680	895	1815	310					

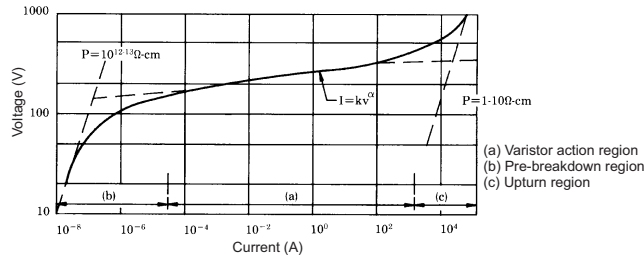
\*\*\* Replace with Lead & Packaging code

■ 14mm PULSE LIFETIME RATINGS

■ 14mm V-I CHARACTERISTIC CURVE



### CURRENT - VOLTAGE CHARACTERISTICS



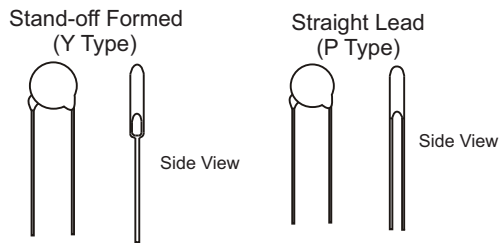
Operating & Storage Temperature Range : -40°C to +85°C  
 Temperature Coefficient of Voltage : 0~0.05% / °C max.

### 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, 07 = φ 7mm, 10 = φ 10mm, 14 = φ 14mm, 20 = φ 20mm, 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%

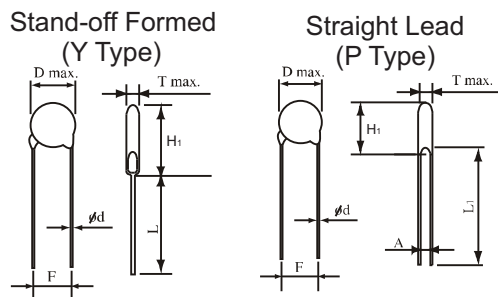
### LEAD LENGTH & PACKAGING



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
$d \pm 0.05$	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

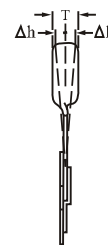
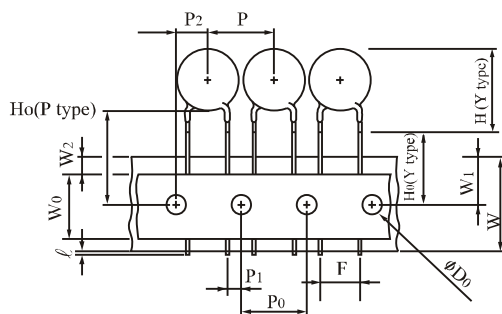
\* Just for 182K

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

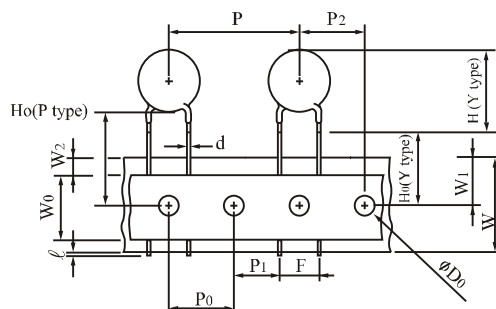
Diameter	5mm			7mm			10mm			14mm			20mm		
	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>	T	A	H <sub>1</sub>
180M	4.5	0.8	10.5	4.5	0.8	12	4.9	0.8	15.5	5	0.9	19.5	---	---	---
220M/L	4.5	0.9	10.5	4.5	0.9	12	4.9	0.9	15.5	5	1	19.5	5.3	1	26.5
270M/K	4.7	0.9	10.5	4.7	0.9	12	5.1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

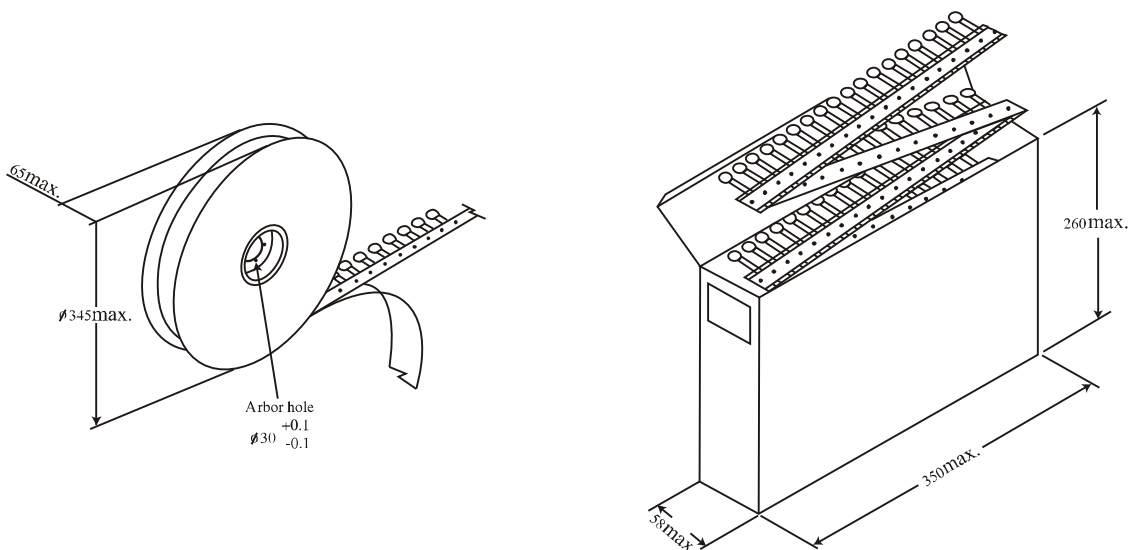


Symbols	Item	5 / 7 mm	10 / 14mm	20mm
	Cut out length	1.1 mm max.	1.1 mm max.	
H (Y Type)	Height of Top	See H Max. Table on page 4		
Ho (Y Type)	Height to seating plane	16.0 ± 0.5mm (*±1.0mm)	16.0 ± 0.5mm (*±1.0mm)	
Ho (P Type)	Height of component from hole center	16.0 ~ 21.0 mm	16.0 ~ 21.0 mm	
Δ h	Front 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