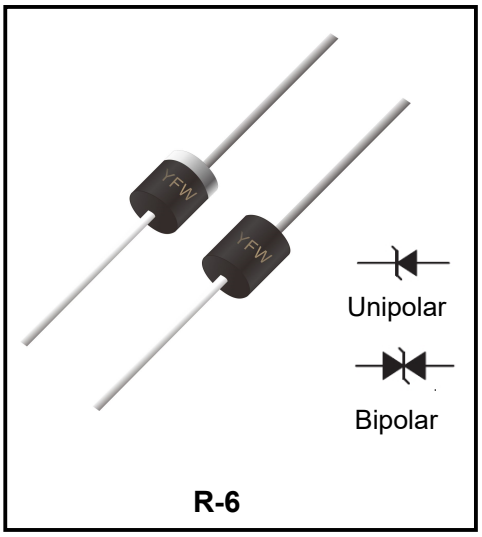
3000W Axial Leaded Transient Voltage Suppressors
P_{PP} 3000W
V_{RWM} 5.0V~220V



FEATURES

- Peak power dissipation 3000w @10 x 1000 us Pulse
- Low profile package.
- Excellent clamping capability.
- Glass passivated junction.
- Fast response time: typically less than 1ps from 0 volts to BV min
- Typical I_R less than 2ua when V_{BR} min above 12v.
- IEC 61000-4-2 ESD 30kv(air), 30kv(contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000 4-4
- Halogen free and ROHS compliant
- Lead-free finish

MECHANICAL CHARACTERISTICS

- Case: R-6 Molded Plastic
- Mounting Position: Any
- Polarity: by cathode band denotes UNI-directional device, none cathode band denotes bi-directional device.
- Terminal: Solder plated

Maximum Ratings and Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 us Waveform (Note 1, FIG.1)	P_{PPM}	3000	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (Note 2)	I_{FSM}	300	A
Peak Pulse Current of on 10/1000us Waveform (Note 1, FIG.3)	I_{PPM}	See Next Table	A
Power Dissipation on Infinite Heat Sink at T_L=75°C	P_D	7.0	W
Operating junction and storage Temperature range	T_J,T_{STG}	-55 to +150	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
2. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

Electrical Specification (T_A=25@25°C unless otherwise specified)

Type Number		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
3KP5.0A	3KP5.0CA	5.0	6.40	7.00	50	9.2	326.1	5000
3KP6.0A	3KP6.0CA	6.0	6.67	7.37	50	10.3	291.3	5000
3KP6.5A	3KP6.5CA	6.5	7.22	7.98	50	11.2	267.9	2000
3KP7.0A	3KP7.0CA	7.0	7.78	8.60	50	12.0	250.0	1000
3KP7.5A	3KP7.5CA	7.5	8.33	9.21	5	12.9	232.6	250
3KP8.0A	3KP8.0CA	8.0	8.89	9.83	5	13.6	220.6	150
3KP8.5A	3KP8.5CA	8.5	9.44	10.40	5	14.4	208.3	50
3KP9.0A	3KP9.0CA	9.0	10.00	11.10	5	15.4	194.8	20
3KP10A	3KP10CA	10.0	11.10	12.30	5	17.0	176.5	15
3KP11A	3KP11CA	11.0	12.20	13.50	5	18.2	164.8	2
3KP12A	3KP12CA	12.0	13.30	14.70	5	19.9	150.8	2
3KP13A	3KP13CA	13.0	14.40	15.90	5	21.5	139.5	2
3KP14A	3KP14CA	14.0	15.60	17.20	5	23.2	129.3	2
3KP15A	3KP15CA	15.0	16.70	18.50	5	24.4	123.0	2
3KP16A	3KP16CA	16.0	17.80	19.70	5	26.0	115.4	2
3KP17A	3KP17CA	17.0	18.90	20.90	5	27.6	108.7	2
3KP18A	3KP18CA	18.0	20.00	22.10	5	29.2	102.7	2
3KP20A	3KP20CA	20.0	22.20	24.50	5	32.4	92.6	2
3KP22A	3KP22CA	22.0	24.40	26.90	5	35.5	84.5	2
3KP24A	3KP24CA	24.0	26.70	29.50	5	38.9	77.1	2
3KP26A	3KP26CA	26.0	28.90	31.90	5	42.1	71.3	2
3KP28A	3KP28CA	28.0	31.10	34.40	5	45.4	66.1	2
3KP30A	3KP30CA	30.0	33.30	36.80	5	48.4	62.0	2
3KP33A	3KP33CA	33.0	36.70	40.60	5	53.3	56.3	2
3KP36A	3KP36CA	36.0	40.00	44.20	5	58.1	51.6	2
3KP40A	3KP40CA	40.0	44.40	49.10	5	64.5	46.5	2
3KP43A	3KP43CA	43.0	47.80	52.80	5	69.4	43.2	2
3KP45A	3KP45CA	45.0	50.00	55.30	5	72.7	41.3	2
3KP48A	3KP48CA	48.0	53.30	58,90	5	77.4	38.8	2
3KP51A	3KP51CA	51.0	56.70	62.70	5	82.4	36.4	2
3KP54A	3KP54CA	54.0	60.00	66.30	5	87.1	34.4	2
3KP58A	3KP58CA	58.0	64.40	71.20	5	93.6	32.1	2
3KP60A	3KP60CA	60.0	66.70	73.70	5	96.8	31.0	2
3KP64A	3KP64CA	64.0	71.10	78.60	5	103.0	29.1	2
3KP70A	3KP70CA	70.0	77.80	86.00	5	113.0	26.5	2
3KP75A	3KP75CA	75.0	83.30	92.10	5	121.0	24.8	2

※ For Bi-directional type having V_{RWM} of 10 Volts and less, the I_R limit is double.

※For parts without A, the V_{BR} is ± 10% and V_C is 5% higher than with A parts.

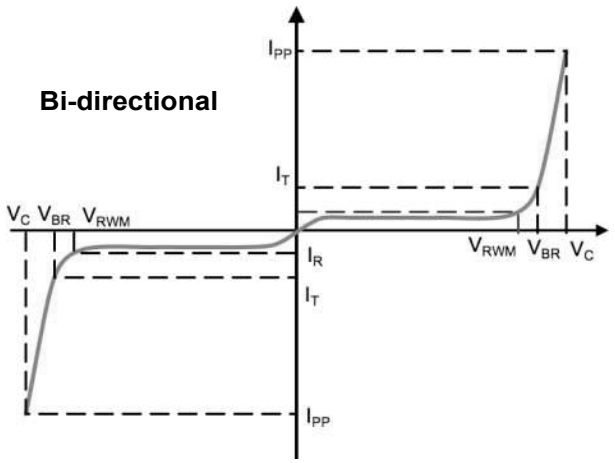
Electrical Specification (T_A=25@25°C unless otherwise specified)

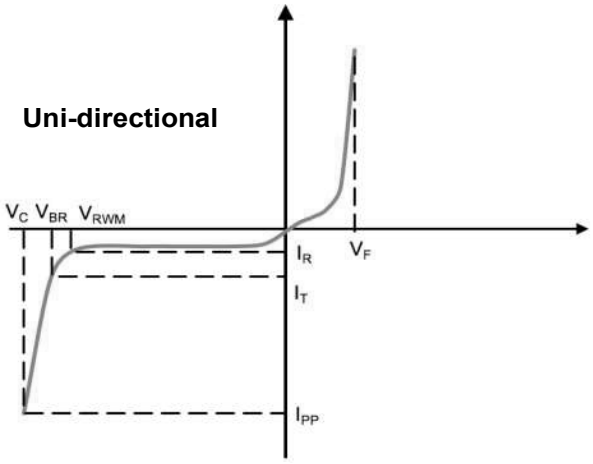
Type Number		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
3KP78A	3KP78CA	78.0	86.70	95.80	5	126.0	23.8	2
3KP85A	3KP85CA	85.0	94.40	104.00	5	137.0	21.9	2
3KP90A	3KP90CA	90.0	100.00	111.00	5	146.0	20.5	2
3KP100A	3KP100CA	100.0	111.00	123.00	5	162.0	18.5	2
3KP110A	3KP110CA	110.0	122.00	135.00	5	177.0	16.9	2
3KP120A	3KP120CA	120.0	133.00	147.00	5	193.0	15.5	2
3KP130A	3KP130CA	130.0	144.00	159.00	5	209.0	14.4	2
3KP150A	3KP150CA	150.0	167.00	185.00	5	243.0	12.3	2
3KP160A	3KP160CA	160.0	178.00	197.00	5	259.0	11.6	2
3KP170A	3KP170CA	170.0	189.00	209.00	5	275.0	10.9	2
3KP180A	3KP180CA	180.0	200.00	221.00	5	289.0	10.4	2
3KP190A	3KP190CA	190.0	211.00	233.00	5	310.0	9.7	2
3KP200A	3KP200CA	200.0	222.00	246.00	5	329.2	9.1	2
3KP210A	3KP210CA	210.0	233.00	258.00	5	349.5	8.6	2
3KP220A	3KP220CA	220.0	244.00	270.00	5	371.1	8.1	2

※ For Bi-directional type having V_{RWM} of 10 Volts and less, the I_R limit is double.

※For parts without A, the V_{BR} is ± 10% and V_C is 5% higher than with A parts.

I-V Curve Characteristics





P_{PPM} **Peak Pulse Power Dissipation** - Max power dissipation

V_{RWM} **Reverse Stand-off Voltage** - Maximum voltage that can be applied to TVS without operation

V_{BR} **Breakdown Voltage** – Maximum voltage that flows though the TVS at a specified current (I_T)

v_c **Clamping Voltage** – Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current)

I_R **Reverse Leakage Current** – Current measured at V_R

V_F **Forward Voltage Drop for UNI-directional**

Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

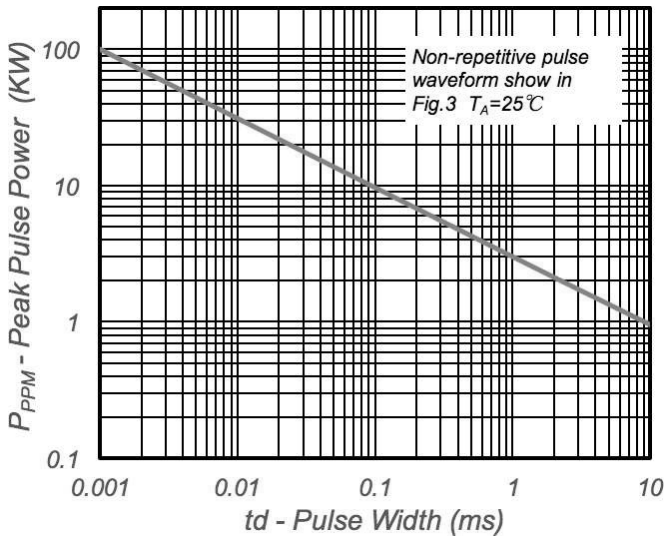


Fig.1 - Peak Pulse Power Rating

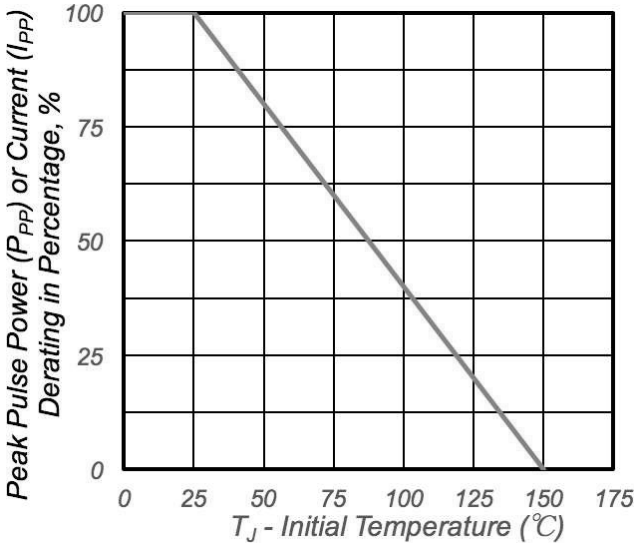


Fig.2 - Pulse Derating Cure

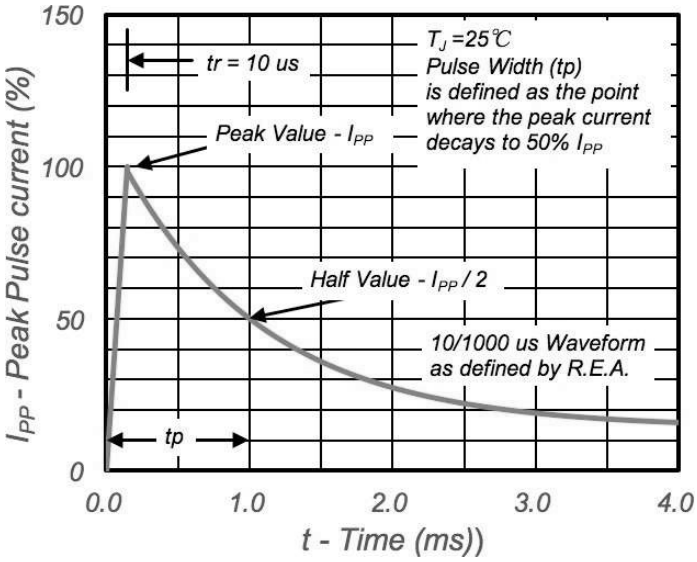


Fig.3 – Pulse Waveform

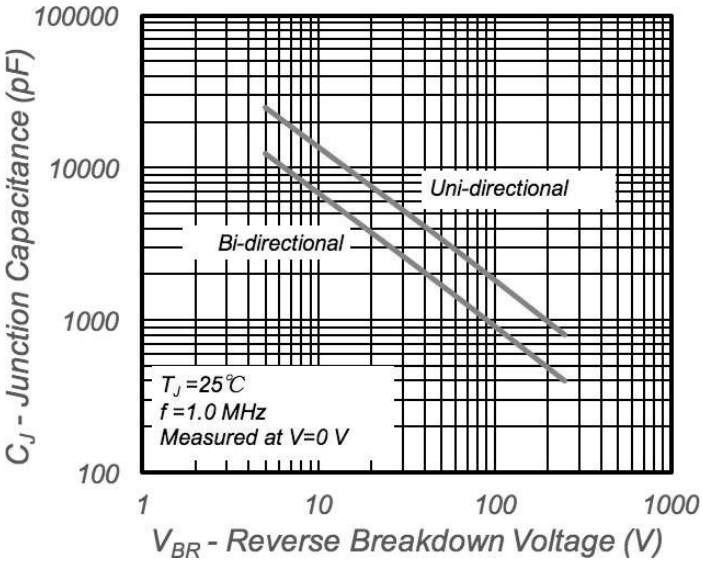


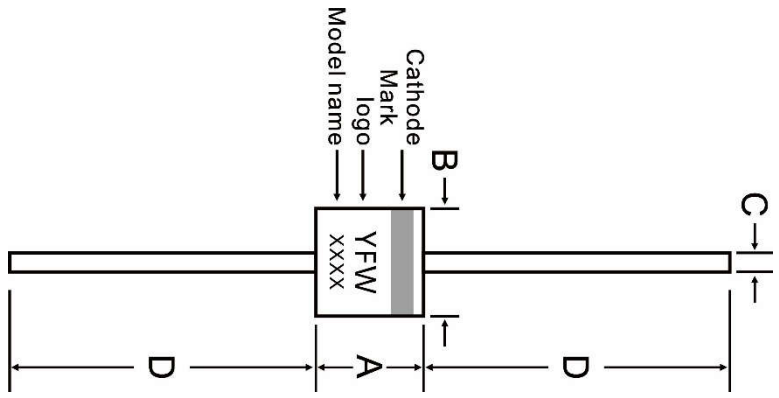
Fig.4 - Typical Junction Capacitance

Ordering information

Package	Packing Description	Packing Quantity
R-6	bulk	100PCS/Inner Box 5000PCS/Carton
	ammo pack	500PCS/Box 5000PCS/Carton

Package Dimensions

R-6



Dim.	Millimeter(mm)		INCHES	
	Min.	Max.	Min.	Max.
A	8.60	9.10	0.340	0.360
B	8.60	9.10	0.340	0.360
C	1.20	1.30	0.048	0.052
D	25.40	-	1.00	-

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