Zibo Seno Electronic Engineering Co., Ltd.

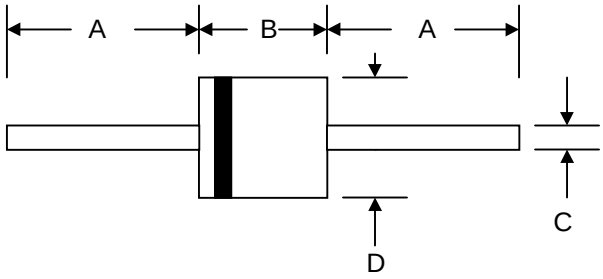
淄博圣诺

3KP SERIES

3000W TRANSIENT VOLTAGE SUPPRESSORS

Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 5.0V-190V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



Mechanical Data

- Case: JEDEC R-6/P-600 Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking:
  Unidirectional – Device Code and Cathode Band
  Bidirectional – Device Code Only
- Weight: 2.10 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

R-6/P-600		
Dim	**Min**	**Max**
A	25.4	—
B	8.60	9.10
C	1.10	1.30
D	8.60	9.10
All Dimensions in mm		

"C" Suffix Designates Bi-directional Devices
"A" Suffix Designates 5% Tolerance Devices
No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A = 25°C (Note 1, 2, 5) Figure 3	P_{PPM}	3000 Minimum	W
Peak Forward Surge Current (Note 3)	I_{FSM}	250	A
Peak Pulse Current on 10/1000μS Waveform (Note 1) Figure 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	$P_{M(AV)}$	8.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Note: 1. Non-repetitive current pulse, per Figure 1 and derated above T_A = 25°C per Figure 4.
2. Mounted on 20mm^2 copper pad.
3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000μS.

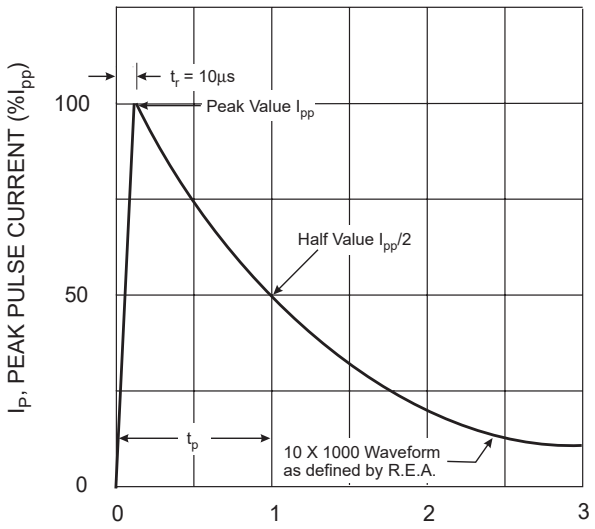


Fig. 1 Pulse Waveform

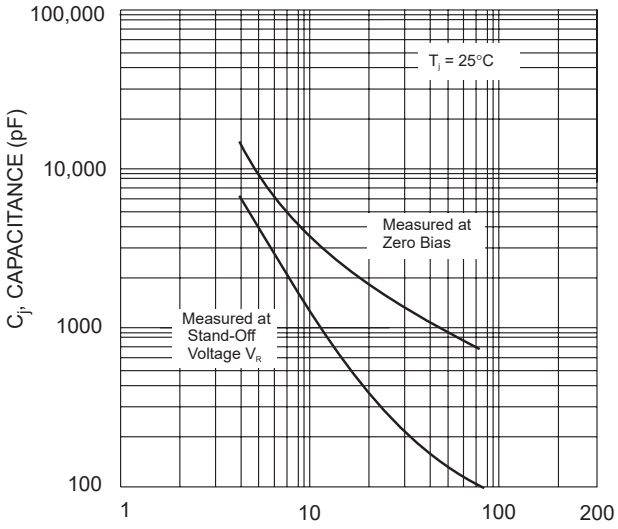


Fig. 2 Typical Junction Capacitance

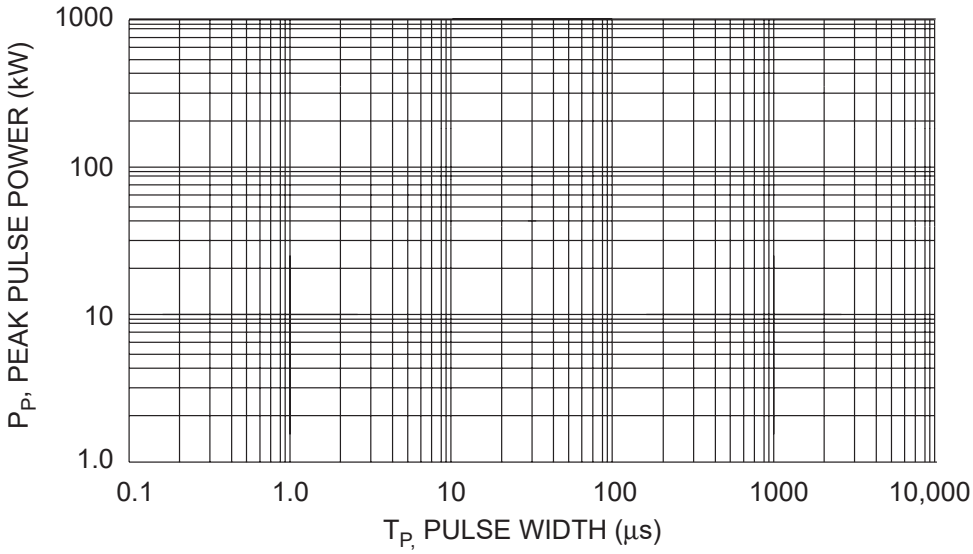


Fig. 3 Pulse Derating Curve

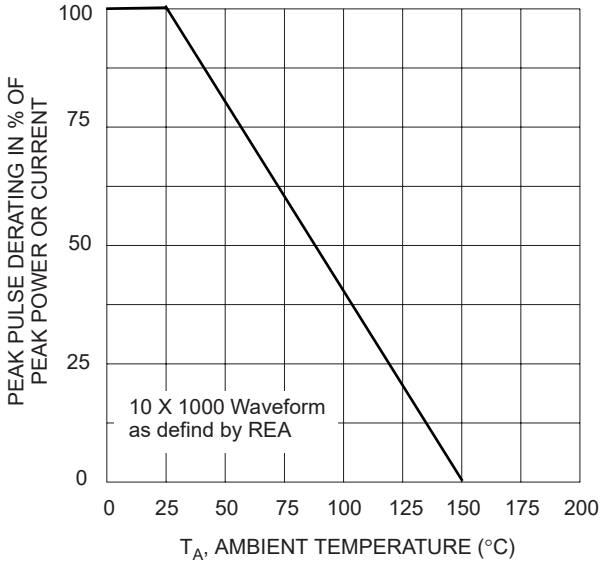


Fig. 4 Pulse Derating Curve

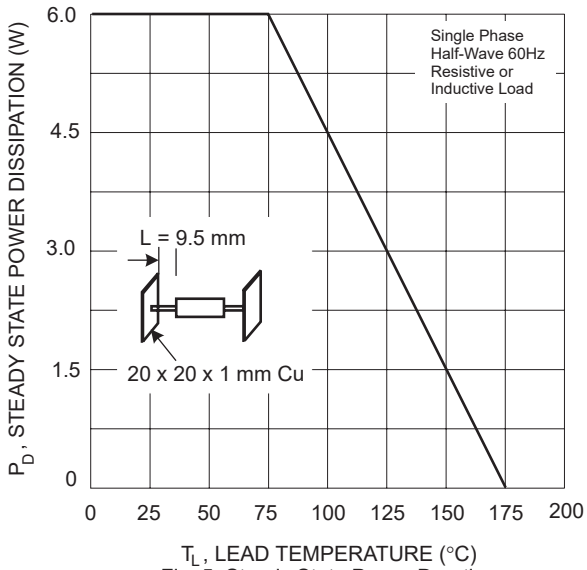


Fig. 5 Steady State Power Derating

UNI/BI-DIRECTIONAL 6.8 to 190Volts 3000W AXIAL TRANSIENT VOLTAGE SUPPRESSORS

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)
3KP5.0	3KP5.0C	5.0	6.40	7.55	10	9.6	312.5	1000.0
3KP5.0A	3KP5.0CA	5.0	6.40	7.25	10	9.2	326.1	1000.0
3KP6.0	3KP6.0C	6.0	6.67	8.45	10	11.4	263.2	1000.0
3KP6.0A	3KP6.0CA	6.0	6.67	7.67	10	10.3	291.3	1000.0
3KP6.5	3KP6.5C	6.5	7.22	9.14	10	12.3	243.9	500.0
3KP6.5A	3KP6.5CA	6.5	7.22	8.30	10	11.2	267.9	500.0
3KP7.0	3KP7.0C	7.0	7.78	9.86	10	13.3	225.6	200.0
3KP7.0A	3KP7.0CA	7.0	7.78	8.95	10	12.0	250.0	200.0
3KP7.5	3KP7.5C	7.5	8.33	10.67	1.0	14.3	209.8	50.0
3KP7.5A	3KP7.5CA	7.5	8.33	9.58	1.0	12.9	232.6	50.0
3KP8.0	3KP8.0C	8.0	8.89	11.3	1.0	15.0	200.0	10.0
3KP8.0A	3KP8.0CA	8.0	8.89	10.23	1.0	13.6	220.6	10.0
3KP8.5	3KP8.5C	8.5	9.44	11.92	1.0	15.9	188.7	5.0
3KP8.5A	3KP8.5CA	8.5	9.44	10.82	1.0	14.4	208.3	5.0
3KP9.0	3KP9.0C	9.0	10.0	12.6	1.0	16.9	177.5	5.0
3KP9.0A	3KP9.0CA	9.0	10.0	11.5	1.0	15.4	194.8	5.0
3KP10	3KP10C	10	11.1	14.1	1.0	18.8	159.6	5.0
3KP10A	3KP10CA	10	11.1	12.8	1.0	17.0	176.5	5.0
3KP11	3KP11C	11	12.2	15.4	1.0	20.1	149.3	5.0
3KP11A	3KP11CA	11	12.2	14.0	1.0	18.2	164.8	5.0
3KP12	3KP12C	12	13.3	16.9	1.0	22.0	136.4	5.0
3KP12A	3KP12CA	12	13.3	15.3	1.0	19.9	150.8	5.0
3KP13	3KP13C	13	14.4	18.2	1.0	23.8	126.1	5.0
3KP13A	3KP13CA	13	14.4	16.5	1.0	21.5	139.5	5.0
3KP14	3KP14C	14	15.6	19.8	1.0	25.8	116.3	5.0
3KP14A	3KP14CA	14	15.6	17.9	1.0	23.2	129.3	5.0
3KP15	3KP15C	15	16.7	21.1	1.0	26.9	111.5	5.0
3KP15A	3KP15CA	15	16.7	19.2	1.0	24.4	123.0	5.0
3KP16	3KP16C	16	17.8	22.6	1.0	28.8	104.2	5.0
3KP16A	3KP16CA	16	17.8	20.5	1.0	26.0	115.4	5.0
3KP17	3KP17C	17	18.9	23.9	1.0	30.5	98.4	5.0
3KP17A	3KP17CA	17	18.9	21.7	1.0	27.6	108.7	5.0
3KP18	3KP18C	18	20.0	25.3	1.0	32.2	93.2	5.0
3KP18A	3KP18CA	18	20.0	23.3	1.0	29.2	102.7	5.0
3KP20	3KP20C	20	22.2	28.1	1.0	35.8	83.8	5.0
3KP20A	3KP20CA	20	22.2	25.5	1.0	32.4	92.6	5.0
3KP22	3KP22C	22	24.4	30.9	1.0	39.4	76.1	5.0
3KP22A	3KP22CA	22	24.4	28.0	1.0	35.5	84.5	5.0
3KP24	3KP24C	24	26.7	33.8	1.0	43.0	69.8	5.0
3KP24A	3KP24CA	24	26.7	30.7	1.0	38.9	77.1	5.0

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(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)
3KP26	3KP26C	26	28.9	36.6	1.0	46.6	64.4	5.0
3KP26A	3KP26CA	26	28.9	33.2	1.0	42.1	71.3	5.0
3KP28	3KP28C	28	31.1	39.4	1.0	50.0	60.0	5.0
3KP28A	3KP28CA	28	31.1	35.8	1.0	45.4	66.1	5.0
3KP30	3KP30C	30	33.3	42.2	1.0	53.5	56.1	5.0
3KP30A	3KP30CA	30	33.3	38.3	1.0	48.4	62.0	5.0
3KP33	3KP33C	33	36.7	46.5	1.0	59.0	50.8	5.0
3KP33A	3KP33CA	33	36.7	42.2	1.0	53.3	56.3	5.0
3KP36	3KP36C	36	40.0	50.7	1.0	64.3	46.7	5.0
3KP36A	3KP36CA	36	40.0	46.0	1.0	58.1	51.6	5.0
3KP40	3KP40C	40	44.4	56.3	1.0	71.4	42.0	5.0
3KP40A	3KP40CA	40	44.4	51.1	1.0	64.5	46.5	5.0
3KP43	3KP43C	43	47.8	60.5	1.0	76.7	39.1	5.0
3KP43A	3KP43CA	43	47.8	54.9	1.0	69.4	43.2	5.0
3KP45	3KP45C	45	50.0	63.3	1.0	80.3	37.4	5.0
3KP45A	3KP45CA	45	50.0	57.5	1.0	72.7	41.3	5.0
3KP48	3KP48C	48	53.3	67.5	1.0	85.5	35.1	5.0
3KP48A	3KP48CA	48	53.3	61.3	1.0	77.4	38.8	5.0
3KP51	3KP51C	51	56.7	71.8	1.0	91.1	32.9	5.0
3KP51A	3KP51CA	51	56.7	65.2	1.0	82.4	36.4	5.0
3KP54	3KP54C	54	60.0	76.0	1.0	96.3	31.2	5.0
3KP54A	3KP54CA	54	60.0	69.0	1.0	87.1	34.4	5.0
3KP58	3KP58C	58	64.4	81.6	1.0	103	29.1	5.0
3KP58A	3KP58CA	58	64.4	74.1	1.0	93.6	32.1	5.0
3KP60	3KP60C	60	66.7	84.5	1.0	107	28.0	5.0
3KP60A	3KP60CA	60	66.7	76.7	1.0	96.8	31.0	5.0
3KP64	3KP64C	64	71.1	90.1	1.0	114	26.3	5.0
3KP64A	3KP64CA	64	71.1	81.8	1.0	103	29.1	5.0
3KP70	3KP70C	70	77.8	98.6	1.0	125	24.0	5.0
3KP70A	3KP70CA	70	77.8	89.5	1.0	113	26.5	5.0
3KP75	3KP75C	75	83.0	105.7	1.0	134	22.4	5.0
3KP75A	3KP75CA	75	83.0	95.8	1.0	121	24.8	5.0
3KP78	3KP78C	78	86.0	109.8	1.0	139	21.6	5.0
3KP78A	3KP78CA	78	86.0	99.7	1.0	126	23.8	5.0
3KP85	3KP85C	85	94.0	119.2	1.0	151	19.9	5.0
3KP85A	3KP85CA	85	94.0	108.2	1.0	137	21.9	5.0
3KP90	3KP90C	90	100	126.5	1.0	160	18.8	5.0
3KP90A	3KP90CA	90	100	115.5	1.0	146	20.5	5.0

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(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)
3KP100	3KP100C	100	111	141.0	1.0	179	16.8	5.0
3KP100A	3KP100CA	100	111	128.0	1.0	162	18.5	5.0
3KP110	3KP110C	110	122	154.5	1.0	196	15.3	5.0
3KP110A	3KP110CA	110	122	140.5	1.0	177	16.9	5.0
3KP120	3KP120C	120	133	169.0	1.0	214	14.0	5.0
3KP120A	3KP120CA	120	133	153.0	1.0	193	15.5	5.0
3KP130	3KP130C	130	144	182.5	1.0	231	13.0	5.0
3KP130A	3KP130CA	130	144	165.5	1.0	209	14.4	5.0
3KP150	3KP150C	150	167	211.5	1.0	268	11.2	5.0
3KP150A	3KP150CA	150	167	192.5	1.0	243	12.3	5.0
3KP160	3KP160C	160	178	226.0	1.0	287	10.5	5.0
3KP160A	3KP160CA	160	178	205.0	1.0	259	11.6	5.0
3KP170	3KP170C	170	189	239.5	1.0	304	9.9	5.0
3KP170A	3KP170CA	170	189	217.5	1.0	275	10.9	5.0
3KP180	3KP180C	180	200	253.8	1.0	321	9.3	5.0
3KP180A	3KP180CA	180	200	230.4	1.0	290	10.3	5.0
3KP190	3KP190C	190	211	267.9	1.0	339	8.8	5.0
3KP190A	3KP190CA	190	211	243.2	1.0	306	9.8	5.0

※ For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

1. A transient suppressor is normally selected according to the working peak reverse voltage (VRWM), which should be equal to or greater than the DC or continuous peak operating voltage level.
2. VBR measured at pulse test current IT at an ambient temperature of 25°C.