

**5000 Watt Peak Power Transient Voltage Suppressors**  
Reverse Stand-off Voltage 5.0 to 180 V

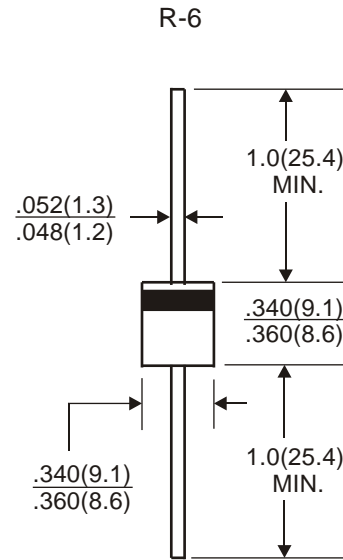


**Features**

- 5000 Watts surge capability at 1ms
- Excellent clamping capability
- Low zener impedance
- Fast response time: typically less than 1.0ps from 0 Volt to 8 Volt min.
- Typical IR less than 1μA above 10 V
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension

**Mechanical Data**

Case: Molded plastic  
 Terminals: Solder plated solderable per MIL-STD-202, Method 208  
 Polarity: Cathode band  
 Mounting Position: Any  
 Weight: 2.1 grams (approx)



All dimensions inches and (millimeters)

**Maximum Ratings & Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

Ratings	Symble	Value	Unit
Minimum Peak Power Dissipation at TA = 25 °C, TP = 1ms(Note 1)	PPK	5000	W
Steady State Power Dissipation at TL = 75 °C Lead Length .375"(9.5mm)(Note 2)	PD	5.0	W
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load(JEDEC method)(Note 3)	IFSM	400	A
Operating and Storage Temperature Range	Tj, Ts	-55 to 175	°C

Notes:

- 1.Non-repetitive current pulse per fig.3 and derated above TA = 25°C per fig.2
- 2.Mounted on copper pad area 1.6"X1.6"(40mmX40mm) per fig.5
- 3.8.3ms single half sine-wave,duty cycle=4pulses per minute maximum.

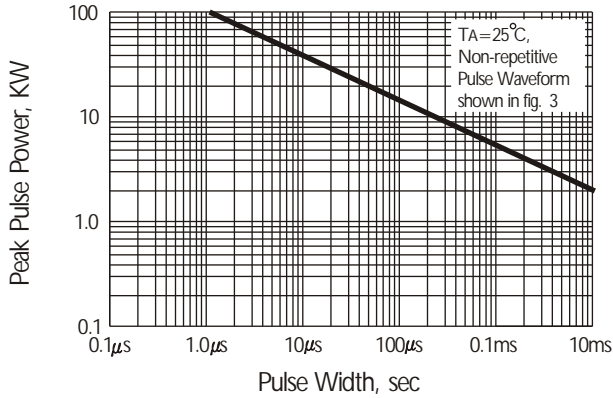
**Devices for Bipolar Applications**

1. For Bidirection use C or CA suffix for types 5KP5.0 THRU 5KP180.
2. Electrical characteristics apply in both directions.

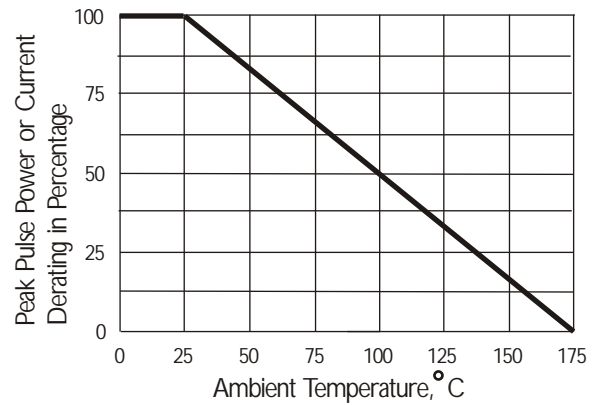
# Rating and Characteristic Curves ( TA=25°C Unless otherwise noted )

## 5KP Series

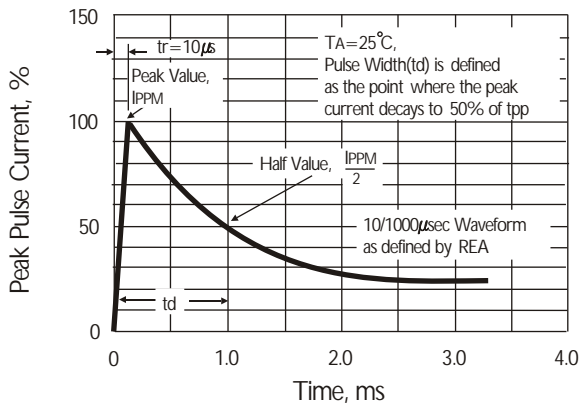
**Fig. 1 Peak Pulse Power Derating Curve**



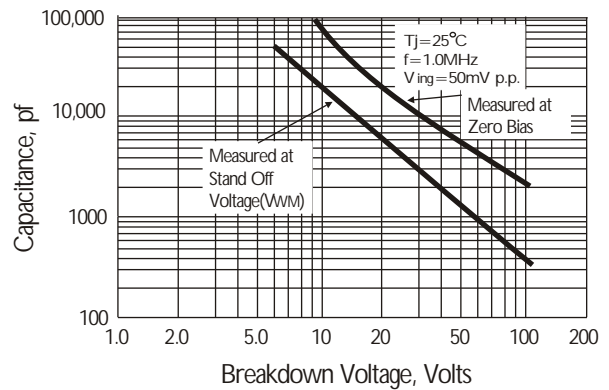
**Fig. 2 Pulse Derating Curve**



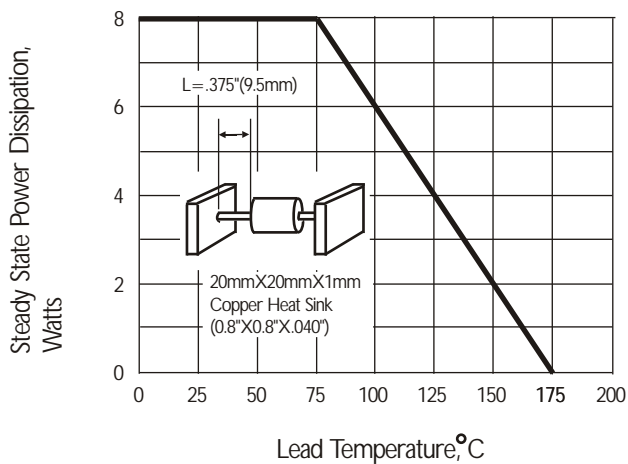
**Fig. 3 Pulse Wave Form**



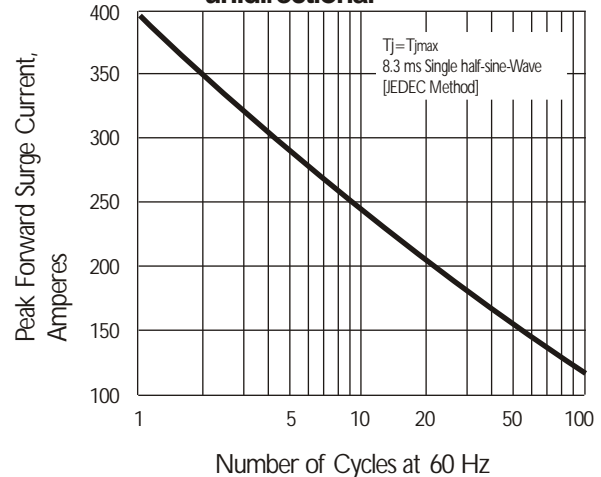
**Fig. 4 Typical Junction Capacitance**



**Fig. 5 Steady State Power Derating Curve**



**Fig. 6 Maximum Non-repetitive Peak Forward Surge current, unidirectional**



## 5KP / 5000 W Axial Lead TVS

Uni Directional Part Number	Reverse Stand-off Voltage VRWM(V)	Breakdown Voltage VBR(V) Min. @IT	Breakdown Voltage VRB(V) MAX. @IT	Test Current IT (mA)	Maximum Clamping Voltage @IPP Vc(V)	Peak Pulse Current IPP(A)	Reverse Leakage @ VRWM IR(μA)
5KP5.0	5.00	6.40	7.30	50	9.6	520	2000
5KP5.0A	5.00	6.40	7.00	50	9.2	543	2000
5KP6.0	6.00	6.57	8.15	50	11.4	439	5000
5KP6.0A	6.00	6.57	7.37	50	10.3	485	5000
5KP6.5	6.50	7.22	8.82	50	12.3	407	2000
5KP6.5A	6.50	7.22	7.98	50	11.2	447	2000
5KP7.0	7.00	7.78	9.51	50	13.3	378	1000
5KP7.0A	7.00	7.78	8.60	50	12.0	417	1000
5KP7.5	7.50	8.33	10.20	5	14.3	350	250
5KP7.5A	7.50	8.33	9.21	5	12.9	388	250
5KP8.0	8.00	8.89	10.90	5	15.0	333	150
5KP8.0A	8.00	8.89	9.83	5	13.6	367	150
5KP8.5	8.50	9.44	11.50	5	15.9	314	50
5KP8.5A	8.50	9.44	10.40	5	14.4	347	50
5KP9.0	9.00	10.00	12.20	5	16.9	295	20
5KP9.0A	9.00	10.00	11.10	5	15.4	325	20
5KP10	10.00	11.10	13.60	5	18.8	266	15
5KP10A	10.00	11.10	12.30	5	17.0	294	15
5KP11	11.00	12.20	14.90	5	20.1	249	10
5KP11A	11.00	12.20	13.50	5	18.2	274	10
5KP12	12.00	13.30	16.30	5	22.0	227	10
5KP12A	12.00	13.30	14.70	5	19.9	251	10
5KP13	13.00	14.40	17.60	5	23.8	210	10
5KP13A	13.00	14.40	15.90	5	21.5	232	10
5KP14	14.00	15.60	19.10	5	25.8	194	10
5KP14A	14.00	15.60	17.20	5	23.2	215	10
5KP15	15.00	16.70	20.40	5	26.9	188	10
5KP15A	15.00	16.70	18.50	5	24.4	206	10
5KP16	16.00	17.80	21.80	5	28.8	176	10
5KP16A	16.00	17.80	19.70	5	26.0	176	10
5KP17	17.00	18.90	23.10	5	30.5	164	10
5KP17A	17.00	18.90	20.90	5	27.6	161	10
5KP18	18.00	20.00	24.40	5	32.2	155	10
5KP18A	18.00	20.00	22.10	5	29.2	172	10
5KP20	20.00	22.00	27.10	5	35.8	139	10
5KP20A	20.00	22.00	24.50	5	32.4	154	10
5KP22	22.00	24.40	29.80	5	39.4	127	10
5KP22A	22.00	24.40	26.90	5	35.5	141	10
5KP24	24.00	26.70	32.60	5	43.0	116	10
5KP24A	24.00	26.70	29.50	5	38.9	128	10
5KP26	26.00	28.90	35.30	5	46.6	107	10
5KP26A	26.00	28.90	31.90	5	42.1	110	10
5KP28	28.00	31.10	38.00	5	50.1	99	10
5KP28A	28.00	31.10	34.40	5	45.4	110	10
5KP30	30.00	33.30	40.70	5	53.5	93	10
5KP30A	30.00	33.30	36.80	5	48.4	103	10
5KP33	33.00	36.70	44.90	5	59.0	85	10
5KP33A	33.00	36.70	40.60	5	53.3	94	10

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5KP36	36.00	40.00	48.90	5	64.3	78	10
5KP36A	36.00	40.00	44.20	5	58.1	85	10
5KP40	40.00	44.40	54.30	5	71.4	70	10
5KP40A	40.00	44.40	49.10	5	64.5	78	10
5KP43	43.00	47.80	58.40	5	76.7	65	10
5KP43A	43.00	47.80	52.80	5	69.4	72	10
5KP45	45.00	50.00	61.10	5	80.3	62	10
5KP45A	45.00	50.00	55.30	5	72.7	69	10
5KP48	48.00	53.30	65.20	5	85.5	58	10
5KP48A	48.00	53.30	58.90	5	77.4	65	10
5KP51	51.00	56.70	69.30	5	91.1	55	10
5KP51A	51.00	56.70	62.70	5	82.4	61	10
5KP54	54.00	60.00	73.30	5	96.3	52	10
5KP54A	54.00	60.00	66.30	5	87.1	57	10
5KP58	58.00	64.40	78.70	5	103.0	49	10
5KP58A	58.00	64.40	71.20	5	93.6	53	10
5KP60	60.00	66.70	81.50	5	107.0	47	10
5KP60A	60.00	66.70	73.70	5	96.8	52	10
5KP64	64.00	71.10	86.90	5	114.0	44	10
5KP64A	64.00	71.10	78.60	5	103.0	49	10
5KP70	70.00	77.80	95.10	5	125.0	40	10
5KP70A	70.00	77.80	86.00	5	113.0	44	10
5KP75	75.00	83.30	102.00	5	134.0	37	10
5KP75A	75.00	83.30	92.10	5	121.0	41	10
5KP78	78.00	86.70	106.00	5	139.0	36	10
5KP78A	78.00	86.70	95.80	5	126.0	40	10
5KP85	85.00	94.40	115.00	5	151.0	33	10
5KP85A	85.00	94.40	104.00	5	137.0	36	10
5KP90	90.00	100.00	122.00	5	160.0	31	10
5KP90A	90.00	100.00	111.00	5	146.0	34	10
5KP100	100.00	111.00	136.00	5	179.0	28	10
5KP100A	100.00	111.00	123.00	5	162.0	31	10
5KP110	110.00	122.00	149.00	5	196.0	26	10
5KP110A	110.00	122.00	135.00	5	177.0	28	10
5KP120	120.00	133.00	163.00	5	214.0	23	10
5KP120A	120.00	133.00	147.00	5	193.0	26	10
5KP150	150.00	167.00	204.00	5	268.0	19	10
5KP150A	150.00	167.00	185.00	5	243.0	21	10
5KP160	160.00	178.00	218.00	5	287.0	17	10
5KP160A	160.00	178.00	197.00	5	259.0	19	10
5KP170	170.00	189.00	231.00	5	304.0	17	10
5KP170A	170.00	189.00	209.00	5	275.0	18	10
5KP180	180.00	200.00	244.00	5	320.0	16	10
5KP180A	180.00	200.00	233.00	5	289.0	17	10