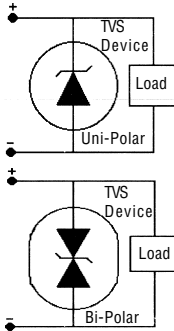
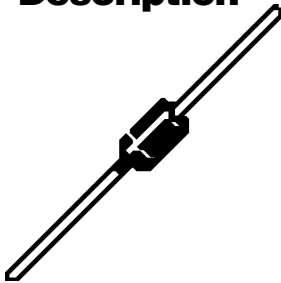


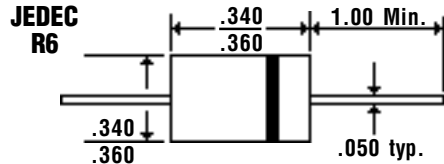
# 5.0V to 110V GPP TRANSIENT VOLTAGE SUPPRESSORS

**5KP Series**

## Description



## Mechanical Dimensions



## Features

- 5000 WATT PEAK POWER PROTECTION
- EXCELLENT CLAMPING CAPABILITY
- FAST RESPONSE TIME
- TYPICAL  $I_R < 1\mu A$  ABOVE 10V
- GLASSPASSIVATED CHIP CONSTRUCTION
- MEETS UL SPECIFICATION 94V-0

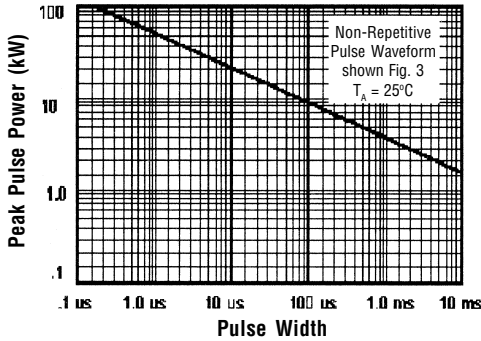
<b>5KP Series</b>		<b>Units</b>
<b>Maximum Ratings</b>		
Peak Power Dissipation... $P_{PK}$ $T_p = 1ms$ (Note 5)	5000	Watts
Steady State Power Dissipation... $P_D$ @ $T_L = 75^\circ C$	5	Watts
Non-Repetitive Peak Forward Surge Current... $I_{FSM}$ @ Rated Load Conditions, 8.3 ms, 1/2 Sine Wave, Single Phase (Note 3)	400	Amps
Weight... $G_{RM}$	2.10	Grams
Soldering Requirements (Time & Temp)... $S_T$ @ $250^\circ C$	10 Sec.	Min. to Solder
Operating & Storage Temperature Range... $T_J, T_{STRG}$	-55 to 175	$^\circ C$

- NOTES:**
1. For Bi-Directional Applications, Use C or CA. Electrical Characteristics Apply in Both Directions.
  2. Mounted on 20mm<sup>2</sup> Copper Pads.
  3. 8.3 ms, 1/2 Sine Wave, Single Phase Duty Cycle, @ 4 Pulses Per Minute Maximum.
  4.  $V_{BR}$  Measured After  $I_T$  Applies for 300  $\mu s$ .  $I_T$  = Square Wave Pulse or Equivalent.
  5. Non-Repetitive Current Pulse. Per Fig. 3 and Derated Above  $T_A = 25^\circ C$  Per Fig. 2.

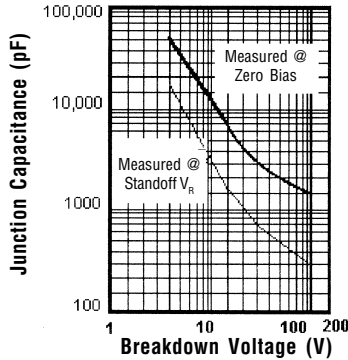
# 5.0V to 110V GPP TRANSIENT VOLTAGE SUPPRESSORS

**5KP Series**

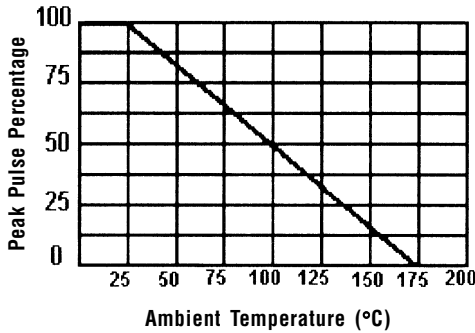
**Fig. 1 Pulse Rating Curve**



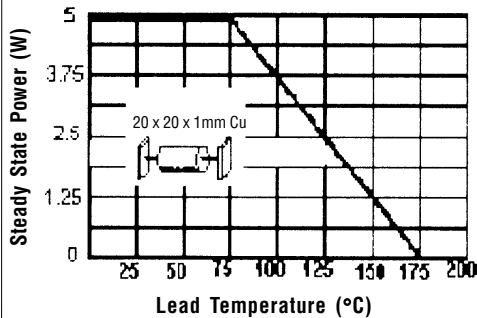
**Fig. 4 Typical Junction Capacitance**



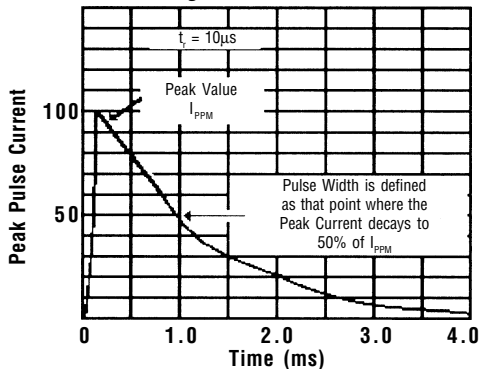
**Fig. 2 Pulse Derating Curve**



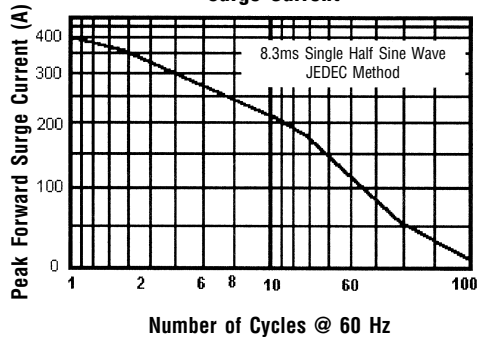
**Fig. 5 Steady State Power Derating**



**Fig. 3 Pulse Waveform**



**Fig. 6 Maximum Non-Repetitive Surge Current**



Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 Hz Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

# 5.0V to 110V GPP TRANSIENT VOLTAGE SUPPRESSORS

**5KP Series**

DEVICE	Breakdown Voltage			Working Peak Reverse Voltage $V_{RWM}$ (V)	Maximum Reverse Leakage @ $V_{RWM}$ $I_R$ ( $\mu$ A)	Peak Pulse Current $I_{PPM}$ (A) (Note 2)	Maximum Clamping Voltage @ $I_{PPM}$ $V_C$ (V)	Maximum Temperature Coefficient of $V_{BR}$ % / °C
	$V_{BR}$ Volts (Note 1)		@ $I_T$ (mA)					
	Min.	Max.						
5KP5.0	6.40	7.30	50.00	5.00	2000	520	9.60	0.057
5KP5.0A	6.40	7.00	50.00	5.00	2000	543	9.20	0.057
5KP6.0	6.67	8.15	50.00	6.00	5000	439	11.40	0.061
5KP6.0A	6.67	7.37	50.00	6.00	5000	485	10.30	0.061
5KP6.5	7.22	8.82	50.00	6.50	2000	407	12.30	0.065
5KP6.5A	7.22	7.98	50.00	6.50	2000	447	11.20	0.065
5KP7.0	7.78	9.51	50.00	7.00	1000	378	13.30	0.068
5KP7.0A	7.78	8.60	50.00	7.00	1000	417	12.00	0.068
5KP7.5	8.33	10.20	5.00	7.50	250	350	14.30	0.073
5KP7.5A	8.33	9.21	5.00	7.50	250	388	12.90	0.073
5KP8.0	8.89	10.90	5.00	8.00	150	333	15.00	0.075
5KP8.0A	8.89	9.83	5.00	8.00	150	367	13.60	0.075
5KP8.5	9.44	11.50	5.00	8.50	50.00	314	15.90	0.078
5KP8.5A	9.44	10.40	5.00	8.50	50.00	347	14.40	0.078
5KP9.0	10.00	12.20	5.00	9.00	20.00	295	16.90	0.061
5KP9.0A	10.00	11.10	5.00	9.00	20.00	325	15.40	0.061
5KP10	11.10	13.60	5.00	10.00	15.00	266	18.80	0.084
5KP10A	11.10	12.30	5.00	10.00	15.00	294	17.00	0.084
5KP11	12.20	14.90	5.00	11.00	10.00	249	20.10	0.086
5KP11A	12.20	13.50	5.00	11.00	10.00	274	18.20	0.086
5KP12	13.30	16.30	5.00	12.00	10.00	227	22.00	0.088
5KP12A	13.30	14.70	5.00	12.00	10.00	251	19.90	0.088
5KP13	14.40	17.60	5.00	13.00	10.00	210	23.80	0.090
5KP13A	14.40	15.90	5.00	13.00	10.00	232	21.50	0.090
5KP14	15.60	19.10	5.00	14.00	10.00	194	25.80	0.092
5KP14A	15.60	17.20	5.00	14.00	10.00	215	23.20	0.092
5KP15	16.70	20.40	5.00	15.00	10.00	188	26.90	0.094
5KP15A	16.70	18.50	5.00	15.00	10.00	206	24.40	0.094
5KP16	17.80	21.80	5.00	16.00	10.00	176	28.80	0.096
5KP16A	17.80	19.70	5.00	16.00	10.00	192	26.00	0.096
5KP17	18.90	23.10	5.00	17.00	10.00	164	30.50	0.097
5KP17A	18.90	20.90	5.00	17.00	10.00	181	27.60	0.097
5KP18	20.00	24.40	5.00	18.00	10.00	155	32.20	0.098
5KP18A	20.00	22.10	5.00	18.00	10.00	172	29.20	0.098
5KP20	22.20	27.10	5.00	20.00	10.00	139	35.80	0.099
5KP20A	22.20	24.50	5.00	20.00	10.00	154	32.40	0.099
5KP22	24.40	29.80	5.00	22.00	10.00	127	39.40	0.100
5KP22A	24.40	26.90	5.00	22.00	10.00	141	35.50	0.100
5KP24	26.70	32.60	5.00	24.00	10.00	116	43.00	0.101
5KP24A	26.70	29.50	5.00	24.00	10.00	128	38.90	0.101
5KP26	28.90	35.30	5.00	26.00	10.00	107	46.60	0.101
5KP26A	28.90	31.90	5.00	26.00	10.00	119	42.10	0.101

# 5.0V to 110V GPP TRANSIENT VOLTAGE SUPPRESSORS

**5KP Series**

DEVICE	Breakdown Voltage		Working Peak Reverse Voltage $V_{RWM}$ (V)	Maximum Reverse Leakage @ $V_{RWM}$ $I_R$ (L.A)	Peak Pulse Current $I_{PPM}$ (A) (Note 2)	Maximum Clamping Voltage @ $I_{PPM}$ $V_C$ (V)	Maximum Temperature Coefficient of $V_{BR}$ % / °C	
	$V_{BR}$ Volts (Note 1)							@ $I_T$ (mA)
	Min.	Max.						
5KP28	31.10	38.00	5.00	28.00	10.00	99	50.10	0.102
5KP28A	31.10	34.40	5.00	28.00	10.00	110	45.40	0.102
5KP30	33.30	40.70	5.00	30.00	10.00	93	53.50	0.103
5KP30A	33.30	36.80	5.00	30.00	10.00	103	48.40	0.103
5KP33	36.70	44.90	5.00	33.00	10.00	86	59.00	0.104
5KP33A	36.70	40.60	5.00	33.00	10.00	94	53.30	0.104
5KP36	40.00	48.90	5.00	36.00	10.00	78	64.30	0.105
5KP36A	40.00	44.20	5.00	36.00	10.00	86	58.10	0.105
5KP40	44.40	54.30	5.00	40.00	10.00	70	71.40	0.105
5KP40A	44.40	49.10	5.00	40.00	10.00	78	64.50	0.105
5KP43	47.80	58.40	5.00	43.00	10.00	65	76.70	0.106
5KP43A	47.80	52.80	5.00	43.00	10.00	72	69.40	0.106
5KP45	50.00	61.10	5.00	45.00	10.00	62	80.30	0.106
5KP45A	50.00	55.30	5.00	45.00	10.00	69	72.70	0.106
5KP48	53.30	65.10	5.00	48.00	10.00	58	85.50	0.107
5KP48A	53.30	58.90	5.00	48.00	10.00	65	77.40	0.107
5KP51	56.70	69.30	5.00	51.00	10.00	55	91.10	0.107
5KP51A	56.70	62.70	5.00	51.00	10.00	61	82.40	0.107
5KP54	60.00	73.30	5.00	54.00	10.00	52	96.30	0.107
5KP54A	60.00	66.30	5.00	54.00	10.00	57	87.10	0.107
5KP58	64.40	78.70	5.00	58.00	10.00	49	103.00	0.108
5KP58A	64.40	71.20	5.00	58.00	10.00	53	93.60	0.108
5KP60	66.70	81.50	5.00	60.00	10.00	47	107.00	0.108
5KP60A	66.70	73.70	5.00	60.00	10.00	52	96.80	0.108
5KP64	71.10	86.90	5.00	64.00	10.00	44	114.00	0.108
5KP64A	71.10	78.60	5.00	64.00	10.00	49	103.00	0.108
5KP70	77.80	95.10	5.00	70.00	10.00	40	125.00	0.108
5KP70A	77.80	86.00	5.00	70.00	10.00	44	113.00	0.108
5KP75	83.30	102.00	5.00	75.00	10.00	37	134.00	0.108
5KP75A	83.30	92.10	5.00	75.00	10.00	41	121.00	0.108
5KP78	86.70	106.00	5.00	78.00	10.00	36	139.00	0.108
5KP78A	86.70	95.80	5.00	78.00	10.00	40	126.00	0.108
5KP85	94.40	115.00	5.00	85.00	10.00	33	151.00	0.108
5KP85A	94.40	104.00	5.00	85.00	10.00	36	137.00	0.110
5KP90	100.00	122.00	5.00	90.00	10.00	31	160.00	0.110
5KP90A	100.00	111.00	5.00	90.00	10.00	34	146.00	0.110
5KP100	111.00	136.00	5.00	100.00	10.00	28	179.00	0.110
5KP100A	111.00	123.00	5.00	100.00	10.00	31	162.00	0.110
5KP110	122.00	149.00	5.00	110.00	10.00	26	196.00	0.112
5KP110A	122.00	135.00	5.00	110.00	10.00	28	177.00	0.112