

5KP5.0(A) THRU 5KP180(A)
5KP5.0A(CA) THRU 5KP180A(CA)
VOLTAGE - 5.0 TO 180 VOLTS 5000 WATT PEAK POWER

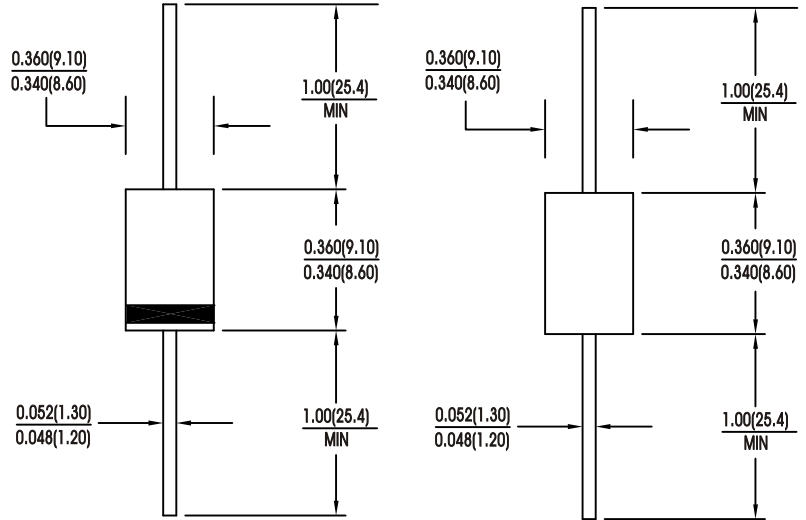
FEATURES:

- Plastic package has Underwrites Laboratory Flammability Classification 94V-0
- 5000W surge capability at 10/1000us
- Excellent clamping capability
- Low zener incremental surge resistance
- Fast response time : typically less than 1.0 ps from 0 volts to V(BR)
- Typical I_r less than 1uA above 10V
- High temperature soldering guaranteed : 260°C /10 seconds/0.375"(9.5mm) lead length/5lbs(2.3kg) tension

MECHANICAL DATA

Case: Molded plastic
 Terminals: Axial leads, Solderable per MIL-STD-202, Method 208
 Polarity: Color band denoted positive end except Bidirectionals
 Mounting Position: Any
 Weight: 2.1 grams

P6



Suffix " ", "A"
 UNIDIRECTIONAL

Suffix "C", "CA"
 DIRECTIONAL

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.
 Single phase, half sine wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20 %.

Characteristic	Symbol	Value	Units
Minimum peak power dissipation on 10/1000us waveform (note1,fig.1) T _a =25 °C	P _{PK}	5000	W
Maximum peak pulse current of on 10/1000us waveform (note1,fig3)	I _{PPM}	SEE TABLE1~3	Amps
Stedy state powerdissipation at T _L =75 °C LEAD LENGTHS .375"(9.5mm)(note 2)	PM(AV)	5.0	Watts
Maximum forward Surge current, 8.3ms Single Half Sine-Wave Supermposed on ratedload (Jedec Method) Unidirectional only (NOTE3)	I _{FSM}	400	Amps
Maximum instantaneous forward voltage at 100A for unidirectional only(note 3)	V _F	3.5	Volts
Operating and storage temperature range	T _J , T _{stg}	-55 to +175	°C

- NOTES :
1. Non-repetitive current pulse, per Fig.3 and derated above T_a=25 °C per Fig.2
 2. Mounted on Copper Lead area of 0.79x0.79" (20x20mm)
 3. 8.3mS Singal half sine-wave or equivalent square, duty cycle=4pulse per minutes maximum
 4. For bidirectional use "C" Suffix, "CA" suffix

RATINGS AND CHARACTERISTIC CURVES 5KP5.0(A)(C)(CA) THRU 5KP180(A)(C)(CA)

TABLE 1

Device Type	Breakdown V _{BR} Voltage at I _T (Voltage)		Test Current I _T mA	Working Peak Reverse Voltage V _{RWM} Volts	Maximun Reverse Leakage at V _{RWM} I _R (μ A)	Maximun Peak Pulse Current I _{PPM} Amps	Maximum Clamping Voltage V _C Volts	Maximun Temperature coefficient of V _{BR} %/ °C	Device
	Min	Max							
5KP5.0(C)	6.40	7.30	50	5.00	2000	520	9.60	0.057	
5KP5.0A(CA)	6.40	7.00	50	5.00	2000	543	9.20	0.057	
5KP6.0(C)	6.67	8.15	50	6.00	5000	439	11.4	0.061	
5KP6.0A(CA)	6.67	7.37	50	6.00	5000	485	10.3	0.061	
5KP6.5(C)	7.22	8.82	50	6.50	2000	407	12.3	0.065	
5KP6.5A(CA)	7.22	7.98	50	6.50	2000	447	11.2	0.065	
5KP7.0(C)	7.78	9.51	50	7.00	1000	378	13.3	0.068	
5KP7.0A(CA)	7.78	8.60	50	7.00	1000	417	12.0	0.068	
5KP7.5(C)	8.33	10.2	5.0	7.50	250	350	14.3	0.073	
5KP7.5A(CA)	8.33	9.21	5.0	7.50	250	388	12.9	0.073	
5KP8.0(C)	8.89	10.9	5.0	8.00	150	333	15.0	0.075	
5KP8.0A(CA)	8.89	9.83	5.0	8.00	150	367	13.6	0.075	
5KP8.5(C)	9.44	11.5	5.0	8.50	50	314	15.9	0.078	
5KP8.5A(CA)	9.44	10.4	5.0	8.50	50	347	14.4	0.078	
5KP9.0(C)	10.0	12.2	5.0	9.00	20	295	16.9	0.081	
5KP9.0A(CA)	10.0	11.1	5.0	9.00	20	325	15.4	0.081	
5KP10(C)	11.1	13.6	5.0	10.0	15	266	18.8	0.084	
5KP10A(CA)	11.1	12.3	5.0	10.0	15	294	17.0	0.084	
5KP11(C)	12.2	14.9	5.0	11.0	10	249	20.1	0.086	
15KP11A(CA)	12.2	13.5	5.0	11.0	10	274	18.2	0.086	
5KP12(C)	13.3	16.3	5.0	12.0	10	227	22.0	0.088	
5KP12A(CA)	13.3	14.7	5.0	12.0	10	251	19.9	0.088	
5KP13(C)	14.4	17.6	5.0	13.0	10	210	23.8	0.090	
5KP13A(CA)	14.4	15.9	5.0	13.0	10	232	21.5	0.090	
5KP14(C)	15.6	19.1	5.0	14.0	10	194	25.8	0.092	
5KP14A(CA)	15.6	17.2	5.0	14.0	10	215	23.2	0.092	
5KP15(C)	16.7	20.4	5.0	15.0	10	188	26.9	0.094	
5KP15A(CA)	16.7	18.5	5.0	15.0	10	206	24.4	0.094	
5KP16(C)	17.8	21.8	5.0	16.0	10	176	28.8	0.096	
5KP16A(CA)	17.8	19.7	5.0	16.0	10	192	26.0	0.096	
5KP17(C)	18.9	23.1	5.0	17.0	10	164	30.5	0.097	
5KP17A(CA)	18.9	20.9	5.0	17.0	10	181	27.6	0.097	
5KP18(C)	20.0	24.4	5.0	18.0	10	155	32.2	0.098	
5KP18A(CA)	20.0	22.1	5.0	18.0	10	172	29.2	0.098	
5KP20(C)	22.2	27.1	5.0	20.0	10	139	35.8	0.099	
5KP20A(CA)	22.2	24.5	5.0	20.0	10	154	32.4	0.099	
5KP22(C)	24.4	29.8	5.0	22.0	10	127	39.4	0.100	
5KP22A(CA)	24.4	26.9	5.0	22.0	10	141	35.5	0.100	
5KP24(C)	26.7	32.6	5.0	24.0	10	116	43.0	0.101	
5KP24A(CA)	26.7	29.5	5.0	24.0	10	128	38.9	0.101	
5KP26(C)	28.9	35.5	5.0	26.0	10	107	46.6	0.101	
5KP26A(CA)	28.9	31.9	5.0	26.0	10	119	42.1	0.101	

RATINGS AND CHARACTERISTIC CURVES 5KP5.0(A)(C)(CA) THRU 5KP180(A)(C)(CA)

TABLE 2

Device Type	Breakdown V _{BR} Voltage at I _T (Voltage)		Test Current I _T mA	Working Peak Reverse Voltage V _{RWM} Volts	Maximun Reverse Leakage at V _{RWM} I _R (μ A)	Maximun Peak Pulse Current I _{PPM} Amps	Maximum Clamping Voltage V _C Volts	Maximun Temperature coefficient of V _{BR} %/ °C	Device
	Min	Max							
5KP28(C)	31.1	38.0	5.0	28.0	10	99	50.1	0.102	
5KP28A(CA)	31.1	34.4	5.0	28.0	10	110	45.4	0.102	
5KP30(C)	33.3	40.7	5.0	30.0	10	93	53.5	0.103	
5KP30A(CA)	33.3	36.8	5.0	30.0	10	103	48.4	0.103	
5KP33(C)	36.7	44.9	5.0	33.0	10	85	59.0	0.104	
5KP33A(CA)	36.7	40.6	5.0	33.0	10	94	53.3	0.104	
5KP36(C)	40.0	48.9	5.0	36.0	10	78	64.3	0.104	
5KP36A(CA)	40.0	44.2	5.0	36.0	10	86	58.1	0.104	
5KP40(C)	44.4	54.3	5.0	40.0	10	70	71.4	0.105	
5KP40A(CA)	44.4	49.1	5.0	40.0	10	78	64.5	0.105	
5KP43(C)	47.8	58.4	5.0	43.0	10	65	76.7	0.105	
5KP43A(CA)	47.8	52.8	5.0	43.0	10	72	69.4	0.105	
5KP45(C)	50.0	61.1	5.0	45.0	10	62	80.3	0.106	
5KP45(CA)	50.0	55.3	5.0	45.0	10	69	72.7	0.106	
5KP48(C)	53.3	65.2	5.0	48.0	10	58	85.5	0.106	
5KP48A(CA)	53.3	58.9	5.0	48.0	10	65	77.4	0.106	
5KP51(C)	56.7	69.3	5.0	51.0	10	55	91.1	0.107	
5KP51A(CA)	56.7	62.7	5.0	51.0	10	61	82.4	0.107	
5KP54(C)	60.0	73.3	5.0	54.0	10	52	96.3	0.107	
5KP54A(CA)	60.0	66.3	5.0	54.0	10	57	87.1	0.107	
5KP58(C)	64.4	78.7	5.0	58.0	10	49	103	0.107	
5KP58A(CA)	64.4	71.2	5.0	58.0	10	53	93.6	0.107	
5KP60(C)	66.7	81.5	5.0	60.0	10	47	107	0.108	
5KP60A(CA)	66.7	73.7	5.0	60.0	10	52	96.8	0.108	
5KP64(C)	71.1	86.9	5.0	64.0	10	44	114	0.108	
5KP64A(CA)	71.1	78.6	5.0	64.0	10	49	103	0.108	
5KP70(C)	77.6	95.1	5.0	70.0	10	40	125	0.108	
5KP70A(CA)	77.8	86.0	5.0	70.0	10	44	113	0.108	
5KP75(C)	83.3	102	5.0	75.0	10	37	134	0.108	
5KP75A(CA)	83.3	92.1	5.0	75.0	10	41	121	0.108	
5KP78(C)	86.7	106	5.0	78.0	10	36	139	0.108	
5KP78A(CA)	86.7	95.8	5.0	78.0	10	40	126	0.108	
5KP85(C)	94.4	115	5.0	85.0	10	33	151	0.108	
5KP85A(CA)	94.4	104	5.0	85.0	10	36	137	0.108	
5KP90(C)	100	122	5.0	90.0	10	31	160	0.110	
5KP90A(CA)	100	111	5.0	90.0	10	34	146	0.110	
5KP100(C)	111	136	5.0	100	10	28	179	0.110	
5KP100A(CA)	111	123	5.0	100	10	31	162	0.110	
5KP110(C)	122	149	5.0	110	10	26	196	0.112	
5KP110A(CA)	122	135	5.0	110	10	28	177	0.112	
5KP120(C)	133	163	5.0	120	10	23	215	0.112	
5KP120A(CA)	133	147	5.0	120	10	26	194	0.112	

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TABLE 2

Device Type	Breakdown V _{BR} Voltage at I _T (Voltage)		Test Current I _T mA	Working Peak Reverse Voltage V _{RWM} Volts	Maximun Reverse Leakage at V _{RWM} I _R (μ A)	Maximun Peak Pulse Current I _{PPM} Amps	Maximum Clamping Voltage V _C Volts	Maximun Temperature coefficient of V _{BR} %/ °C	Device
	Min	Max							
5KP150(C)	166	204	5.0	150.0	10	19	269.0	0.112	
5KP150A(CA)	166	186	5.0	150.0	10	21	242.0	0.112	
5KP160(C)	178	217	5.0	160.0	10	17	285.0	0.112	
5KP160A(CA)	178	196	5.0	160.0	10	19	258.0	0.112	
5KP170(C)	189	230	5.0	170.0	10	17	302.0	0.112	
5KP170A(CA)	189	200	5.0	170.0	10	18	273.0	0.112	
5KP180(C)	200	245	5.0	180.0	10	16	322.0	0.112	
5KP180A(CA)	200	222	5.0	180.0	10	17	292.0	0.112	

NOTES :

1. V_{BR} Measured after I_T applied for 300 μ s, I_T=square wave pulse or equivalent
2. Surge current waveform per figure.3 and derate per figure.2

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