DATA SHEET

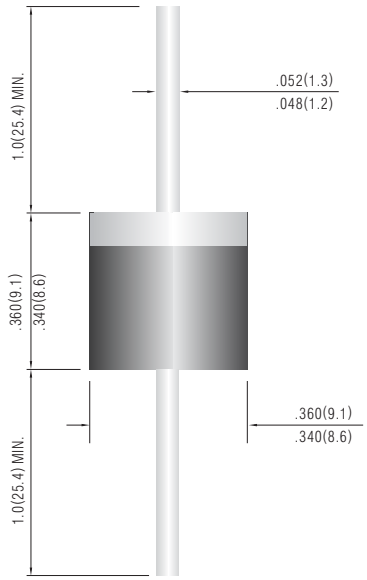
5KP5.0~5KP220CA

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

5000 Watt Peak Power VOLTAGE - 5.0 to 220 Volts

P-600

Unit: inch (mm)



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction in P-600 package
- 5000W Peak Pulse Power capability at on 10/1000μs waveform
- Excellent clamping capability
- Low zener impedance
- Repetition rate(Duty Cycle):.05%
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- Typical IR less than 1μA above 10V
- High temperature soldering guaranteed: 260°C/10 seconds/.375" ,(9.5mm) lead length/5lbs., (2.3kg) tension

MECHANICAL DATA

Case: JEDEC P600 molded plastic

Terminals: Axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denoted cathode except Bipolar

Mounting Position: Any

Weight: 0.07 ounce, 2.1 gram

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 5KP5.0 thru types 5KP220

Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

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

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at T_A=25°C, T_P=1ms(Note 1)	P_{PK}	Minimum Max 5000	Watts
Steady State Power Dissipation at T_L=75°CLead Lengths .375",(9.5mm) (Note 2)	PD	8.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JECED Method) (Note 3)	I_{FSM}	400	Amps
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°Cper Fig. 2.

2.Mounted on Copper Leaf area of 0.79in^2(20mm^2).

3.8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

Part Number	V_{RWM}	V_{BR} @ I_T			I_R @ V_{RWM}		V_C @ I_{PP}		PACKAGE
		Min.	Max.	I_T	UNI-	Bi-			
	V	V	V	mA	uA	uA	V	A	
5000W Transient Voltage Suppressor									
5KP5.0(C)	5.0	6.40	7.55	50	5000	10000	9.6	520	P-600
5KP5.0(C)A	5.0	6.40	7.25	50	5000	10000	9.2	543	P-600
5KP6.0(C)	6.0	6.67	8.45	50	5000	10000	11.4	439	P-600
5KP6.0(C)A	6.0	6.67	7.67	50	5000	10000	10.3	485	P-600
5KP6.5(C)	6.5	7.22	9.14	50	2000	4000	12.3	407	P-600
5KP6.5(C)A	6.5	7.22	8.30	50	2000	4000	11.2	447	P-600
5KP7.0(C)	7.0	7.78	9.86	50	1000	2000	13.3	378	P-600
5KP7.0(C)A	7.0	7.78	8.95	50	1000	2000	12.0	417	P-600
5KP7.5(C)	7.5	8.33	10.67	5.0	250	500	14.3	350	P-600
5KP7.5(C)A	7.5	8.33	9.58	5.0	250	500	12.9	388	P-600
5KP8.0(C)	8.0	8.89	11.30	5.0	150	300	15.0	333	P-600
5KP8.0(C)A	8.0	8.89	10.23	5.0	150	300	13.6	367	P-600
5KP8.5(C)	8.5	9.44	11.92	5.0	50	100	15.9	314	P-600
5KP8.5(C)A	8.5	9.44	10.82	5.0	50	100	14.4	347	P-600
5KP9.0(C)	9.0	10.0	12.6	5.0	20	40	16.9	295	P-600
5KP9.0(C)A	9.0	10.0	11.5	5.0	20	40	15.4	325	P-600
5KP10(C)	10	11.1	14.1	5.0	10	10	18.8	266	P-600
5KP10(C)A	10	11.1	12.8	5.0	10	10	17.0	294	P-600
5KP11(C)	11	12.2	15.4	5.0	10	10	20.1	249	P-600
5KP11(C)A	11	12.2	14.0	5.0	10	10	18.2	274	P-600
5KP12(C)	12	13.3	16.9	5.0	10	10	22.0	227	P-600
5KP12(C)A	12	13.3	15.3	5.0	10	10	19.9	251	P-600
5KP13(C)	13	14.4	18.2	5.0	10	10	23.8	210	P-600
5KP13(C)A	13	14.4	16.5	5.0	10	10	21.5	232	P-600
5KP14(C)	14	15.6	19.8	5.0	10	10	25.8	194	P-600
5KP14(C)A	14	15.6	17.9	5.0	10	10	23.2	215	P-600
5KP15(C)	15	16.7	21.1	5.0	10	10	26.9	188	P-600
5KP15(C)A	15	16.7	19.2	5.0	10	10	24.4	206	P-600
5KP16(C)	16	17.8	22.6	5.0	10	10	28.8	176	P-600
5KP16(C)A	16	17.8	20.5	5.0	10	10	26.0	192	P-600
5KPJ17(C)	17	18.9	23.9	5.0	10	10	30.5	164	P-600
5KP17(C)A	17	18.9	21.7	5.0	10	10	27.6	181	P-600
5KP18(C)	18	20.0	25.3	5.0	10	10	32.2	155	P-600
5KP18(C)A	18	20.0	23.3	5.0	10	10	29.2	172	P-600
5KP20(C)	20	22.2	28.1	5.0	10	10	35.8	139	P-600
5KP20(C)A	20	22.2	25.5	5.0	10	10	32.4	154	P-600
5KP22(C)	22	24.4	30.9	5.0	10	10	39.4	127	P-600
5KP22(C)A	22	24.4	28.0	5.0	10	10	35.5	141	P-600
5KP24(C)	24	26.7	33.8	5.0	10	10	43.0	116	P-600
5KP24(C)A	24	26.7	30.7	5.0	10	10	38.9	128	P-600
5KP26(C)	26	28.9	36.6	5.0	10	10	46.6	107	P-600
5KP26(C)A	26	28.9	33.2	5.0	10	10	42.1	119	P-600
5KP28(C)	28	31.1	39.4	5.0	10	10	50.0	99	P-600
5KP28(C)A	28	31.1	35.8	5.0	10	10	45.4	110	P-600
5KP30(C)	30	33.3	42.2	5.0	10	10	53.5	93	P-600
5KP30(C)A	30	33.3	38.3	5.0	10	10	48.4	103	P-600
5KP33(C)	33	36.7	46.5	5.0	10	10	59.0	85	P-600
5KP33(C)A	33	36.7	42.2	5.0	10	10	53.3	94	P-600
5KP36(C)	36	40.0	50.7	5.0	10	10	64.3	78	P-600
5KP36(C)A	36	40.0	46.0	5.0	10	10	58.1	85	P-600
5KP40(C)	40	44.4	56.3	5.0	10	10	71.4	70	P-600
5KP40(C)A	40	44.4	51.1	5.0	10	10	64.5	78	P-600

Part Number	V_{RWM}	V_{BR} @ I_T			I_R @ V_{RWM}		V_C @ I_{PP}		PACKAGE
		Min.	Max.	I_T	UNI-	Bi-			
	V	V	V	mA	uA	uA	V	A	
5000W Transient Voltage Suppressor									
5KP43(C)	43	47.8	60.5	5.0	10	10	76.7	65	P-600
5KP43(C)A	43	47.8	54.9	5.0	10	10	69.4	72	P-600
5KP45(C)	45	50.0	63.3	5.0	10	10	80.3	62	P-600
5KP45(C)A	45	50.0	57.5	5.0	10	10	72.7	69	P-600
5KP48(C)	48	53.3	67.5	5.0	10	10	85.5	58	P-600
5KP48(C)A	48	53.3	61.3	5.0	10	10	77.4	65	P-600
5KP51(C)	51	56.7	71.8	5.0	10	10	91.1	55	P-600
5KP51(C)A	51	56.7	65.2	5.0	10	10	82.4	61	P-600
5KP54(C)	54	60.0	76.0	5.0	10	10	96.3	52	P-600
5KP54(C)A	54	60.0	69.0	5.0	10	10	87.1	57	P-600
5KP58(C)	58	64.4	81.6	5.0	10	10	103	49	P-600
5KP58(C)A	58	64.4	74.1	5.0	10	10	93.6	53	P-600
5KP60(C)	60	66.7	84.5	5.0	10	10	107	47	P-600
5KP60(C)A	60	66.7	76.7	5.0	10	10	96.8	52	P-600
5KP64(C)	64	71.1	90.1	5.0	10	10	114	44	P-600
5KP64(C)A	64	71.1	81.8	5.0	10	10	103	49	P-600
5KP70(C)	70	77.8	98.6	5.0	10	10	125	40	P-600
5KP70(C)A	70	77.8	89.5	5.0	10	10	113	44	P-600
5KP75(C)	75	83.3	105.7	5.0	10	10	134	37	P-600
5KP75(C)A	75	83.3	95.8	5.0	10	10	121	41	P-600
5KP78(C)	78	86.7	109.8	5.0	10	10	139	36	P-600
5KP78(C)A	78	86.7	99.7	5.0	10	10	126	40	P-600
5KP85(C)	85	94.4	119.2	5.0	10	10	151	33	P-600
5KP85(C)A	85	94.4	108.2	5.0	10	10	137	36	P-600
5KP90(C)	90	100	126.5	5.0	10	10	160	31	P-600
5KP90(C)A	90	100	115.5	5.0	10	10	146	34	P-600
5KP100(C)	100	111	141.0	5.0	10	10	179	28	P-600
5KP100(C)A	100	111	128.0	5.0	10	10	162	31	P-600
5KP110(C)	110	122	154.5	5.0	10	10	196	26	P-600
5KP110(C)A	110	122	140.5	5.0	10	10	177	28	P-600
5KP120(C)	120	133	169.0	5.0	10	10	214	23	P-600
5KP120(C)A	120	133	153.0	5.0	10	10	193	20	P-600
5KP130(C)	130	144	182.5	5.0	10	10	231	22	P-600
5KP130(C)A	130	144	165.5	5.0	10	10	209	24	P-600
5KP150(C)	150	167	211.5	5.0	10	10	268	19	P-600
5KP150(C)A	150	167	192.5	5.0	10	10	243	21	P-600
5KP160(C)	160	178	226.0	5.0	10	10	287	17	P-600
5KP160(C)A	160	178	205.0	5.0	10	10	259	19	P-600
5KP170(C)	170	189	239.5	5.0	10	10	304	16	P-600
5KP170(C)A	170	189	217.5	5.0	10	10	275	18	P-600
5KP180(C)	180	198	253.8	5.0	10	10	322	16	P-600
5KP180(C)A	180	198	230.4	5.0	10	10	292	17	P-600
5KP190(C)	190	209	267.9	1.0	5	5	340	15	P-600
5KP190(C)A	190	209	243.2	1.0	5	5	308	16	P-600
5KP200(C)	200	220	282.0	1.0	5	5	358	14	P-600
5KP200(C)A	200	220	256.0	1.0	5	5	324	15	P-600
5KP210(C)	210	231	296.1	1.0	5	5	376	13	P-600
5KP210(C)A	210	231	268.8	1.0	5	5	340	15	P-600
5KP220(C)	220	242	310.2	1.0	5	5	394	13	P-600
5KP220(C)A	220	242	281.6	1.0	5	5	356	14	P-600

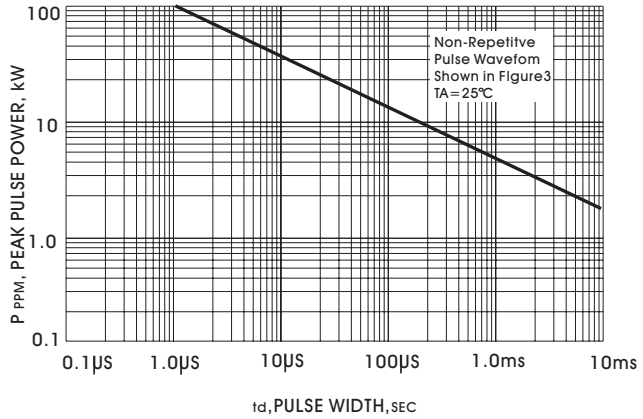


FIGURE 1-PEAK PULSE POWER VS PULSE TIME

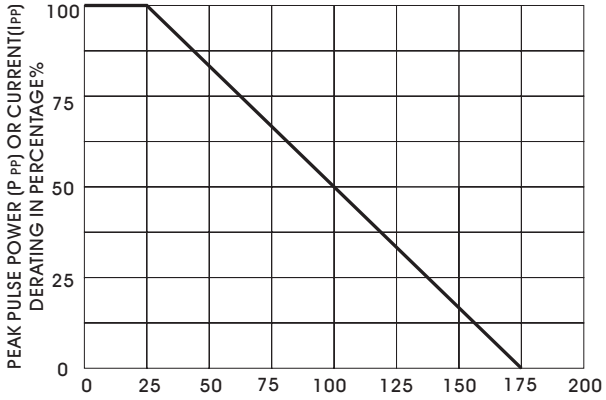


FIGURE2 DERATING CURVE

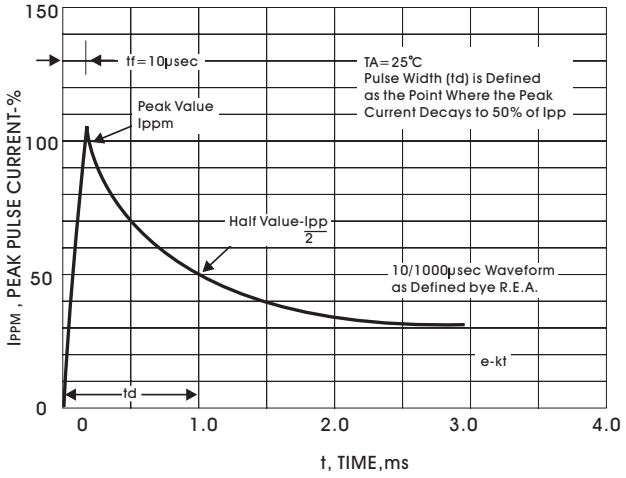


FIGURE 3-PULSE WAVEFORM

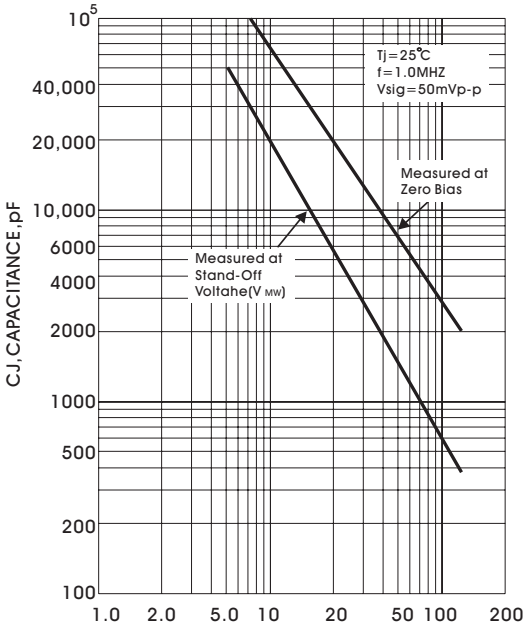


FIGURE 4
TYPICAL CAPACITANCE
VS STAND-OFF VOLTAGE

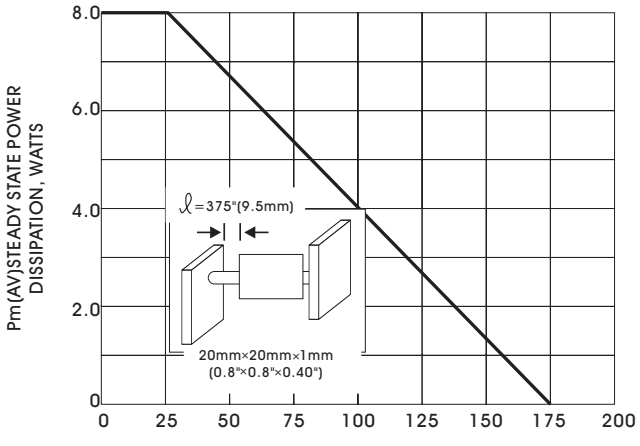


FIG.5-STEADY STATE POWER DERATING CURVE

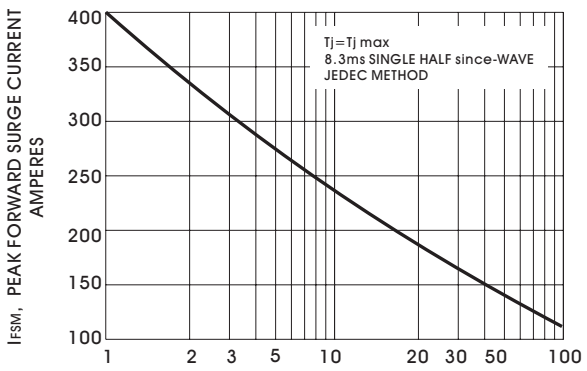


FIG.6-MAXIMUM NON-REPETITEVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL