5KP SERIES

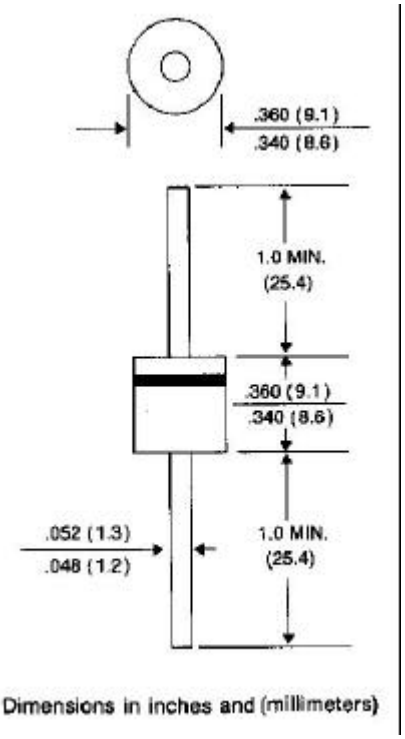
GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 5.0 TO 110 Volts 5000 Watt Peak Pulse Power

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- 5000W Peak Pulse Power capability on 10/1000 S waveform
- Excellent clamping capability
- Repetition rate(Duty Cycle): 0.05%
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- Typical I_D less than 1 A above 10V
- High temperature soldering guaranteed: 300 /10 seconds/.375",(9.5mm) lead length/5lbs., (2.3kg) tension

P-600



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic over glass passivated junction

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

Polarity: Color band denotes positive end(cathode) Except Bipolar

Mounting Position: Any

Weight: 0.07 ounce, 2.1 grams

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types

Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 S waveform (Note 1, FIG.1)	P_{PPM}	Minimum 5000	Watts
Peak Pulse Current on 10/1000 S waveform (Note 1, FIG.3)	I_{PPM}	SEE TABLE 1	Amps
Steady State Power Dissipation at T_L=75 Lead Lengths .375",(9.5mm) (Note 2)	$P_{M(AV)}$	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 Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +175	

NOTES:

1.Non-repetitive current pulse, per Fig. 3 and derated above T_A=25 per Fig. 2.

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

3.Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle= 4 pulses per minutes maximum.

RATING AND CHARACTERISTIC CURVES 5KP SERIES

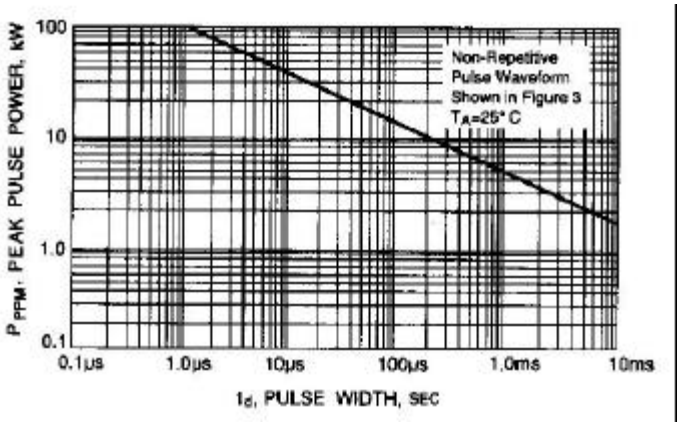


Fig. 1-PEAK PULSE POWER RATING CURVE

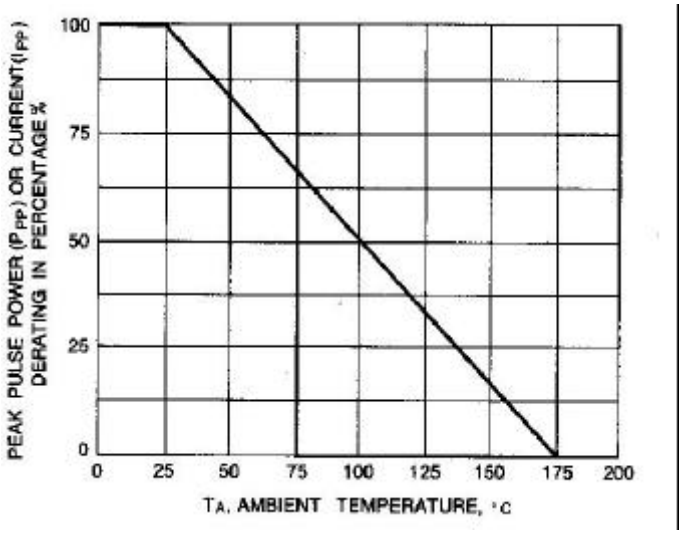


Fig. 2-PULSE DERATING CURVE

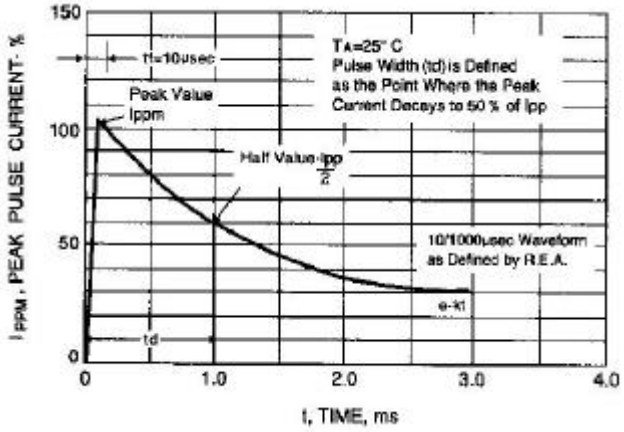


Fig. 3-PULSE WAVEFORM

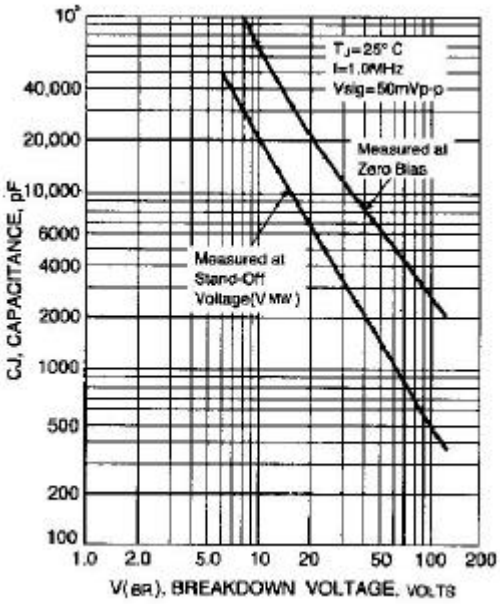


Fig. 4-TYPICAL JUNCTION CAPACITANCE

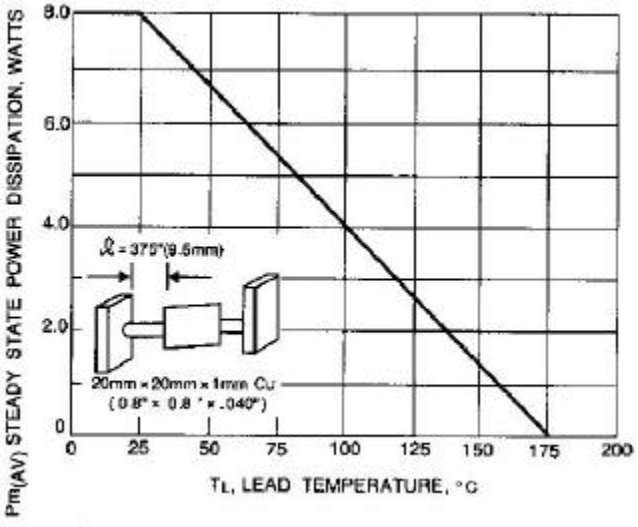


Fig. 5-STEADY STATE POWER DERATING

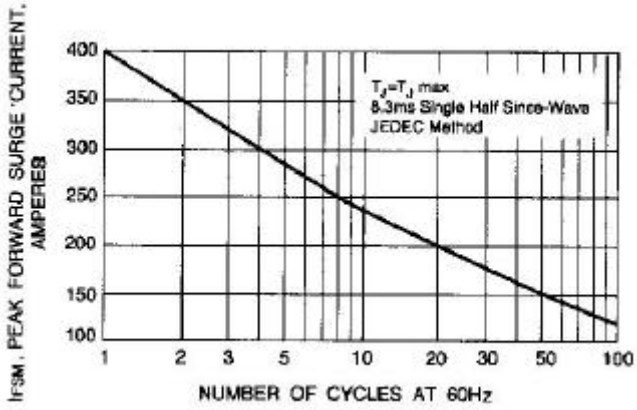


Fig. 6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

UNI-DIRECTIONAL 5000 Watt Axial Lead TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @I_{PP} VC (V)	PEAK PULSE CURRENT I_{PP} (A)	REVERSE LEAKAGE @VRWM IR (uA)
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	6.67	8.15	50	11.4	439	5000
5KP6.0A	6.00	6.67	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	10
5KP10A	10.00	11.10	12.30	5	17.0	294	10

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	192	10
5KP17	17.00	18.90	23.10	5	30.5	164	10
5KP17A	17.00	18.90	20.90	5	27.6	181	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	22.20	27.10	5	35.8	139	10
5KP20A	20.00	22.20	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	119	10
5KP28	28.00	31.10	38.00	5	50.0	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
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	65.10	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

UNI-DIRECTIONAL 5000 Watt Axial Lead TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @I_{PP} VC (V)	PEAK PULSE CURRENT I_{PP} (A)	REVERSE LEAKAGE @VRWM IR (uA)
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

BI-DIRECTIONAL 5000 Watt Axial Lead TVS

BI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @I_{PP} VC (V)	PEAK PULSE CURRENT I_{PP} (A)	REVERSE LEAKAGE @VRWM IR (uA)
5KP5.0C	5.00	6.40	7.30	50	9.6	520	4000
5KP5.0CA	5.00	6.40	7.00	50	9.2	543	4000
5KP6.0C	6.00	6.67	8.15	50	11.4	439	10000
5KP6.0CA	6.00	6.67	7.37	50	10.3	485	10000
5KP6.5C	6.50	7.22	8.82	50	12.3	407	4000
5KP6.5CA	6.50	7.22	7.98	50	11.2	447	4000
5KP7.0C	7.00	7.78	9.51	50	13.3	378	2000
5KP7.0CA	7.00	7.78	8.60	50	12.0	417	2000
5KP7.5C	7.50	8.33	10.20	5	14.3	350	500
5KP7.5CA	7.50	8.33	9.21	5	12.9	388	500
5KP8.0C	8.00	8.89	10.90	5	15.0	333	300
5KP8.0CA	8.00	8.89	9.83	5	13.6	367	300
5KP8.5C	8.50	9.44	11.50	5	15.9	314	100
5KP8.5CA	8.50	9.44	10.40	5	14.4	347	100
5KP9.0C	9.00	10.00	12.20	5	16.9	295	40
5KP9.0CA	9.00	10.00	11.10	5	15.4	325	40
5KP10C	10.00	11.10	13.60	5	18.8	266	10
5KP10CA	10.00	11.10	12.30	5	17.0	294	10
5KP11C	11.00	12.20	14.90	5	20.1	249	10
5KP11CA	11.00	12.20	13.50	5	18.2	274	10
5KP12C	12.00	13.30	16.30	5	22.0	227	10
5KP12CA	12.00	13.30	14.70	5	19.9	251	10
5KP13C	13.00	14.40	17.60	5	23.8	210	10
5KP13CA	13.00	14.40	15.90	5	21.5	232	10
5KP14C	14.00	15.60	19.10	5	25.8	194	10
5KP14CA	14.00	15.60	17.20	5	23.2	215	10
5KP15C	15.00	16.70	20.40	5	26.9	188	10
5KP15CA	15.00	16.70	18.50	5	24.4	206	10
5KP16C	16.00	17.80	21.80	5	28.8	176	10
5KP16CA	16.00	17.80	19.70	5	26.0	192	10
5KP17C	17.00	18.90	23.10	5	30.5	164	10
5KP17CA	17.00	18.90	20.90	5	27.6	181	10
5KP18C	18.00	20.00	24.40	5	32.2	155	10
5KP18CA	18.00	20.00	22.10	5	29.2	172	10
5KP20C	20.00	22.20	27.10	5	35.8	139	10
5KP20CA	20.00	22.20	24.50	5	32.4	154	10
5KP22C	22.00	24.40	29.80	5	39.4	127	10
5KP22CA	22.00	24.40	26.90	5	35.5	141	10
5KP24C	24.00	26.70	32.60	5	43.0	116	10
5KP24CA	24.00	26.70	29.50	5	38.9	128	10
5KP26C	26.00	28.90	35.30	5	46.6	107	10
5KP26CA	26.00	28.90	31.90	5	42.1	119	10
5KP28C	28.00	31.10	38.00	5	50.0	99	10
5KP28CA	28.00	31.10	34.40	5	45.4	110	10
5KP30C	30.00	33.30	40.70	5	53.5	93	10
5KP30CA	30.00	33.30	36.80	5	48.4	103	10
5KP33C	33.00	36.70	44.90	5	59.0	85	10
5KP33CA	33.00	36.70	40.60	5	53.3	94	10
5KP36C	36.00	40.00	48.90	5	64.3	78	10
5KP36CA	36.00	40.00	44.20	5	58.1	85	10
5KP40C	40.00	44.40	54.30	5	71.4	70	10
5KP40CA	40.00	44.40	49.10	5	64.5	78	10
5KP43C	43.00	47.80	58.40	5	76.7	65	10
5KP43CA	43.00	47.80	52.80	5	69.4	72	10
5KP45C	45.00	50.00	61.10	5	80.3	62	10
5KP45CA	45.00	50.00	55.30	5	72.7	69	10
5KP48C	48.00	53.30	65.10	5	85.5	58	10
5KP48CA	48.00	53.30	58.90	5	77.4	65	10
5KP51C	51.00	56.70	69.30	5	91.1	55	10
5KP51CA	51.00	56.70	62.70	5	82.4	61	10
5KP54C	54.00	60.00	73.30	5	96.3	52	10
5KP54CA	54.00	60.00	66.30	5	87.1	57	10
5KP58C	58.00	64.40	78.70	5	103.0	49	10
5KP58CA	58.00	64.40	71.20	5	93.6	53	10
5KP60C	60.00	66.70	81.50	5	107.0	47	10
5KP60CA	60.00	66.70	73.70	5	96.8	52	10
5KP64C	64.00	71.10	86.90	5	114.0	44	10
5KP64CA	64.00	71.10	78.60	5	103.0	49	10

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5KP70	70.00	77.80	95.10	5	125.0	40	10
5KP70CA	70.00	77.80	86.00	5	113.0	44	10
5KP75	75.00	83.30	102.00	5	134.0	37	10
5KP75CA	75.00	83.30	92.10	5	121.0	41	10
5KP78	78.00	86.70	106.00	5	139.0	36	10
5KP78CA	78.00	86.70	95.80	5	126.0	40	10
5KP85	85.00	94.40	115.00	5	151.0	33	10
5KP85CA	85.00	94.40	104.00	5	137.0	36	10
5KP90	90.00	100.00	122.00	5	160.0	31	10
5KP90CA	90.00	100.00	111.00	5	146.0	34	10
5KP100	100.00	111.00	136.00	5	179.0	28	10
5KP100CA	100.00	111.00	123.00	5	162.0	31	10
5KP110	110.00	122.00	149.00	5	196.0	26	10
5KP110CA	110.00	122.00	135.00	5	177.0	28	10