

**GLASS PASSIVATED UNIDIRECTIONAL AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS**

REVERSE VOLTAGE - **5.0 to 180** Volts  
POWER DISSIPATION - **5000** WATTS

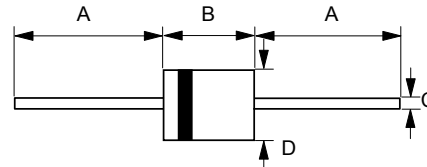
**FEATURES**

- Glass passivated chip
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- The plastic material has U/L recognition 94V-0
- Fast response time

**MECHANICAL DATA**

- Case : Molded Plastic
- Marking : Unidirectional - type number and cathode band Bidirectional - type number only
- Weight : 0.07 ounces, 2.1 grams

**R-6**



R-6		
Dim.	Min.	Max.
A	25.4	-
B	8.60	9.10
C	1.22 $\phi$	1.32 $\phi$
D	8.60 $\phi$	9.10 $\phi$

All Dimensions in millimeter

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT TA = 25°C, TP = 1ms (Note 1)	PPK	5000	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (Note 2)	IFSM	400	AMPS.
Steady State Power Dissipation at TL =120°C lead lengths 0.375" (9.5mm) , see fig.4	PM(AV)	3.5	WATTS
Maximum Instantaneous forward voltage at 100A for unidirectional devices only (Note 3)	VF	SEE NOTE 3	Volts
Operating Temperature Range	TJ	-55 to +175	°C
Storage Temperature Range	TSTG	-55 to +175	°C

NOTES : 1. Non-repetitive current pulse, per fig. 5 and derated above TA= 25°C per fig. 1  
2. 8.3ms single half sine-wave duty cycle= 4 pulses per minutes maximum (uni-directional units only).  
3. VF= 3.5V on 5KP5.0 thru 5KP100 devices and VF= 5.0V on 5KP110 thru 5KP180 devices.

FIG.1 - PULSE DERATING CURVE

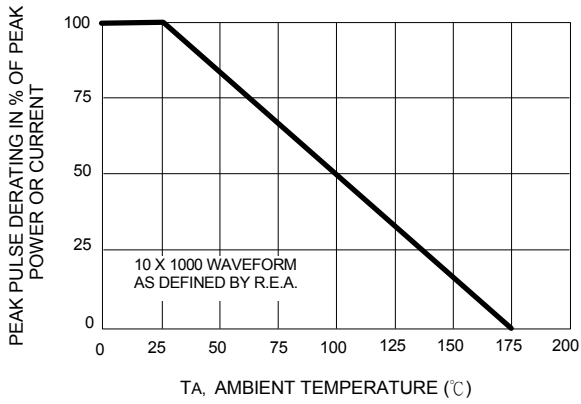


FIG.2 - TYPICAL JUNCTION CAPACITANCE

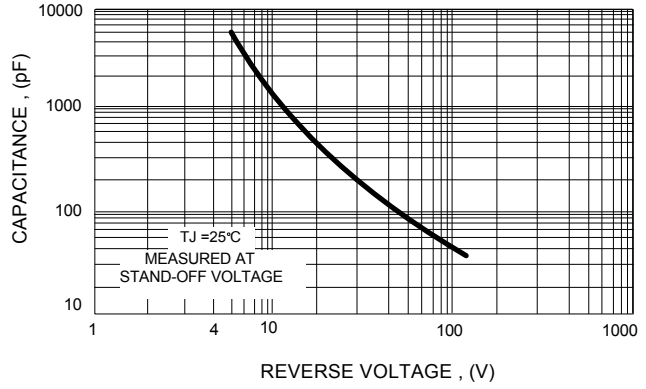


FIG.3 - PULSE RATING CURVE

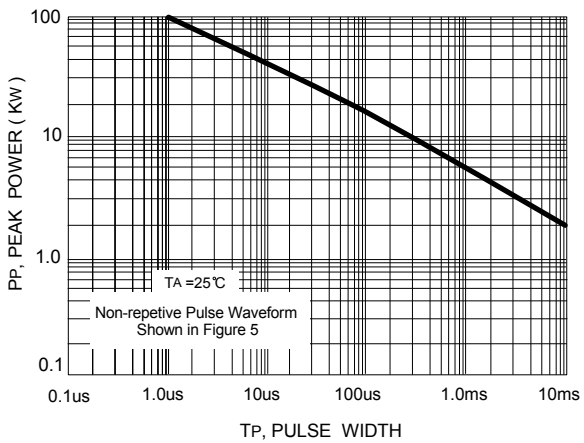


FIG.4 - STEADY STATE POWER DERATING CURVE

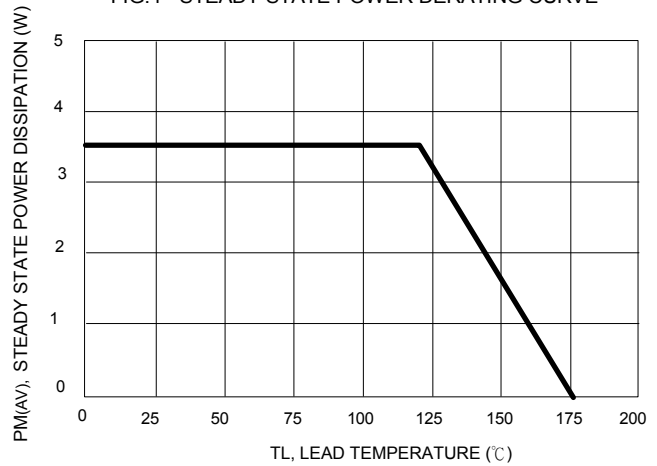
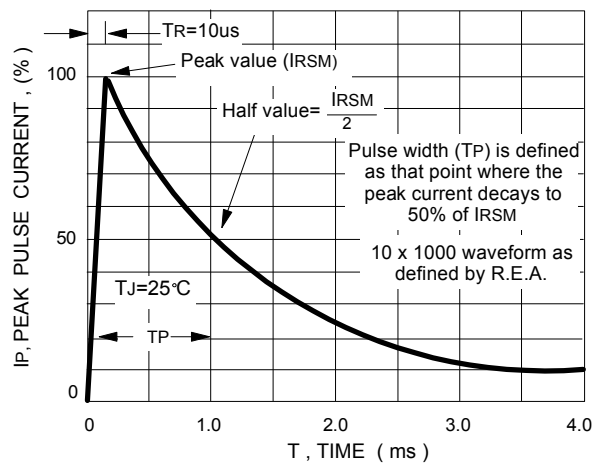


FIG.5 - PULSE WAVEFORM



Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Clamping Voltage @Ipp	Max. Peak Pulse Current	Max. Reverse Leakage @VR
			(UNI)	(BI)	VR (V)			
5KP5.0	5KP5.0C	5.0	6.40	7.82	50	9.6	520.8	5000
5KP5.0A	5KP5.0CA	5.0	6.40	7.07	50	9.2	543.5	5000
5KP6.0	5KP6.0C	6.0	6.67	8.15	50	11.4	438.6	5000
5KP6.0A	5KP6.0CA	6.0	6.67	7.37	50	10.3	485.4	5000
5KP6.5	5KP6.5C	6.5	7.22	8.82	50	12.3	406.5	2000
5KP6.5A	5KP6.5CA	6.5	7.22	7.98	50	11.2	446.4	2000
5KP7.0	5KP7.0C	7.0	7.78	9.51	50	13.3	375.9	1000
5KP7.0A	5KP7.0CA	7.0	7.78	8.60	50	12.0	416.7	1000
5KP7.5	5KP7.5C	7.5	8.33	10.18	5.0	14.3	349.7	250
5KP7.5A	5KP7.5CA	7.5	8.33	9.21	5.0	12.9	387.6	250
5KP8.0	5KP8.0C	8.0	8.89	10.86	5.0	15.0	333.3	150
5KP8.0A	5KP8.0CA	8.0	8.89	9.83	5.0	13.6	367.6	150
5KP8.5	5KP8.5C	8.5	9.44	11.54	5.0	15.9	314.5	50
5KP8.5A	5KP8.5CA	8.5	9.44	10.43	5.0	14.4	347.2	50
5KP9.0	5KP9.0C	9.0	10.00	12.22	5.0	16.9	295.9	20
5KP9.0A	5KP9.0CA	9.0	10.00	11.05	5.0	15.4	324.7	20
5KP10	5KP10C	10.0	11.10	13.56	5.0	18.8	266.0	5
5KP10A	5KP10CA	10.0	11.10	12.3	5.0	17.0	294.1	5
5KP11	5KP11C	11.0	12.20	14.9	5.0	20.1	248.8	5
5KP11A	5KP11 CA	11.0	12.20	13.5	5.0	18.2	274.7	5
5KP12	5KP12C	12.0	13.30	16.3	5.0	22.0	227.3	5
5KP12A	5KP12CA	12.0	13.30	14.7	5.0	19.9	251.3	5
5KP13	5KP13C	13.0	14.40	17.6	5.0	23.8	210.1	5
5KP13A	5KP13CA	13.0	14.40	15.9	5.0	21.5	232.6	5
5KP14	5KP14C	14.0	15.60	19.1	5.0	25.8	193.8	5
5KP14A	5KP14CA	14.0	15.60	17.2	5.0	23.2	215.5	5
5KP15	5KP15C	15.0	16.70	20.4	5.0	26.9	185.9	5
5KP15A	5KP15CA	15.0	16.70	18.5	5.0	24.4	204.9	5
5KP16	5KP16C	16.0	17.80	21.8	5.0	28.8	173.6	5
5KP16A	5KP16CA	16.0	17.80	19.7	5.0	26.0	192.3	5
5KP17	5KP17C	17.0	18.90	23.1	5.0	30.5	163.9	5
5KP17A	5KP17CA	17.0	18.90	20.9	5.0	27.6	181.2	5
5KP18	5KP18C	18.0	20.00	24.4	5.0	32.2	155.3	5
5KP18A	5KP18CA	18.0	20.00	22.1	5.0	29.2	171.2	5
5KP20	5KP20C	20.0	22.20	27.1	5.0	35.8	139.7	5
5KP20A	5KP20CA	20.0	22.20	24.5	5.0	32.4	154.3	5
5KP22	5KP22C	22.0	24.40	29.8	5.0	39.4	126.9	5
5KP22A	5KP22CA	22.0	24.40	27.0	5.0	35.5	140.8	5
5KP24	5KP24C	24.0	26.70	32.6	5.0	43.0	116.3	5
5KP24A	5KP24CA	24.0	26.70	29.5	5.0	38.9	128.5	5
5KP26	5KP26C	26.0	28.9	35.3	5.0	46.6	107.3	5
5KP26A	5KP26CA	26.0	28.9	31.9	5.0	42.1	118.8	5
5KP28	5KP28C	28.0	31.1	38.0	5.0	50.1	99.8	5
5KP28A	5KP28CA	28.0	31.1	34.4	5.0	45.5	109.9	5
5KP30	5KP30C	30.0	33.3	40.7	5.0	53.5	93.5	5
5KP30A	5KP30CA	30.0	33.3	36.8	5.0	48.4	103.3	5

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			(UNI)	(BI)	VR (V)			
5KP33	5KP33C	33.0	36.7	44.8	5.0	59.0	84.7	5
5KP33A	5KP33CA	33.0	36.7	40.6	5.0	53.3	93.8	5
5KP36	5KP36C	36.0	40.0	48.9	5.0	64.3	77.8	5
5KP36A	5KP36CA	36.0	40.0	44.2	5.0	58.1	86.1	5
5KP40	5KP40C	40.0	44.4	54.3	5.0	71.4	70.0	5
5KP40A	5KP40CA	40.0	44.4	49.1	5.0	64.5	77.5	5
5KP43	5KP43C	43.0	47.8	58.4	5.0	76.7	65.2	5
5KP43A	5KP43CA	43.0	47.8	52.8	5.0	69.4	72.0	5
5KP45	5KP45C	45.0	50.0	61.1	5.0	80.3	62.3	5
5KP45A	5KP45CA	45.0	50.0	55.3	5.0	72.7	68.8	5
5KP48	5KP48C	48.0	53.3	65.1	5.0	85.5	58.5	5
5KP48A	5KP48CA	48.0	53.3	58.9	5.0	77.4	64.6	5
5KP51	5KP51 C	51.0	56.7	69.3	5.0	91.1	54.9	5
5KP51A	5KP51 CA	51.0	56.7	62.7	5.0	82.4	60.7	5
5KP54	5KP54C	54.0	60.0	73.3	5.0	96.3	51.9	5
5KP54A	5KP54CA	54.0	60.0	66.3	5.0	87.1	57.4	5
5KP58	5KP58C	58.0	64.4	78.7	5.0	103.0	48.5	5
5KP58A	5KP58CA	58.0	64.4	71.2	5.0	93.6	53.4	5
5KP60	5KP60C	60.0	66.7	81.5	5.0	107.0	46.7	5
5KP60A	5KP60CA	60.0	66.7	73.7	5.0	96.8	51.7	5
5KP64	5KP64C	64.0	71.1	86.9	5.0	114.0	43.9	5
5KP64A	5KP64CA	64.0	71.1	78.6	5.0	103.0	48.5	5
5KP70	5KP70C	70.0	77.8	95.1	5.0	125.0	40.0	5
5KP70A	5KP70CA	70.0	77.8	86.0	5.0	113.0	44.2	5
5KP75	5KP75C	75.0	83.3	101.8	5.0	134.0	37.3	5
5KP75A	5KP75A	75.0	83.3	92.1	5.0	121.0	41.3	5
5KP78	5KP78C	78.0	86.7	105.9	5.0	139.0	36.0	5
5KP78A	5KP78CA	78.0	86.7	95.8	5.0	126.0	39.7	5
5KP85	5KP85C	85.0	94.4	115.4	5.0	151.0	33.1	5
5KP85A	5KP85CA	85.0	94.4	104.3	5.0	137.0	36.5	5
5KP90	5KP90C	90.0	100.0	122.2	5.0	160.0	31.3	5
5KP90A	5KP90CA	90.0	100.0	110.5	5.0	146.0	34.2	5
5KP100	5KP100C	100.0	111.0	135.6	5.0	179.0	27.9	5
5KP110	5KP110C	110.0	122.0	149.1	5.0	196.0	25.5	5
5KP120	5KP120C	120.0	133.0	162.5	5.0	214.0	23.4	5
5KP150	5KP150C	150.0	167.0	204.1	5.0	268.0	18.7	5
5KP180	N/A	180.0	198.0	242.0	5.0	322.0	15.5	5

NOTES:

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device .

For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

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## **Important Notice and Disclaimer**

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