

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

REVERSE VOLTAGE - **5.0 to 220** Volts
POWER DISSIPATION - **3000** WATTS

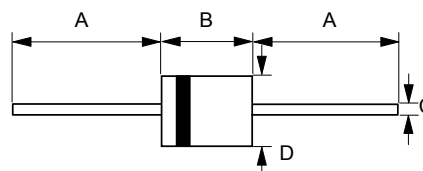
FEATURES

- 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 $\varnothing$	1.32 $\varnothing$
D	8.60 $\varnothing$	9.10 $\varnothing$
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 $T_J = 25^\circ\text{C}$, $T_P = 1\text{ms}$ (Note 1)	P_{PK}	3000	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave @ $T_J = 25^\circ\text{C}$ (Note 2)	I_{FSM}	300	AMPS.
Steady State Power Dissipation at $T_L = 120^\circ\text{C}$ lead lengths 0.375" (9.5mm) , see fig.6	$P_{M(AV)}$	3.5	WATTS
Operating Temperature Range	T_J	-55 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ\text{C}$

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above $T_J = 25^\circ\text{C}$ per Fig.1.
2. Only for unidirectional units.

REV. 4, Nov-2010, KDIG02

FIG.1 - PULSE DERATING CURVE

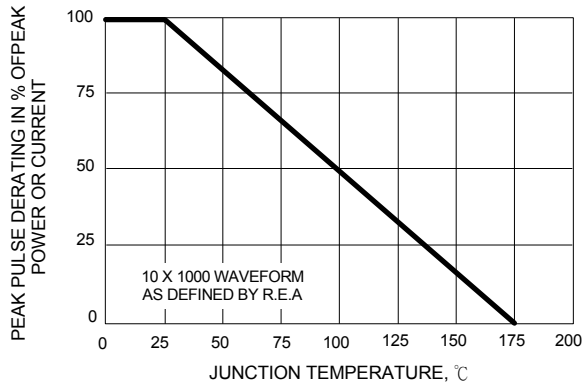


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

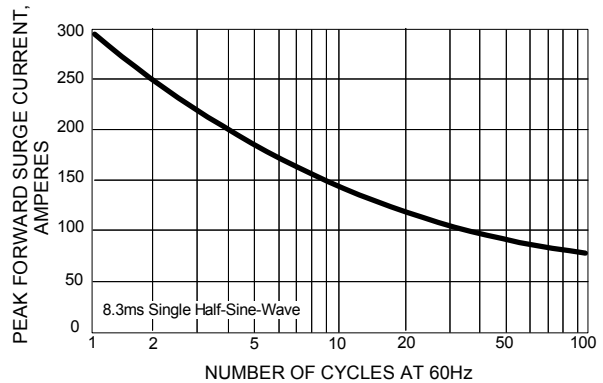


FIG.3 - PULSE WAVEFORM

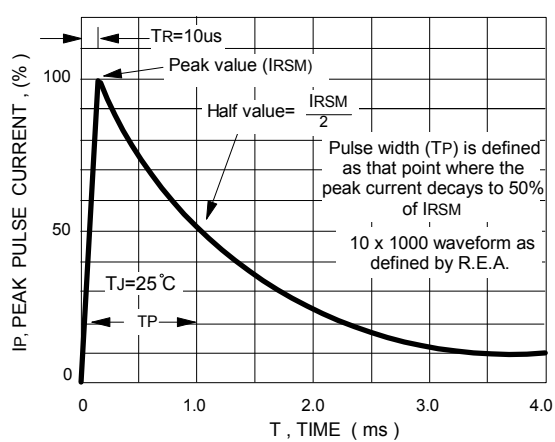


FIG.4 - TYPICAL JUNCTION CAPACITANCE

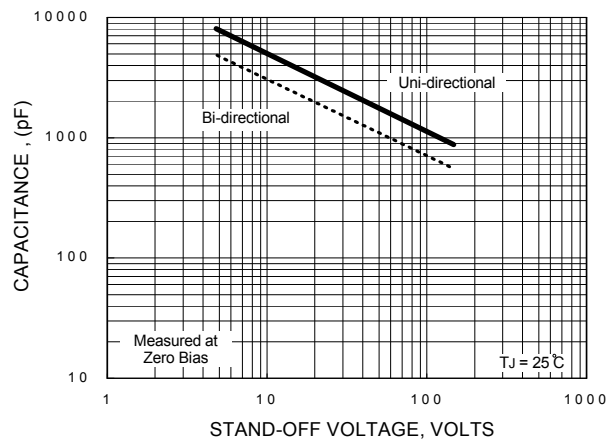


FIG.5 - PULSE RATING CURVE

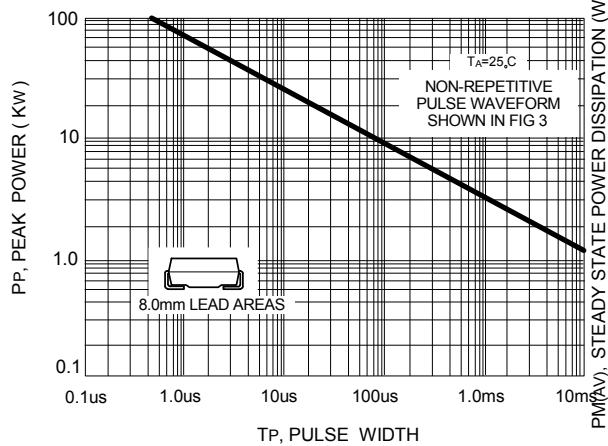
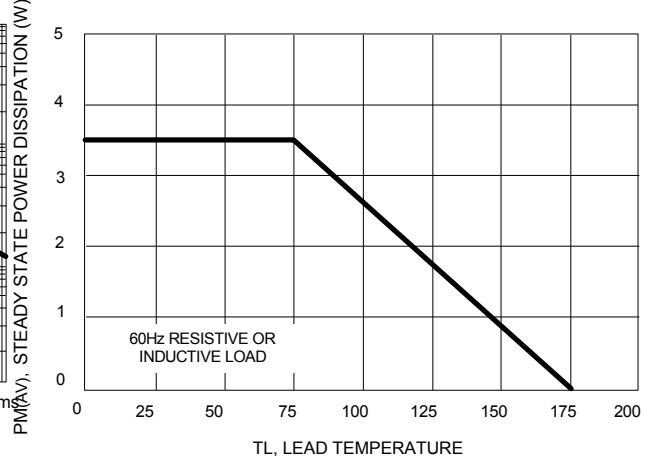


FIG.6 - STEADY STATE POWER DERATING CURVE



Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
(UNI)	(BI)	VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Vc (V)	Ipp (A)
3KP5.0	3KP5.0C	5	6.40	7.82	10	1000.0	9.6	312.5
3KP5.0A	3KP5.0CA	5	6.40	7.07	10	1000.0	9.2	326.1
3KP6.0	3KP6.0C	6	6.67	8.15	10	1000.0	11.4	263.2
3KP6.0A	3KP6.0CA	6	6.67	7.37	10	1000.0	10.3	291.3
3KP6.5	3KP6.5C	6.5	7.22	8.82	10	500.0	12.3	243.9
3KP6.5A	3KP6.5CA	6.5	7.22	7.98	10	500.0	11.2	267.9
3KP7.0	3KP7.0C	7	7.78	9.51	10	200.0	13.3	225.6
3KP7.0A	3KP7.0CA	7	7.78	8.60	10	200.0	12.0	250.0
3KP7.5	3KP7.5C	7.5	8.33	10.18	1	100.0	14.3	209.8
3KP7.5A	3KP7.5CA	7.5	8.33	9.21	1	100.0	12.9	232.6
3KP8.0	3KP8.0C	8	8.89	10.86	1	50.0	15.0	200.0
3KP8.0A	3KP8.0CA	8	8.89	9.83	1	50.0	13.6	220.6
3KP8.5	3KP8.5C	8.5	9.44	11.54	1	25.0	15.9	188.7
3KP8.5A	3KP8.5CA	8.5	9.44	10.43	1	25.0	14.4	208.3
3KP9.0	3KP9.0C	9	10.00	12.22	1	10.0	16.9	177.5
3KP9.0A	3KP9.0CA	9	10.00	11.05	1	10.0	15.4	194.8
3KP10	3KP10C	10	11.10	13.56	1	5.0	18.8	159.6
3KP10A	3KP10CA	10	11.10	12.27	1	5.0	17.0	176.5
3KP11	3KP11C	11	12.20	14.9	1	5.0	20.1	149.3
3KP11A	3KP11CA	11	12.20	13.5	1	5.0	18.2	164.8
3KP12	3KP12C	12	13.30	16.3	1	5.0	22.0	136.4
3KP12A	3KP12CA	12	13.30	14.7	1	5.0	19.9	150.8
3KP13	3KP13C	13	14.40	17.6	1	5.0	23.8	126.1
3KP13A	3KP13CA	13	14.40	15.9	1	5.0	21.5	139.5
3KP14	3KP14C	14	15.60	19.1	1	5.0	25.8	116.3
3KP14A	3KP14CA	14	15.60	17.2	1	5.0	23.2	129.3
3KP15	3KP15C	15	16.70	20.4	1	5.0	26.9	111.5
3KP15A	3KP15CA	15	16.70	18.5	1	5.0	24.2	124.0
3KP16	3KP16C	16	17.80	21.8	1	5.0	28.8	104.2
3KP16A	3KP16CA	16	17.80	19.7	1	5.0	26.0	115.4
3KP17	3KP17C	17	18.90	23.1	1	5.0	30.5	98.4
3KP17A	3KP17CA	17	18.90	20.9	1	5.0	27.6	108.7
3KP18	3KP18C	18	20.00	24.4	1	5.0	32.2	93.2
3KP18A	3KP18CA	18	20.00	22.1	1	5.0	29.2	102.7
3KP20	3KP20C	20	22.20	27.1	1	5.0	35.8	83.8
3KP20A	3KP20CA	20	22.20	24.5	1	5.0	32.4	92.6
3KP22	3KP22C	22	24.40	29.8	1	5.0	39.4	76.1
3KP22A	3KP22CA	22	24.40	27.0	1	5.0	35.5	84.5
3KP24	3KP24C	24	26.70	32.6	1	5.0	43.0	69.8
3KP24A	3KP24CA	24	26.70	29.5	1	5.0	38.9	77.1
3KP26	3KP26C	26	28.9	35.3	1	5	46.6	64.4
3KP26A	3KP26CA	26	28.9	31.9	1	5	42.1	71.3

Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
(UNI)	(BI)	VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Vc (V)	Ipp (A)
3KP28	3KP28C	28	31.1	38.0	1	5	50.0	60.0
3KP28A	3KP28CA	29	31.1	34.4	1	5	45.4	66.1
3KP30	3KP30C	30	33.3	40.7	1	5	53.5	56.1
3KP30A	3KP30CA	30	33.3	36.8	1	5	48.4	62.0
3KP33	3KP33C	33	36.7	44.8	1	5	59.0	50.8
3KP33A	3KP33CA	33	36.7	40.6	1	5	53.3	56.3
3KP36	3KP36C	36	40	48.9	1	5	64.3	46.7
3KP36A	3KP36CA	36	40	44.2	1	5	58.1	51.6
3KP40	3KP40C	40	44.4	54.3	1	5	71.4	42.0
3KP40A	3KP40CA	40	44.4	49.1	1	5	64.5	46.5
3KP43	3KP43C	43	47.8	58.4	1	5	76.7	39.1
3KP43A	3KP43CA	43	47.8	52.8	1	5	69.4	43.2
3KP45	3KP45C	45	50	61.1	1	5	80.3	37.4
3KP45A	3KP45CA	45	50	55.3	1	5	72.7	41.3
3KP48	3KP48C	48	53.3	65.1	1	5	85.5	35.1
3KP48A	3KP48CA	48	53.3	58.9	1	5	77.4	38.8
3KP51	3KP51C	51	56.7	69.3	1	5	91.1	32.9
3KP51A	3KP51CA	51	56.7	62.7	1	5	82.4	36.4
3KP54	3KP54C	54	60	73.3	1	5	96.3	31.2
3KP54A	3KP54CA	54	60	66.3	1	5	87.1	34.4
3KP58	3KP58C	58	64.4	78.7	1	5	103.0	29.1
3KP58A	3KP58CA	58	64.4	71.2	1	5	93.6	32.1
3KP60	3KP60C	60	66.7	81.5	1	5	107.0	28.0
3KP60A	3KP60CA	60	66.7	73.7	1	5	96.8	31.0
3KP64	3KP64C	64	71.1	86.9	1	5	114.0	26.3
3KP64A	3KP64CA	64	71.1	78.6	1	5	103.0	29.1
3KP70	3KP70C	70	77.8	95.1	1	5	125.0	24.0
3KP70A	3KP70CA	70	77.8	86.0	1	5	113.0	26.5
3KP75	3KP75C	75	83.3	101.8	1	5	134.0	22.4
3KP75A	3KP75CA	75	83.3	92.1	1	5	121.0	24.8
3KP78	3KP78C	78	86.7	105.9	1	5	139.0	21.6
3KP78A	3KP78CA	78	86.7	95.8	1	5	126.0	23.8
3KP85	3KP85C	85	94.4	115.4	1	5	151.0	19.9
3KP85A	3KP85CA	85	94.4	104.3	1	5	137.0	21.9
3KP90	3KP90C	90	100	122.2	1	5	160.0	18.8
3KP90A	3KP90CA	90	100	110.5	1	5	146.0	20.5
3KP100	3KP100C	100	111	135.6	1	5	179.0	16.8
3KP100A	3KP100CA	100	111	122.7	1	5	162.0	18.5
3KP110	3KP110C	110	122.0	149.1	1	5	196.0	15.3
3KP110A	3KP110CA	110	122.0	134.8	1	5	177.0	16.9
3KP120	3KP120C	120	133.0	162.5	1	5	214.0	14.0
3KP120A	3KP120CA	120	133.0	147.0	1	5	193.0	15.5
3KP130	3KP130C	130	144.0	176.0	1	5	231.0	13.0
3KP130A	3KP130CA	130	144.0	159.2	1	5	209.0	14.4

Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
(UNI)	(BI)	VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Vc (V)	Ipp (A)
3KP150	3KP150C	150	167.0	204.1	1	5	268.0	11.2
3KP150A	3KP150CA	150	167.0	184.6	1	5	243.0	12.3
3KP160	3KP160C	160	178.0	217.5	1	5	287.0	10.5
3KP160A	3KP160CA	160	178.0	196.7	1	5	259.0	11.6
3KP170	3KP170C	170	189.0	231.0	1	5	304.0	9.9
3KP170A	3KP170CA	170	189.0	208.9	1	5	275.0	10.9
3KP180	3KP180C	180	198.0	242.0	1	5	322.0	9.3
3KP180A	3KP180CA	180	198.0	218.8	1	5	292.0	10.3
3KP190	3KP190C	190	209.0	255.4	1	5	340.0	8.8
3KP190A	3KP190CA	190	209.0	231.0	1	5	308.0	9.7
3KP200	3KP200C	200	220.0	268.8	1	5	358.0	8.4
3KP200A	3KP200CA	200	220.0	243.2	1	5	324.0	9.3
3KP210	3KP210C	210	231.0	282.3	1	5	376.0	8.0
3KP210A	3KP210CA	210	231.0	255.3	1	5	340.0	8.8
3KP220	3KP220C	220	242.0	295.7	1	5	394.0	7.6
3KP220A	3KP220CA	220	242.0	267.5	1	5	356.0	8.4

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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