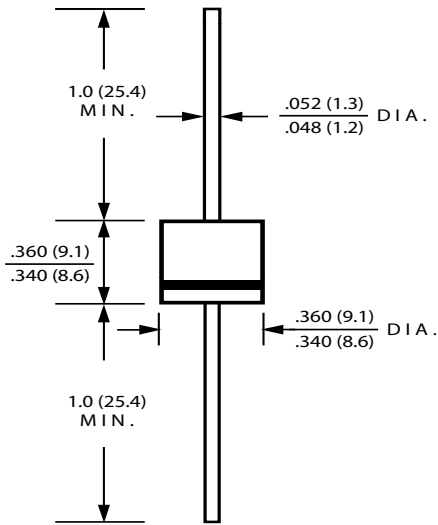




Transient Voltage Suppressors(3000W)



R6

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Compound
3KP SERIES	General
3KP SERIES-H	Halogen Free
3KP SERIES-Q	Automotive

PRIMARY CHARACTERISTICS	
V _{BR}	5~190V
PPPM	3000W
P _D	6.5W
T _J max	150°C

Features

- Glass passivated chip
- 3000 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- Very fast response time
- AEC-Q101 Qualified

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end except Bipolar
- Weight: 2.04 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation with a 10/1000 μ s waveform	P _{PP}	Minimum3000	W
Peak pulse current with a 10/1000 μ s waveform	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL=75°C	P _D	6.5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only(1)	I _{FSM}	300	A
Operating and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note:

(1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

**Transient Voltage Suppressors(3000W)**

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	V	V	V	mA	V	A	uA
3KP5.0A	3KP5.0CA	5.00	6.40	7.00	50.0	9.2	326.1	1000
3KP6.0A	3KP6.0CA	6.00	6.67	7.37	50.0	10.3	291.3	1000
3KP6.5A	3KP6.5CA	6.50	7.22	7.98	50.0	11.2	267.9	500
3KP7.0A	3KP7.0CA	7.00	7.78	8.60	50.0	12.0	250.0	200
3KP7.5A	3KP7.5CA	7.50	8.33	9.21	5.0	12.9	232.6	100
3KP8.0A	3KP8.0CA	8.00	8.89	9.83	5.0	13.6	220.6	50
3KP8.5A	3KP8.5CA	8.50	9.44	10.40	5.0	14.4	208.3	25
3KP9.0A	3KP9.0CA	9.00	10.00	11.10	5.0	15.4	194.8	10
3KP10A	3KP10CA	10.00	11.10	12.30	5.0	17.0	176.5	5
3KP11A	3KP11CA	11.00	12.20	13.50	5.0	18.2	164.8	5
3KP12A	3KP12CA	12.00	13.30	14.70	5.0	19.9	150.8	5
3KP13A	3KP13CA	13.00	14.40	15.90	5.0	21.5	139.5	5
3KP14A	3KP14CA	14.00	15.60	17.20	5.0	23.2	129.3	5
3KP15A	3KP15CA	15.00	16.70	18.50	5.0	24.4	123.0	5
3KP16A	3KP16CA	16.00	17.80	19.70	5.0	26.0	115.4	5
3KP17A	3KP17CA	17.00	18.90	20.90	5.0	27.6	108.7	5
3KP18A	3KP18CA	18.00	20.00	22.10	5.0	29.2	102.7	5
3KP19A	3KP19CA	19.00	21.10	23.30	5.0	30.8	97.5	5
3KP20A	3KP20CA	20.00	22.20	24.50	5.0	32.4	92.6	5
3KP22A	3KP22CA	22.00	24.40	26.90	5.0	35.5	84.5	5
3KP24A	3KP24CA	24.00	26.70	29.50	5.0	38.9	77.1	5
3KP26A	3KP26CA	26.00	28.90	31.90	5.0	42.1	71.3	5
3KP28A	3KP28CA	28.00	31.10	34.40	5.0	45.4	66.1	5
3KP30A	3KP30CA	30.00	33.30	36.80	5.0	48.4	62.0	5
3KP33A	3KP33CA	33.00	36.70	40.60	5.0	53.3	56.3	5
3KP36A	3KP36CA	36.00	40.00	44.20	5.0	58.1	51.6	5
3KP40A	3KP40CA	40.00	44.40	49.10	5.0	64.5	46.5	5
3KP43A	3KP43CA	43.00	47.80	52.80	5.0	69.4	43.2	5
3KP45A	3KP45CA	45.00	50.00	55.30	5.0	72.7	41.3	5
3KP48A	3KP48CA	48.00	53.30	58.90	5.0	77.4	38.8	5
3KP51A	3KP51CA	51.00	56.70	62.70	5.0	82.4	36.4	5
3KP54A	3KP54CA	54.00	60.00	66.30	5.0	87.1	34.4	5
3KP58A	3KP58CA	58.00	64.40	71.20	5.0	93.6	32.1	5
3KP60A	3KP60CA	60.00	66.70	73.70	5.0	96.8	31.0	5
3KP64A	3KP64CA	64.00	71.10	78.60	5.0	103.0	29.1	5
3KP70A	3KP70CA	70.00	77.80	86.00	5.0	113.0	26.5	5
3KP75A	3KP75CA	75.00	83.30	92.10	5.0	121.0	24.8	5
3KP78A	3KP78CA	78.00	86.70	95.80	5.0	126.0	23.8	5
3KP80A	3KP80CA	80.00	88.80	97.60	5.0	130.0	23.1	5
3KP85A	3KP85CA	85.00	94.40	104.00	5.0	137.0	21.9	5
3KP90A	3KP90CA	90.00	100.00	111.00	5.0	146.0	20.5	5



Transient Voltage Suppressors(3000W)

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	V	V	V	mA	V	A	uA
3KP100A	3KP100CA	100.00	111.00	123.00	5.0	162.0	18.5	5
3KP110A	3KP110CA	110.00	122.00	135.00	5.0	177.0	16.9	5
3KP120A	3KP120CA	120.00	133.00	147.00	5.0	193.0	15.5	5
3KP130A	3KP130CA	130.00	144.00	159.00	5.0	209.0	14.4	5
3KP140A	3KP140CA	140.00	155.00	171.00	5.0	227.0	13.2	5
3KP150A	3KP150CA	150.00	167.00	185.00	5.0	243.0	12.3	5
3KP160A	3KP160CA	160.00	178.00	197.00	5.0	259.0	11.6	5
3KP170A	3KP170CA	170.00	189.00	209.00	5.0	275.0	10.9	5
3KP180A	3KP180CA	180.00	200.00	220.00	5.0	292.0	10.3	5
3KP190A	3KP190CA	190.00	211.00	232.00	5.0	308.0	9.75	5

Note:

1. Suffix 'A' denotes 5% tolerance device.
2. For Bi-Directional devices having VR of 10volts and under, the IR limit is double.
3. Add suffix 'CA' after part number to specify Bi-directional devices.



Transient Voltage Suppressors(3000W)

Fig. 1 - Pulse Derating Curve

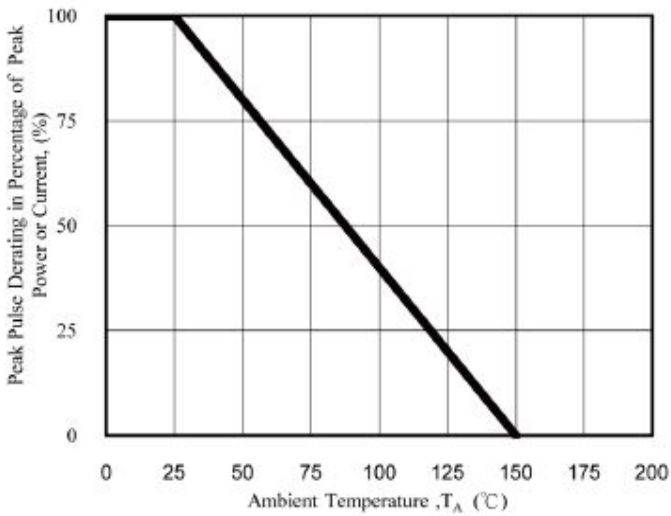


Fig. 2 - Maximum Non-Repetitive Surge Current

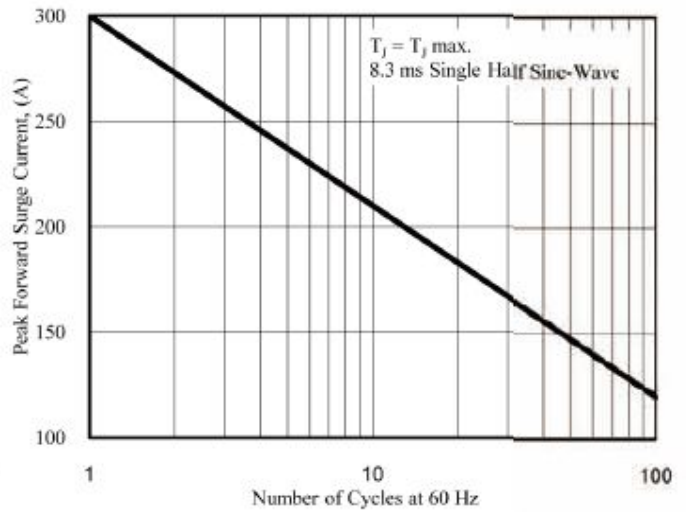


Fig. 3 - Steady State Power Derating Curve

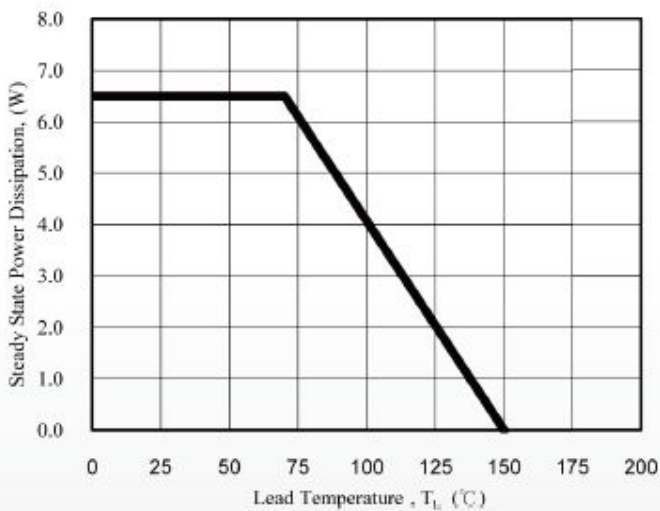


Fig. 4 - Peak Pulse Power Rating Curve

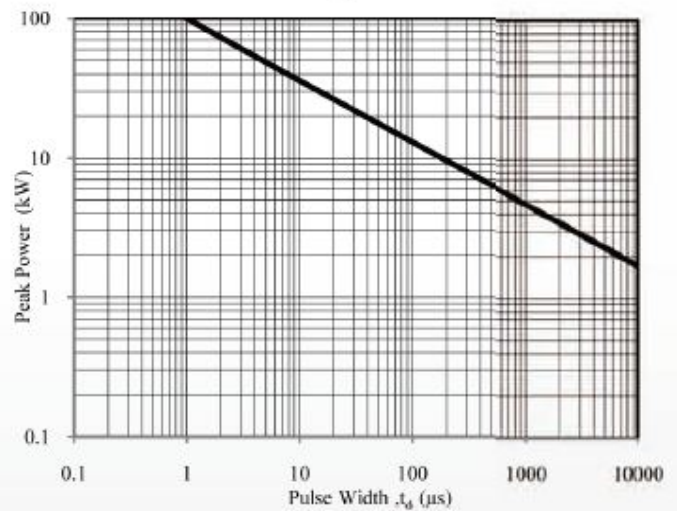


Fig. 5 - Pulse Waveform

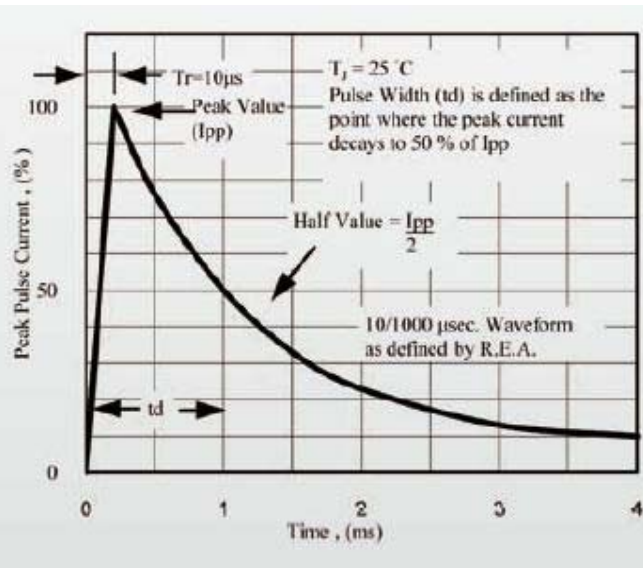


Fig. 6 - Typical junction Capacitance

