

3KP5.0A~3KP220CA

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 3000 Watt

BREAK DOWN VOLTAGE 5.0 to 220 Volt

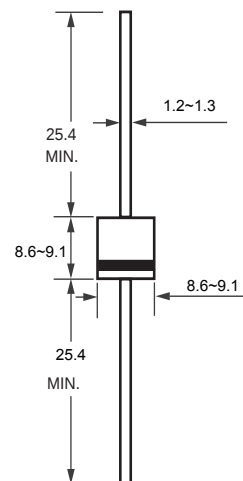
R-6 Unit:mm

FEATURES

- Glass passivated junction
- Low inductance
- Plastic Material has UL Flammability Classification 94V-O
- Fast response time: typically less than 1.0ps from 0V to BV min
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air ±30kV, Contact ±30kV
- Lead free in compliance with EU RoHS

MECHANICAL DATA

- Case: Molded plastic over passivated junction.
- Polarity: Color band denotes cathode end



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$ (Notes 1)	P_{PP}	3000	Watts
Steady State Power Dissipation on Infinite Heat Sink at $T_L=75^\circ\text{C}$	$P_{M(AV)}$	7.0	W
Peak Forward Surge Current per Fig.5 (Notes 2)	I_{FSM}	300	Amps
Peak Pulse Current on $t_p=10/1000\mu\text{s}$ waveform (Notes 1)	I_{PPM}	see Table 1	Amps
Typical Thermal Resistance Junction to Air	$R_{\theta JA}$	40	$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

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ELECTRICAL CHARACTERISTICS @25°C

Part Number (Uni)	Part Number (Bi)	Marking		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{pp} (V)	Maximum Peak Pulse Current I_{pp} (A)	Maximum Reverse Leakage I_R @ V_R (μA)
		UNI	BI		MIN	MAX				
3KP5.0A	3KP5.0CA	3KP5.0A	3KP5.0CA	5.0	6.40	7.00	50	9.2	326.1	5000
3KP6.0A	3KP6.0CA	3KP6.0A	3KP6.0CA	6.0	6.67	7.37	50	10.3	291.3	5000
3KP6.5A	3KP6.5CA	3KP6.5A	3KP6.5CA	6.5	7.22	7.98	50	11.2	267.9	2000
3KP7.0A	3KP7.0CA	3KP7.0A	3KP7.0CA	7.0	7.78	8.60	50	12.0	250.0	1000
3KP7.5A	3KP7.5CA	3KP7.5A	3KP7.5CA	7.5	8.33	9.21	5	12.9	232.6	250
3KP8.0A	3KP8.0CA	3KP8.0A	3KP8.0CA	8.0	8.89	9.83	5	13.6	220.6	150
3KP8.5A	3KP8.5CA	3KP8.5A	3KP8.5CA	8.5	9.44	10.40	5	14.4	208.3	50
3KP9.0A	3KP9.0CA	3KP9.0A	3KP9.0CA	9.0	10.00	11.10	5	15.4	194.8	20
3KP10A	3KP10CA	3KP10A	3KP10CA	10.0	11.10	12.30	5	17.0	176.5	15
3KP11A	3KP11CA	3KP11A	3KP11CA	11.0	12.20	13.50	5	18.2	164.8	2
3KP12A	3KP12CA	3KP12A	3KP12CA	12.0	13.30	14.70	5	19.9	150.8	2
3KP13A	3KP13CA	3KP13A	3KP13CA	13.0	14.40	15.90	5	21.5	139.5	2
3KP14A	3KP14CA	3KP14A	3KP14CA	14.0	15.60	17.20	5	23.2	129.3	2
3KP15A	3KP15CA	3KP15A	3KP15CA	15.0	16.70	18.50	5	24.4	123.0	2
3KP16A	3KP16CA	3KP16A	3KP16CA	16.0	17.80	19.70	5	26.0	115.4	2
3KP17A	3KP17CA	3KP17A	3KP17CA	17.0	18.90	20.90	5	27.6	108.7	2
3KP18A	3KP18CA	3KP18A	3KP18CA	18.0	20.00	22.10	5	29.2	102.7	2
3KP20A	3KP20CA	3KP20A	3KP20CA	20.0	22.20	24.50	5	32.4	92.6	2
3KP22A	3KP22CA	3KP22A	3KP22CA	22.0	24.40	26.90	5	35.5	84.5	2
3KP24A	3KP24CA	3KP24A	3KP24CA	24.0	26.70	29.50	5	38.9	77.1	2
3KP26A	3KP26CA	3KP26A	3KP26CA	26.0	28.90	31.90	5	42.1	71.3	2
3KP28A	3KP28CA	3KP28A	3KP28CA	28.0	31.10	34.40	5	45.4	66.1	2
3KP30A	3KP30CA	3KP30A	3KP30CA	30.0	33.30	36.80	5	48.4	62.0	2
3KP33A	3KP33CA	3KP33A	3KP33CA	33.0	36.70	40.60	5	53.3	56.3	2
3KP36A	3KP36CA	3KP36A	3KP36CA	36.0	40.00	44.20	5	58.1	51.6	2
3KP40A	3KP40CA	3KP40A	3KP40CA	40.0	44.40	49.10	5	64.5	46.5	2
3KP43A	3KP43CA	3KP43A	3KP43CA	43.0	47.80	52.80	5	69.4	43.2	2
3KP45A	3KP45CA	3KP45A	3KP45CA	45.0	50.00	55.30	5	72.7	41.3	2
3KP48A	3KP48CA	3KP48A	3KP48CA	48.0	53.30	58.90	5	77.4	38.8	2
3KP51A	3KP51CA	3KP51A	3KP51CA	51.0	56.70	62.70	5	82.4	36.4	2
3KP54A	3KP54CA	3KP54A	3KP54CA	54.0	60.00	66.30	5	87.1	34.4	2
3KP58A	3KP58CA	3KP58A	3KP58CA	58.0	64.40	71.20	5	93.6	32.1	2
3KP60A	3KP60CA	3KP60A	3KP60CA	60.0	66.70	73.70	5	96.8	31.0	2
3KP64A	3KP64CA	3KP64A	3KP64CA	64.0	71.10	78.60	5	103.0	29.1	2
3KP70A	3KP70CA	3KP70A	3KP70CA	70.0	77.80	86.00	5	113.0	26.5	2
3KP75A	3KP75CA	3KP75A	3KP75CA	75.0	83.30	92.10	5	121.0	24.8	2
3KP78A	3KP78CA	3KP78A	3KP78CA	78.0	86.70	95.80	5	126.0	23.8	2
3KP85A	3KP85CA	3KP85A	3KP85CA	85.0	94.40	104.00	5	137.0	21.9	2
3KP90A	3KP90CA	3KP90A	3KP90CA	90.0	100.00	111.00	5	146.0	20.5	2
3KP100A	3KP100CA	3KP100A	3KP100CA	100.0	111.00	123.00	5	162.0	18.5	2
3KP110A	3KP110CA	3KP110A	3KP110CA	110.0	122.00	135.00	5	177.0	16.9	2
3KP120A	3KP120CA	3KP120A	3KP120CA	120.0	133.00	147.00	5	193.0	15.5	2
3KP130A	3KP130CA	3KP130A	3KP130CA	130.0	144.00	159.00	5	209.0	14.4	2
3KP150A	3KP150CA	3KP150A	3KP150CA	150.0	167.00	185.00	5	243.0	12.3	2
3KP160A	3KP160CA	3KP160A	3KP160CA	160.0	178.00	197.00	5	259.0	11.6	2
3KP170A	3KP170CA	3KP170A	3KP170CA	170.0	189.00	209.00	5	275.0	10.9	2
3KP180A	3KP180CA	3KP180A	3KP180CA	180.0	200.00	221.00	5	289.0	10.4	2
3KP190A	3KP190CA	3KP190A	3KP190CA	190.0	211.00	233.00	5	310.0	9.7	2
3KP200A	3KP200CA	3KP200A	3KP200CA	200.0	222.00	246.00	5	329.2	9.1	2
3KP210A	3KP210CA	3KP210A	3KP210CA	210.0	233.00	258.00	5	349.5	8.6	2
3KP220A	3KP220CA	3KP220A	3KP220CA	220.0	244.00	270.00	5	371.1	8.1	2

For bidirectional type having V_R of 10 volts and less, the I_R limit is double.

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RATING AND CHARACTERISTIC CURVES

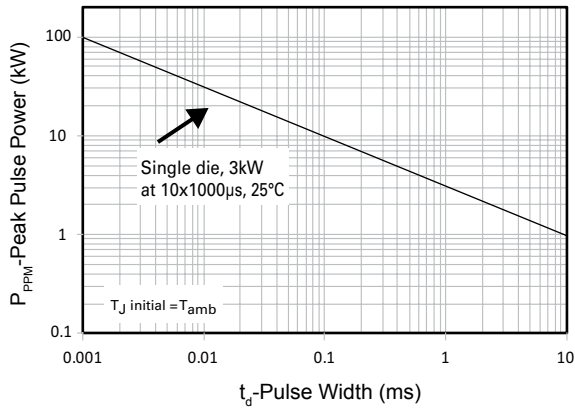


Fig.1 Pulse Power Rating Curve

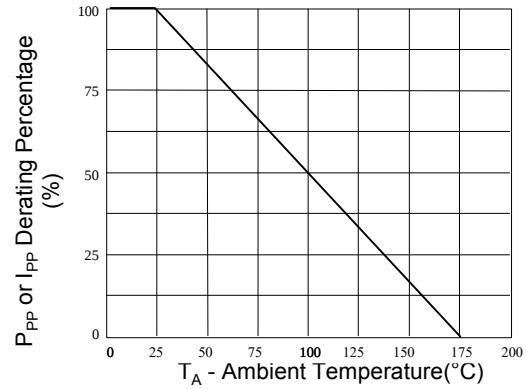


Fig.2 Derating Curve

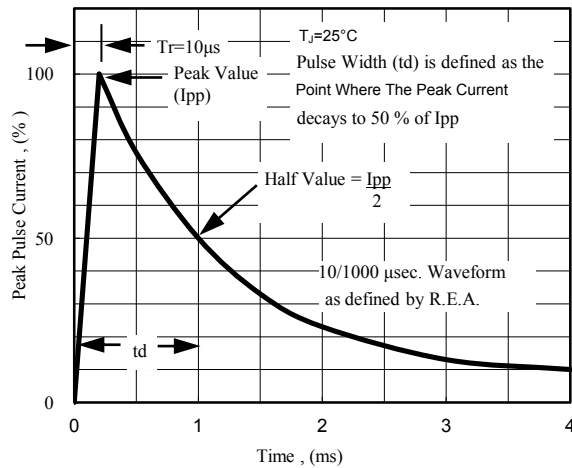


Fig. 3 - Pulse Waveform

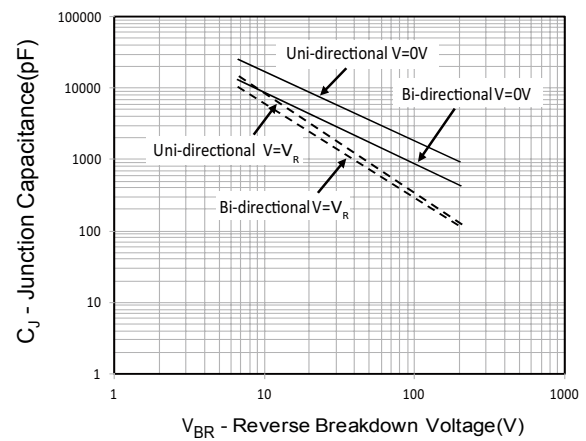


Fig.4 Typical Capacitance

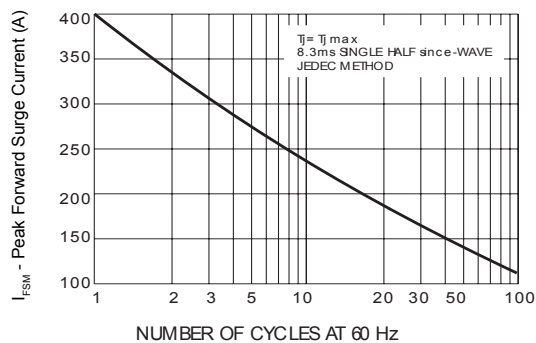


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

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ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
3KP5.0A~3KP220CA	R-6	13 Inch	500