

RoHS Compliant Product

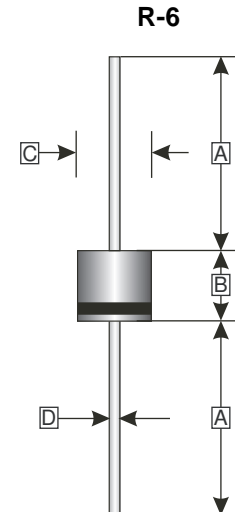
A suffix of "-C" specifies halogen-free and RoHS Compliant

FEATURES

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Glass Passivated Chip Junction in R-6 Package
- 3000W Peak Pulse Power Capability at 10/1000µs Waveform, Repetition Rate (duty cycles): 0.05%
- Excellent Clamping Capability
- Low Zener Impedance
- Fast Response Time
- Typical I_R less than 1µA above 10V
- High Temperature Soldering Guaranteed: 260°C/10s
0.375", (9.5mm) lead length, 5 lbs., (2.3kg) tension

MECHANICAL DATA

- Case: molded plastic
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode except Bipolar
- Mounting position: Any

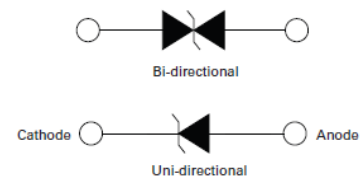


REF.	Millimeter	
	Min.	Max.
A	25.4	REF.
B	8.6	9.1
C	8.6	9.1
D	1.2	1.3

ORDER INFORMATION

Part Number	Type
3KP Series	Lead (Pb)-free
3KP Series-C	Lead (Pb)-free and Halogen-free

Functional Diagram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Minimum Peak Pulse Power Dissipation ¹ @10/1000µs waveform	P _{PP}	3000	W
Peak Pulse Current ¹ @10/1000µs waveform	I _{PP}	(See next table.)	A
Steady State Power Dissipation ²	T _L =75°C P _D	8	W
Peak Forward Surge Current, 8.3ms single half sine-wave ³	I _{FSM}	250	A
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55~175	°C

Notes:

1. Non-repetitive current pulse, per Fig. 3 and derated above T_A=25°C per Fig. 2.
2. Mounted on copper pad area of 0.79 x 0.79" (20 x 20mm) per Fig. 5.
3. Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle= 4 pulses per minute maximum.

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

PART NUMBER		Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T ¹		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Maximum Peak Pulse Current ²	Maximum Reverse Leakage I_R @ V_{RWM}
			Min.	Max.				
DIRECTIONAL		V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Uni	Bi	V	V		mA	V	A	μA
3KP11A	3KP11CA	11	12.2	14	1	18.2	184.88	5
3KP12A	3KP12CA	12	13.3	15.3	1	19.9	150.6	5
3KP13A	3KP13CA	13	14.4	16.5	1	21.5	139.4	5
3KP14A	3KP14CA	14	15.6	17.9	1	23.2	129.4	5
3KP15A	3KP15CA	15	16.7	19.2	1	24.4	123	5
3KP16A	3KP16CA	16	17.8	20.5	1	26	115.4	5
3KP17A	3KP17CA	17	18.9	21.7	1	27.6	106.6	5
3KP18A	3KP18CA	18	20	23.3	1	29.2	102.8	5
3KP20A	3KP20CA	20	22.2	25.5	1	32.4	92.6	5
3KP22A	3KP22CA	22	24.4	28	1	35.5	84.5	5
3KP24A	3KP24CA	24	26.7	30.7	1	38.9	77.2	5
3KP26A	3KP26CA	26	28.9	33.2	1	42.1	71.2	5
3KP28A	3KP28CA	28	31.1	35.8	1	45.4	66	5
3KP30A	3KP30CA	30	33.3	38.3	1	48.4	62	5
3KP33A	3KP33CA	33	36.7	42.2	1	53.3	56.2	5
3KP36A	3KP36CA	36	40	46	1	58.1	51.6	5
3KP40A	3KP40CA	40	44.4	51.1	1	64.5	46.4	5
3KP43A	3KP43CA	43	47.8	54.9	1	69.4	43.2	5
3KP45A	3KP45CA	45	50	57.5	1	72.7	41.2	5
3KP48A	3KP48CA	48	53.3	61.3	1	77.4	38.8	5
3KP51A	3KP51CA	51	56.7	65.2	1	82.4	36.4	5
3KP54A	3KP54CA	54	60	69	1	87.1	34.4	5
3KP58A	3KP58CA	58	64.4	74.1	1	94	32	5
3KP60A	3KP60CA	60	66.7	76.7	1	97	31	5
3KP64A	3KP64CA	64	71.1	81.8	1	103	29.2	5
3KP70A	3KP70CA	70	77.8	89.5	1	113	26.8	5
3KP75A	3KP75CA	75	83.3	95.8	1	121	24.8	5
3KP78A	3KP78CA	78	86.7	99.7	1	126	22.8	5
3KP85A	3KP85CA	85	94.4	108.2	1	137	20.8	5
3KP90A	3KP90CA	90	100	115.5	1	146	20.6	5

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PART NUMBER		Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T ¹		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Maximum Peak Pulse Current ²	Maximum Reverse Leakage I_R @ V_{RWM}
			Min.	Max.				
DIRECTIONAL		V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Uni	Bi	V	V		mA	V	A	μA
3KP100A	3KP100CA	100	111	128	1	162	18.6	5
3KP110A	3KP110CA	110	122	140.5	1	177	16.8	5
3KP120A	3KP120CA	120	133	153	1	193	15.6	5
3KP130A	3KP130CA	130	144	165.5	1	209	14.4	5
3KP150A	3KP150CA	150	167	192.5	1	243	12.4	5
3KP160A	3KP160CA	160	178	205	1	259	11.6	5
3KP170A	3KP170CA	170	189	217.5	1	275	11	5
3KP180A	3KP180CA	180	196	230.4	1	292	10.3	5
3KP190A	3KP190CA	190	209	243.2	1	308	9.7	5
3KP200A	3KP200CA	200	220	256	1	324	9.3	5
3KP210A	3KP210CA	210	231	268.8	1	340	8.8	5
3KP220A	3KP220CA	220	242	281.6	1	356	8.4	5

Notes:

- V_{BR} measured after I_T applied for 300 μs , I_T =square wave pulse or equivalent.
- Surge current waveform per Fig. 3 and derate per Fig. 2.

TYPICAL CHARACTERISTICS

FIG. 1-PEAK PULSE POWER VS PULSE TIME

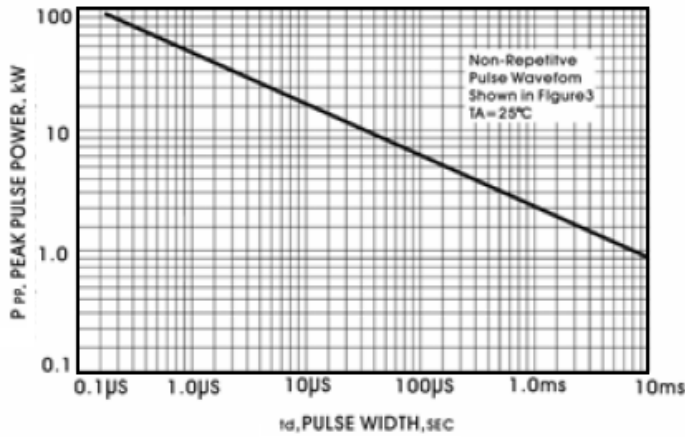


FIG. 2 DERATING CURVE

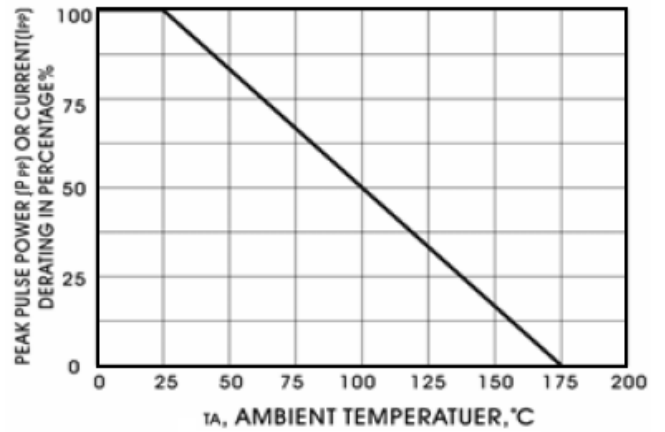


FIG. 3-PULSE WAVEFORM

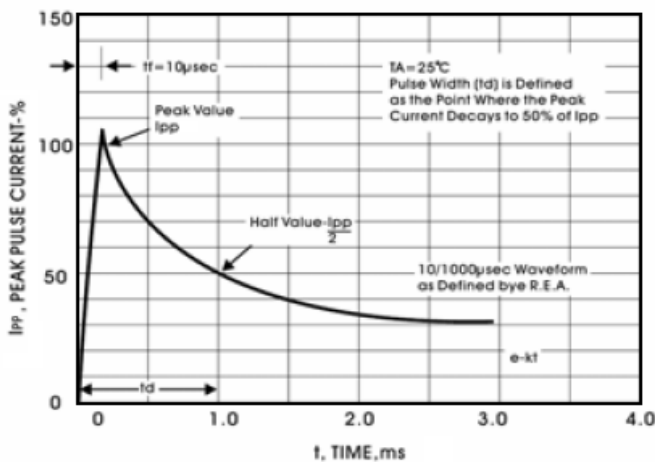


FIG. 4- TYPICAL CAPACITANCE VS STAND-OFF VOLTAGE

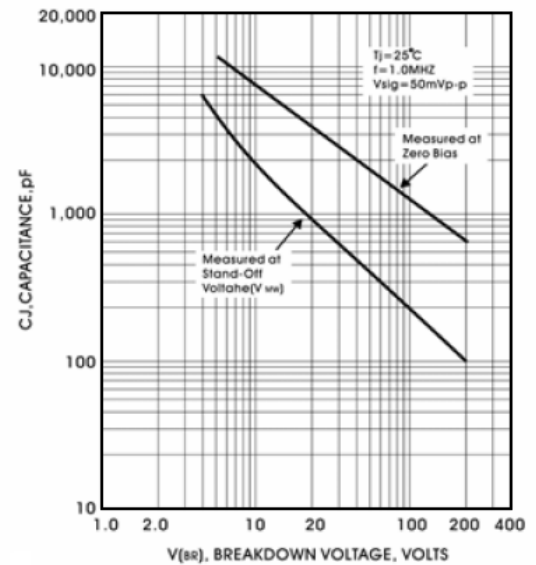


FIG. 5-STEADY STATE POWER DERATING CURVE

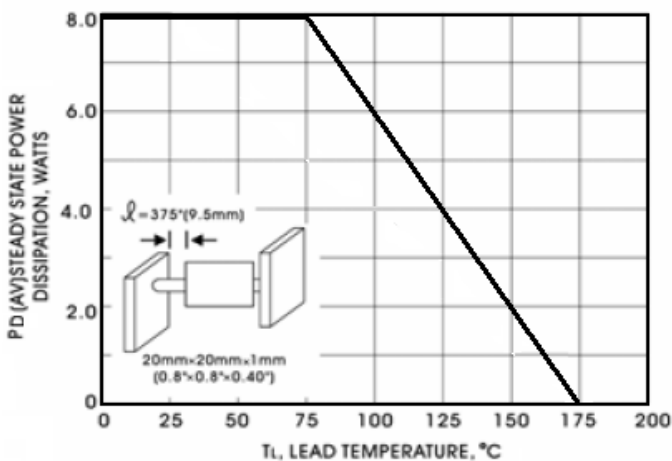


FIG. 6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL

