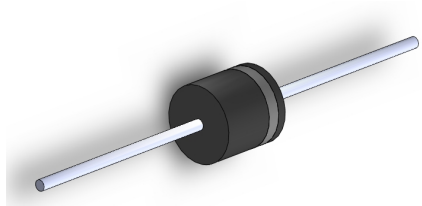
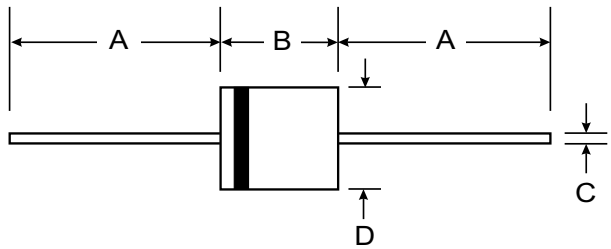
5KP5.0A(CA) - 5KP190A(CA)

AXIAL LEADED TRANSIENT VOLTAGE SUPPRESSORS DIODE

VOLTAGE RANGE: 5.0 - 190 V
POWER: 5000Watts





Features

- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case:R-6 Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Indicates Cathode
- Approx. Weight: 1.7 grams
- Mounting Position: Any

RoHS COMPLIANT

R-6		
Dim	**Min**	**Max**
A	25.4	—
B	8.6	9.1
C	1.2	1.3
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A = 25°C (Note 1, 2, 5) Figure 3	P_{PPM}	5000 Minimum	W
Peak Forward Surge Current (Note 3)	I_{FSM}	400	A
Peak Pulse Current on 10/1000µS Waveform (Note 1) Figure 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	$P_{M(AV)}$	8.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +175	°C

Note: 1. Non-repetitive current pulse, per Figure 1 and derated above T_A = 25°C per Figure 4.
2. Mounted on 20mm^2 copper pad.
3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum,
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000µS.

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
5KP5.0	5KP5.0C	5.0	6.40	7.55	10	9.6	520.8	1000.0
5KP5.0A	5KP5.0CA	5.0	6.40	7.25	10	9.2	543.5	1000.0
5KP6.0	5KP6.0C	6.0	6.67	8.45	10	11.4	438.6	1000.0
5KP6.0A	5KP6.0CA	6.0	6.67	7.67	10	10.3	485.4	1000.0
5KP6.5	5KP6.5C	6.5	7.22	9.14	10	12.3	406.5	500.0
5KP6.5A	5KP6.5CA	6.5	7.22	8.30	10	11.2	446.4	500.0
5KP7.0	5KP7.0C	7.0	7.78	9.86	10	13.3	375.9	200.0
5KP7.0A	5KP7.0CA	7.0	7.78	8.95	10	12.0	416.7	200.0
5KP7.5	5KP7.5C	7.5	8.33	10.67	1.0	14.3	349.7	50.0
5KP7.5A	5KP7.5CA	7.5	8.33	9.58	1.0	12.9	387.6	50.0
5KP8.0	5KP8.0C	8.0	8.89	11.3	1.0	15.0	333.3	10.0
5KP8.0A	5KP8.0CA	8.0	8.89	10.23	1.0	13.6	367.6	10.0
5KP8.5	5KP8.5C	8.5	9.44	11.92	1.0	15.9	314.5	5.0
5KP8.5A	5KP8.5CA	8.5	9.44	10.82	1.0	14.4	347.2	5.0
5KP9.0	5KP9.0C	9.0	10.0	12.6	1.0	16.9	295.9	5.0
5KP9.0A	5KP9.0CA	9.0	10.0	11.5	1.0	15.4	324.7	5.0
5KP10	5KP10C	10	11.1	14.1	1.0	18.8	266.0	5.0
5KP10A	5KP10CA	10	11.1	12.8	1.0	17.0	294.1	5.0
5KP11	5KP11C	11	12.2	15.4	1.0	20.1	248.8	5.0
5KP11A	5KP11CA	11	12.2	14.0	1.0	18.2	274.7	5.0
5KP12	5KP12C	12	13.3	16.9	1.0	22.0	227.3	5.0
5KP12A	5KP12CA	12	13.3	15.3	1.0	19.9	251.3	5.0
5KP13	5KP13C	13	14.4	18.2	1.0	23.8	210.1	5.0
5KP13A	5KP13CA	13	14.4	16.5	1.0	21.5	232.6	5.0
5KP14	5KP14C	14	15.6	19.8	1.0	25.8	193.8	5.0
5KP14A	5KP14CA	14	15.6	17.9	1.0	23.2	215.5	5.0
5KP15	5KP15C	15	16.7	21.1	1.0	26.9	185.9	5.0
5KP15A	5KP15CA	15	16.7	19.2	1.0	24.4	204.9	5.0
5KP16	5KP16C	16	17.8	22.6	1.0	28.8	173.6	5.0
5KP16A	5KP16CA	16	17.8	20.5	1.0	26.0	192.3	5.0
5KP17	5KP17C	17	18.9	23.9	1.0	30.5	163.9	5.0
5KP17A	5KP17CA	17	18.9	21.7	1.0	27.6	181.2	5.0
5KP18	5KP18C	18	20.0	25.3	1.0	32.2	155.3	5.0
5KP18A	5KP18CA	18	20.0	23.3	1.0	29.2	171.2	5.0
5KP20	5KP20C	20	22.2	28.1	1.0	35.8	139.7	5.0
5KP20A	5KP20CA	20	22.2	25.5	1.0	32.4	154.3	5.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
5KP22	5KP22C	22	24.4	30.9	1.0	39.4	126.9	5.0
5KP22A	5KP22CA	22	24.4	28.0	1.0	35.5	140.8	5.0
5KP24	5KP24C	24	26.7	33.8	1.0	43.0	116.3	5.0
5KP24A	5KP24CA	24	26.7	30.7	1.0	38.9	128.5	5.0
5KP26	5KP26C	26	28.9	36.6	1.0	46.6	107.3	5.0
5KP26A	5KP26CA	26	28.9	33.2	1.0	42.1	118.8	5.0
5KP28	5KP28C	28	31.1	39.4	1.0	50.0	100.0	5.0
5KP28A	5KP28CA	28	31.1	35.8	1.0	45.4	110.1	5.0
5KP30	5KP30C	30	33.3	42.2	1.0	53.5	93.5	5.0
5KP30A	5KP30CA	30	33.3	38.3	1.0	48.4	103.3	5.0
5KP33	5KP33C	33	36.7	46.5	1.0	59.0	84.7	5.0
5KP33A	5KP33CA	33	36.7	42.2	1.0	53.3	93.8	5.0
5KP36	5KP36C	36	40.0	50.7	1.0	64.3	77.8	5.0
5KP36A	5KP36CA	36	40.0	46.0	1.0	58.1	86.1	5.0
5KP40	5KP40C	40	44.4	56.3	1.0	71.4	70.0	5.0
5KP40A	5KP40CA	40	44.4	51.1	1.0	64.5	77.5	5.0
5KP43	5KP43C	43	47.8	60.5	1.0	76.7	65.2	5.0
5KP43A	5KP43CA	43	47.8	54.9	1.0	69.4	72.0	5.0
5KP45	5KP45C	45	50.0	63.3	1.0	80.3	62.3	5.0
5KP45A	5KP45CA	45	50.0	57.5	1.0	72.7	68.8	5.0
5KP48	5KP48C	48	53.3	67.5	1.0	85.5	58.5	5.0
5KP48A	5KP48CA	48	53.3	61.3	1.0	77.4	64.6	5.0
5KP51	5KP51C	51	56.7	71.8	1.0	91.1	54.9	5.0
5KP51A	5KP51CA	51	56.7	65.2	1.0	82.4	60.7	5.0
5KP54	5KP54C	54	60.0	76.0	1.0	96.3	51.9	5.0
5KP54A	5KP54CA	54	60.0	69.0	1.0	87.1	57.4	5.0
5KP58	5KP58C	58	64.4	81.6	1.0	103	48.5	5.0
5KP58A	5KP58CA	58	64.4	74.1	1.0	93.6	53.4	5.0
5KP60	5KP60C	60	66.7	84.5	1.0	107	46.7	5.0
5KP60A	5KP60CA	60	66.7	76.7	1.0	96.8	51.7	5.0
5KP64	5KP64C	64	71.1	90.1	1.0	114	43.9	5.0
5KP64A	5KP64CA	64	71.1	81.8	1.0	103	48.5	5.0
5KP70	5KP70C	70	77.8	98.6	1.0	125	40.0	5.0
5KP70A	5KP70CA	70	77.8	89.5	1.0	113	44.2	5.0
5KP75	5KP75C	75	83.0	105.7	1.0	134	37.3	5.0
5KP75A	5KP75CA	75	83.0	95.8	1.0	121	41.3	5.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
5KP78	5KP78C	78	86.0	109.8	1.0	139	36.0	5.0
5KP78A	5KP78CA	78	86.0	99.7	1.0	126	39.7	5.0
5KP85	5KP85C	85	94.0	119.2	1.0	151	33.1	5.0
5KP85A	5KP85CA	85	94.0	108.2	1.0	137	36.5	5.0
5KP90	5KP90C	90	100	126.5	1.0	160	31.3	5.0
5KP90A	5KP90CA	90	100	115.5	1.0	146	34.2	5.0
5KP100	5KP100C	100	111	141.0	1.0	179	27.9	5.0
5KP100A	5KP100CA	100	111	128.0	1.0	162	30.9	5.0
5KP110	5KP110C	110	122	154.5	1.0	196	25.5	5.0
5KP110A	5KP110CA	110	122	140.5	1.0	177	28.2	5.0
5KP120	5KP120C	120	133	169.0	1.0	214	23.4	5.0
5KP120A	5KP120CA	120	133	153.0	1.0	193	25.9	5.0
5KP130	5KP130C	130	144	182.5	1.0	231	21.6	5.0
5KP130A	5KP130CA	130	144	165.5	1.0	209	23.9	5.0
5KP150	5KP150C	150	167	211.5	1.0	268	18.7	5.0
5KP150A	5KP150CA	150	167	192.5	1.0	243	20.6	5.0
5KP160	5KP160C	160	178	226.0	1.0	287	17.4	5.0
5KP160A	5KP160CA	160	178	205.0	1.0	259	19.3	5.0
5KP170	5KP170C	170	189	239.5	1.0	304	16.4	5.0
5KP170A	5KP170CA	170	189	217.5	1.0	275	18.2	5.0
5KP180	5KP180C	180	200	253.8	1.0	321	15.6	5.0
5KP180A	5KP180CA	180	200	230.4	1.0	290	17.2	5.0
5KP190	5KP190C	190	211	267.9	1.0	339	14.7	5.0
5KP190A	5KP190CA	190	211	243.2	1.0	306	16.3	5.0

Typical Characteristics

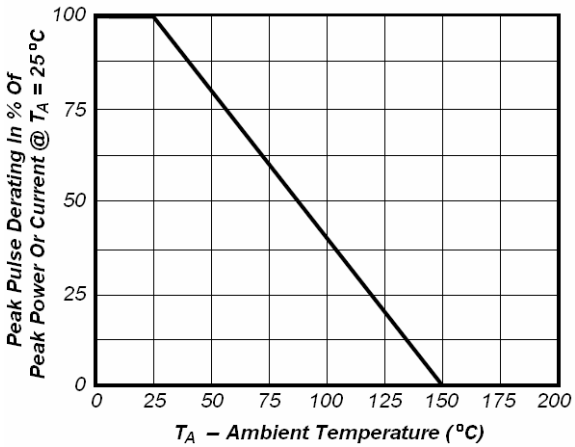


Fig1. Pulse Dearting Curve

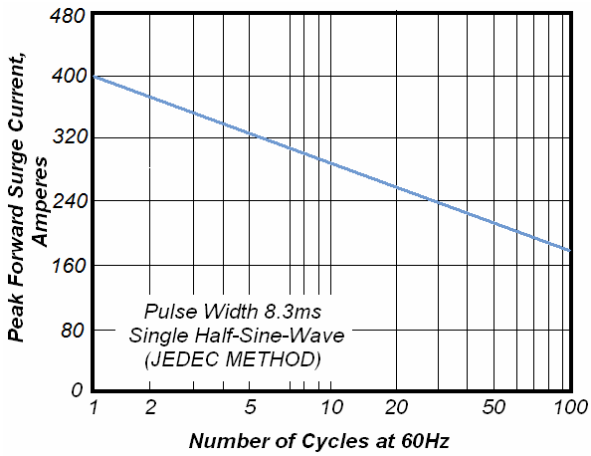


Fig2. Maximum Non-Repetitive Peak Forward Surge Current

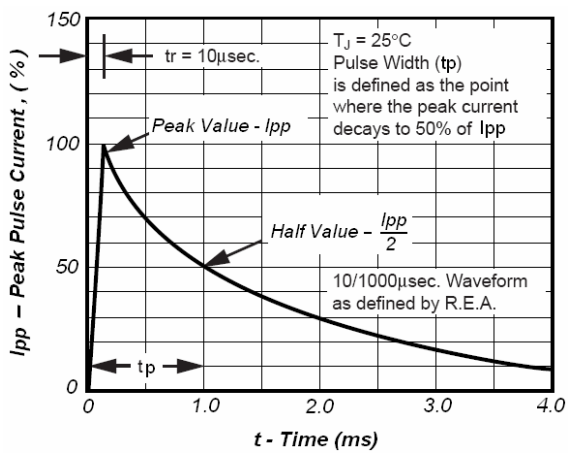


Fig3. Pulse Waveform

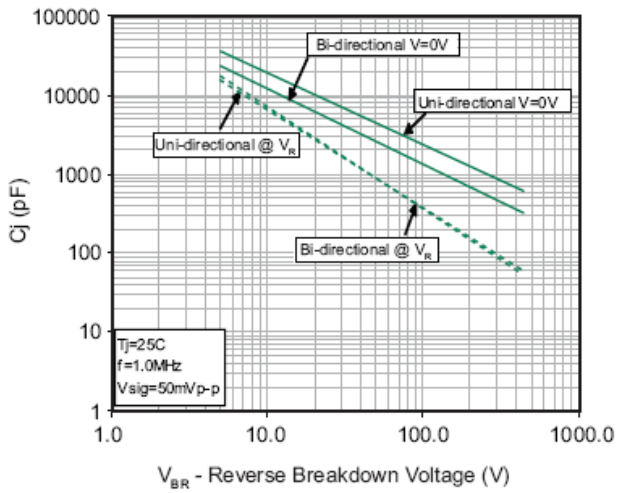


Fig4. Typical Junction Capacitance