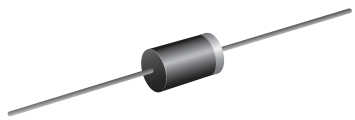
P6KE6.8A(CA)-P6KE440A(CA)

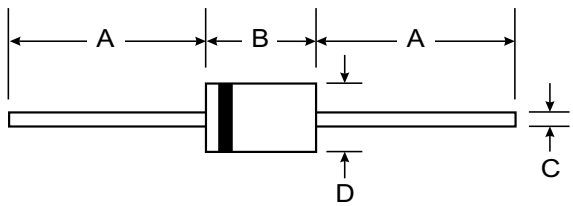
AXIAL LEADED TRANSIENT VOLTAGE SUPPERSSOR

VOLTAGE RANGE: 6.8 - 440V
POWER: 600Watts



Features

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



DO-15		
Dim	**Min**	**Max**
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Mechanical Data

- Case: JEDEC DO-15 Low Profile Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.40 grams (approx.)

RoHS COMPLIANT

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}	600 Minimum	W
Peak Forward Surge Current (Note 3)	I_{FSM}	100	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)	$P_{M(AV)}$	5.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 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 40mm^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)
P6KE6.8	P6KE6.8C	5.50	6.12	7.48	10.0	10.8	55.6	1000.0
P6KE6.8A	P6KE6.8CA	5.80	6.45	7.25	10.0	10.5	57.1	1000.0
P6KE7.5	P6KE7.5C	6.05	6.75	8.25	10.0	11.7	51.3	500.0
P6KE7.5A	P6KE7.5CA	6.40	7.13	7.88	10.0	11.3	53.1	500.0
P6KE8.2	P6KE8.2C	6.63	7.38	9.02	10.0	12.5	48.0	200.0
P6KE8.2A	P6KE8.2CA	7.02	7.79	8.61	10.0	12.1	49.6	200.0
P6KE9.1	P6KE9.1C	7.37	8.19	10.0	1.0	13.8	43.5	50.0
P6KE9.1A	P6KE9.1CA	7.78	8.65	9.55	1.0	13.4	44.8	50.0
P6KE10	P6KE10C	8.10	9.00	11.0	1.0	15.0	40.0	10.0
P6KE10A	P6KE10CA	8.55	9.50	10.5	1.0	14.5	41.4	10.0
P6KE11	P6KE11C	8.92	9.90	12.1	1.0	16.2	37.0	5.0
P6KE11A	P6KE11CA	9.40	10.5	11.6	1.0	15.6	38.5	5.0
P6KE12	P6KE12C	9.72	10.8	13.2	1.0	17.3	34.7	5.0
P6KE12A	P6KE12CA	10.2	11.4	12.6	1.0	16.7	35.9	5.0
P6KE13	P6KE13C	10.5	11.7	14.3	1.0	19.0	31.6	5.0
P6KE13A	P6KE13CA	11.1	12.4	13.7	1.0	18.2	33.0	5.0
P6KE15	P6KE15C	12.1	13.5	16.5	1.0	22.0	27.3	5.0
P6KE15A	P6KE15CA	12.8	14.3	15.8	1.0	21.2	28.3	5.0
P6KE16	P6KE16C	12.9	14.4	17.6	1.0	23.5	25.5	5.0
P6KE16A	P6KE16CA	13.6	15.2	16.8	1.0	22.5	26.7	5.0
P6KE18	P6KE18C	14.5	16.2	19.8	1.0	26.5	22.6	5.0
P6KE18A	P6KE18CA	15.3	17.1	18.9	1.0	25.2	23.8	5.0
P6KE20	P6KE20C	16.2	18.0	22.0	1.0	29.1	20.6	5.0
P6KE20A	P6KE20CA	17.1	19.0	21.0	1.0	27.7	21.7	5.0
P6KE22	P6KE22C	17.8	19.8	24.2	1.0	31.9	18.8	5.0
P6KE22A	P6KE22CA	18.8	20.9	23.1	1.0	30.6	19.6	5.0
P6KE24	P6KE24C	19.4	21.6	26.4	1.0	34.7	17.3	5.0
P6KE24A	P6KE24CA	20.5	22.8	25.2	1.0	33.2	18.1	5.0
P6KE27	P6KE27C	21.8	24.3	29.7	1.0	39.1	15.3	5.0
P6KE27A	P6KE27CA	23.1	25.7	28.4	1.0	37.5	16.0	5.0
P6KE30	P6KE30C	24.3	27.0	33.0	1.0	43.5	13.8	5.0
P6KE30A	P6KE30CA	25.6	28.5	31.5	1.0	41.4	14.5	5.0
P6KE33	P6KE33C	26.8	29.7	36.3	1.0	47.7	12.6	5.0
P6KE33A	P6KE33CA	28.2	31.4	34.7	1.0	45.7	13.1	5.0
P6KE36	P6KE36C	29.1	32.4	39.6	1.0	52.0	11.5	5.0
P6KE36A	P6KE36CA	30.8	34.2	37.8	1.0	49.9	12.0	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)
P6KE39	P6KE39C	31.6	35.1	42.9	1.0	56.4	10.6	5.0
P6KE39A	P6KE39CA	33.3	37.1	41.0	1.0	53.9	11.1	5.0
P6KE43	P6KE43C	34.8	38.7	47.3	1.0	61.9	9.7	5.0
P6KE43A	P6KE43CA	36.8	40.9	45.2	1.0	59.3	10.1	5.0
P6KE47	P6KE47C	38.1	42.3	51.7	1.0	67.8	8.8	5.0
P6KE47A	P6KE47CA	40.2	44.7	49.4	1.0	64.8	9.3	5.0
P6KE51	P6KE51C	41.3	45.9	56.1	1.0	73.5	8.2	5.0
P6KE51A	P6KE51CA	43.6	48.5	53.6	1.0	70.1	8.6	5.0
P6KE56	P6KE56C	45.4	50.4	61.6	1.0	80.5	7.5	5.0
P6KE56A	P6KE56CA	47.8	53.2	58.8	1.0	77.0	7.8	5.0
P6KE62	P6KE62C	50.2	55.8	68.2	1.0	89.0	6.7	5.0
P6KE62A	P6KE62CA	53.0	58.9	65.1	1.0	85.0	7.1	5.0
P6KE68	P6KE68C	55.1	61.2	74.8	1.0	98.0	6.1	5.0
P6KE68A	P6KE68CA	58.1	64.6	71.4	1.0	92.0	6.5	5.0
P6KE75	P6KE75C	60.7	67.5	82.5	1.0	108	5.6	5.0
P6KE75A	P6KE75CA	64.1	71.3	78.8	1.0	103	5.8	5.0
P6KE82	P6KE82C	66.4	73.8	90.2	1.0	118	5.1	5.0
P6KE82A	P6KE82CA	70.1	77.9	86.1	1.0	113	5.3	5.0
P6KE91	P6KE91C	73.7	81.9	100	1.0	131	4.6	5.0
P6KE91A	P6KE91CA	77.8	86.5	95.5	1.0	125	4.8	5.0
P6KE100	P6KE100C	81.0	90.0	110	1.0	144	4.2	5.0
P6KE100A	P6KE100CA	85.5	95.0	105	1.0	137	4.4	5.0
P6KE110	P6KE110C	89.2	99.0	121	1.0	158	3.8	5.0
P6KE110A	P6KE110CA	94.0	105	116	1.0	152	3.9	5.0
P6KE120	P6KE120C	97.2	108	132	1.0	173	3.5	5.0
P6KE120A	P6KE120CA	102	114	126	1.0	165	3.6	5.0
P6KE130	P6KE130C	105	117	143	1.0	187	3.2	5.0
P6KE130A	P6KE130CA	111	124	137	1.0	179	3.4	5.0
P6KE150	P6KE150C	121	135	165	1.0	215	2.8	5.0
P6KE150A	P6KE150CA	128	143	158	1.0	207	2.9	5.0
P6KE160	P6KE160C	130	144	176	1.0	230	2.6	5.0
P6KE160A	P6KE160CA	136	152	168	1.0	219	2.7	5.0
P6KE170	P6KE170C	138	153	187	1.0	244	2.5	5.0
P6KE170A	P6KE170CA	145	162	179	1.0	234	2.6	5.0
P6KE180	P6KE180C	146	162	198	1.0	258	2.3	5.0
P6KE180A	P6KE180CA	154	171	189	1.0	246	2.4	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)
P6KE200	P6KE200C	162	180	220	1.0	287	2.1	5.0
P6KE200A	P6KE200CA	171	190	210	1.0	274	2.2	5.0
P6KE220	P6KE220C	175	198	242	1.0	344	1.7	5.0
P6KE220A	P6KE220CA	185	209	231	1.0	328	1.8	5.0
P6KE250	P6KE250C	202	225	275	1.0	360	1.7	5.0
P6KE250A	P6KE250CA	214	237	263	1.0	344	1.7	5.0
P6KE300	P6KE300C	243	270	330	1.0	430	1.4	5.0
P6KE300A	P6KE300CA	256	285	315	1.0	414	1.4	5.0
P6KE350	P6KE350C	284	315	385	1.0	504	1.2	5.0
P6KE350A	P6KE350CA	300	333	368	1.0	482	1.2	5.0
P6KE400	P6KE400C	324	360	440	1.0	574	1.0	5.0
P6KE400A	P6KE400CA	342	380	420	1.0	548	1.1	5.0
P6KE440	P6KE440C	356	396	484	1.0	631	0.95	5.0
P6KE440A	P6KE440CA	376	418	462	1.0	602	1.0	5.0

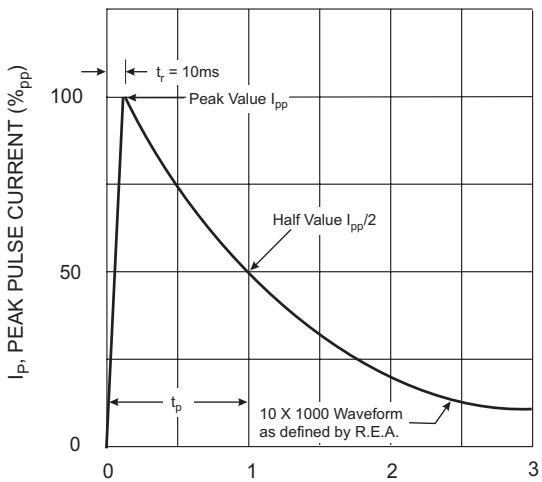


Fig. 1 Pulse Waveform

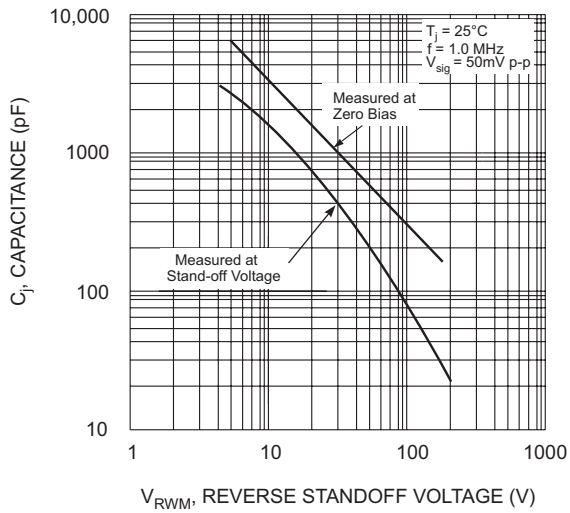


Fig. 2 Typical Junction Capacitance

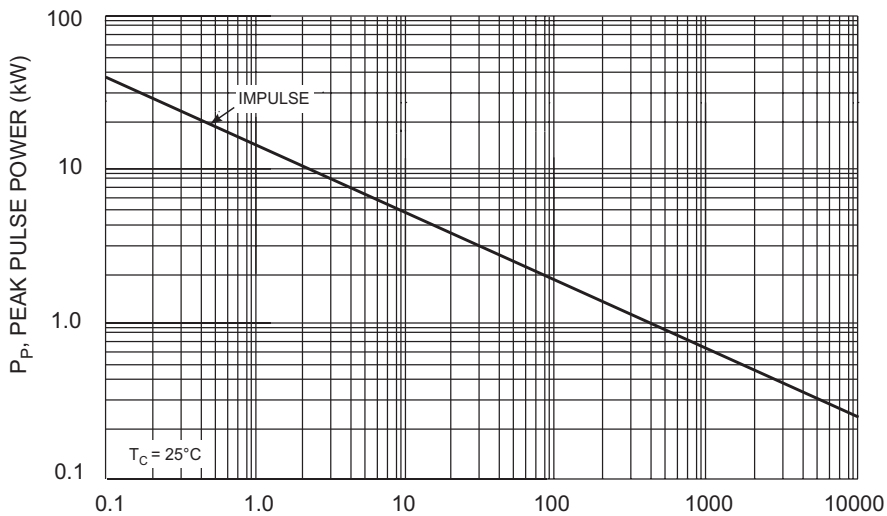


Fig. 3 Pulse Rating Curve

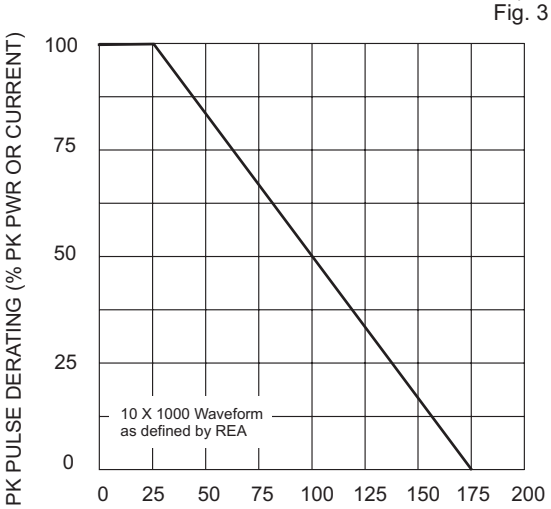


Fig. 4 Pulse Derating Curve

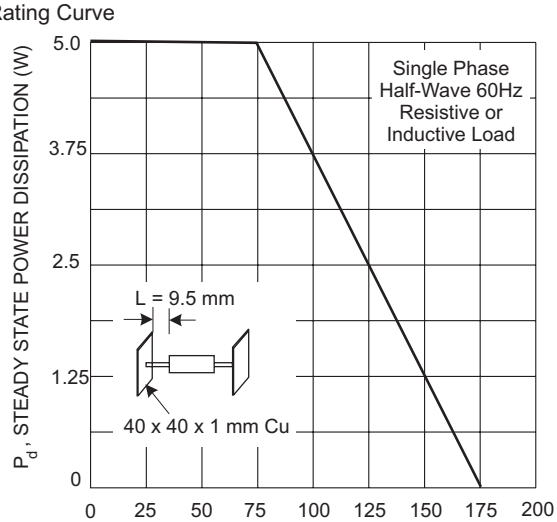


Fig. 5, Steady State Power Derating