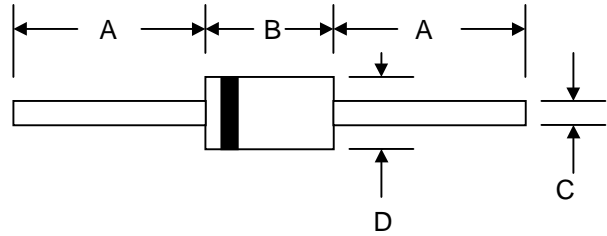


# P4KE6.8(C)A-P4KE440(C)A

## 400W Axial Ledged Transient Voltage Suppressors

### Features

- Glass Passivated Die Construction
- 400W Peak Pulse Power Dissipation
- 6.8V – 440V Standoff Voltage
- 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: JEDEC DO-41 Low Profile Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking:  
Unidirectional – Device Code and Cathode Band  
Bidirectional – Device Code Only
- Weight: 0.34 grams (approx.)

DO-41		
Dim	Min	Max
A	25.4	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

"C" Suffix Designates Bi-directional Devices  
 "A" Suffix Designates 5% Tolerance Devices  
 No Suffix Designates 10% Tolerance Devices

### Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^{\circ}\text{C}$ (Note 1, 2, 5) Figure 3	PPPM	400 Minimum	W
Peak Forward Surge Current (Note 3)	IFSM	40	A
Peak Pulse Current on 10/1000 $\mu\text{s}$ Waveform (Note 1) Figure 1	IPPM	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	PM(AV)	1.0	W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +175	$^{\circ}\text{C}$

- Note: 1. Non-repetitive current pulse, per Figure 1 and derated above  $T_A = 25^{\circ}\text{C}$  per Figure 4.  
 2. Mounted on 40mm<sup>2</sup> copper pad.  
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.  
 4. Lead temperature at  $75^{\circ}\text{C} = T_L$ .  
 5. Peak pulse power waveform is 10/1000 $\mu\text{s}$ .



TYPE	Breakdown Voltage @ It ( Note 1 )		Working Peak Reverse Voltage	Maximum Reverse Leakage @ VRWM	Maximum Reverse Current	Maximum Clamping Voltage @ IRSM	Maximum Temperature Co-efficient of VBR	
	VBR (V)							VRWM
	Min.	Max.	(mA)	(V)	( A)	(A)	(V)	(% / °C)
P4KE6.8CA	6.12	7.48	10	5.50	1000	38.0	10.8	0.057
P4KE6.8A	6.45	7.14	10	5.80	1000	40.0	10.5	0.057
P4KE7.5CA	6.75	8.25	10	6.05	500	36.0	11.7	0.061
P4KE7.5A	7.13	7.88	10	6.40	500	37.0	11.3	0.061
P4KE8.2CA	7.38	9.02	10	6.63	200	33.0	12.5	0.065
P4KE8.2A	7.79	8.61	10	7.02	200	35.0	12.1	0.065
P4KE9.1CA	8.19	10.0	1.0	7.37	50	30.0	13.8	0.068
P4KE9.1A	8.65	9.55	1.0	7.78	50	31.0	13.4	0.068
P4KE10CA	9.00	11.0	1.0	8.10	10	28.0	15.0	0.073
P4KE10A	9.50	10.5	1.0	8.55	10	29.0	14.5	0.073
P4KE11CA	9.90	12.1	1.0	8.92	5.0	26.0	16.2	0.075
P4KE11A	10.5	11.6	1.0	9.40	5.0	27.0	15.6	0.075
P4KE12CA	10.8	13.2	1.0	9.72	5.0	24.0	17.3	0.078
P4KE12A	11.4	12.6	1.0	10.2	5.0	25.0	16.7	0.078
P4KE13CA	11.7	14.3	1.0	10.5	5.0	22.0	19.0	0.081
P4KE13A	12.4	13.7	1.0	11.1	5.0	23.0	18.2	0.081
P4KE15CA	13.5	16.5	1.0	12.1	5.0	19.0	22.0	0.084
P4KE15A	14.3	15.8	1.0	12.8	5.0	20.0	21.2	0.084
P4KE16CA	14.4	17.6	1.0	12.9	5.0	18.0	23.5	0.086
P4KE16A	15.2	16.8	1.0	13.6	5.0	19.0	22.5	0.086
P4KE17CA	15.3	18.7	1.0	13.7	5.0	17.0	25.0	0.087
P4KE17A	16.2	17.9	1.0	14.5	5.0	18.0	24.0	0.087
P4KE18CA	16.2	19.8	1.0	14.5	5.0	16.0	26.5	0.088
P4KE18A	17.1	18.9	1.0	15.3	5.0	17.0	25.5	0.088
P4KE20CA	18.0	22.0	1.0	16.2	5.0	14.0	29.1	0.090
P4KE20A	19.0	21.0	1.0	17.1	5.0	15.0	27.7	0.090
P4KE22CA	19.8	24.2	1.0	17.8	5.0	13.0	31.9	0.092
P4KE22A	20.9	23.1	1.0	18.8	5.0	14.0	30.6	0.092
P4KE24CA	21.6	26.4	1.0	19.4	5.0	12.0	34.7	0.094
P4KE24A	22.8	25.2	1.0	20.5	5.0	13.0	33.2	0.094
P4KE27CA	24.3	29.7	1.0	21.8	5.0	11.0	39.1	0.096
P4KE27A	25.7	28.4	1.0	23.1	5.0	11.2	37.5	0.096
P4KE30CA	27.0	33.0	1.0	24.3	5.0	10.0	43.5	0.097
P4KE30A	28.5	31.5	1.0	25.6	5.0	10.0	41.4	0.097
P4KE33CA	29.7	36.3	1.0	26.8	5.0	9.0	47.7	0.098
P4KE33A	31.4	34.7	1.0	28.2	5.0	9.0	45.7	0.098
P4KE36CA	32.4	39.6	1.0	29.1	5.0	8.0	52.0	0.099
P4KE36A	34.2	37.8	1.0	30.8	5.0	8.4	49.9	0.099
P4KE39CA	35.1	42.9	1.0	31.6	5.0	7.4	56.4	0.100
P4KE39A	37.1	41.0	1.0	33.3	5.0	7.8	53.9	0.100
P4KE43CA	38.7	47.3	1.0	34.8	5.0	6.8	61.9	0.101
P4KE43A	40.9	45.2	1.0	36.8	5.0	7.1	59.3	0.101
P4KE47CA	42.3	51.7	1.0	38.1	5.0	6.2	67.8	0.101
P4KE47A	44.7	49.4	1.0	40.2	5.0	6.5	64.8	0.101
P4KE51CA	45.9	56.1	1.0	41.3	5.0	5.7	73.5	0.102
P4KE51A	48.5	53.6	1.0	43.6	5.0	6.0	70.1	0.102
P4KE56CA	50.4	61.6	1.0	45.4	5.0	5.2	80.5	0.103
P4KE56A	53.2	58.8	1.0	47.8	5.0	5.5	77.0	0.103

Rating at = 25 °C ambient temperature unless otherwise specified



TYPE	Breakdown Voltage @ $I_t$ ( Note 1 )		Working Peak Reverse Voltage	Maximum Reverse Leakage @ $V_{RWM}$	Maximum Reverse Current	Maximum Clamping Voltage @ $I_{RSM}$	Maximum Temperature Co-efficient of $V_{BR}$ (% / °C)	
	$V_{BR}$ (V)							$I_t$
	Min.	Max.	(mA)	(V)	( A)	(A)	(V)	(% / °C)
P4KE62CA	55.8	68.2	1.0	50.2	5.0	4.7	89.0	0.104
P4KE62A	58.9	65.1	1.0	53.0	5.0	5.0	85.0	0.104
P4KE68CA	61.2	74.8	1.0	55.1	5.0	4.3	98.0	0.104
P4KE68A	64.6	71.4	1.0	58.1	5.0	4.6	92.0	0.104
P4KE75CA	67.5	82.5	1.0	60.7	5.0	3.9	108	0.105
P4KE75A	71.3	78.8	1.0	64.1	5.0	4.1	103	0.105
P4KE82CA	73.8	90.2	1.0	66.4	5.0	3.6	118	0.105
P4KE82A	77.9	86.1	1.0	70.1	5.0	3.7	113	0.105
P4KE91CA	81.9	100	1.0	73.7	5.0	3.2	131	0.106
P4KE91A	86.5	95.5	1.0	77.8	5.0	3.4	125	0.106
P4KE100CA	90.0	110	1.0	81.0	5.0	2.9	144	0.106
P4KE100A	95.0	105	1.0	85.5	5.0	3.1	137	0.106
P4KE110CA	99.0	121	1.0	89.2	5.0	2.7	158	0.107
P4KE110A	105	116	1.0	94.0	5.0	2.8	152	0.107
P4KE120CA	108	132	1.0	97.2	5.0	2.4	173	0.107
P4KE120A	114	126	1.0	102	5.0	2.5	165	0.107
P4KE130CA	117	143	1.0	105	5.0	2.2	187	0.107
P4KE130A	124	137	1.0	111	5.0	2.3	179	0.107
P4KE150CA	135	165	1.0	121	5.0	2.0	215	0.108
P4KE150A	143	158	1.0	128	5.0	2.0	207	0.108
P4KE160CA	144	176	1.0	130	5.0	1.8	230	0.108
P4KE160A	152	168	1.0	136	5.0	1.9	219	0.108
P4KE170CA	153	187	1.0	138	5.0	1.7	244	0.108
P4KE170A	162	179	1.0	145	5.0	1.8	234	0.108
P4KE180CA	162	198	1.0	146	5.0	1.6	258	0.108
P4KE180A	171	189	1.0	154	5.0	1.7	246	0.108
P4KE200CA	180	220	1.0	162	5.0	1.5	287	0.108
P4KE200A	190	210	1.0	171	5.0	1.53	274	0.108
P4KE220CA	198	242	1.0	175	5.0	1.16	344	0.108
P4KE220A	209	231	1.0	185	5.0	1.22	328	0.108
P4KE250CA	225	275	1.0	202	5.0	1.11	360	0.110
P4KE250A	237	263	1.0	214	5.0	1.16	344	0.110
P4KE300CA	270	330	1.0	243	5.0	0.93	430	0.110
P4KE300A	285	315	1.0	256	5.0	0.97	414	0.110
P4KE350CA	315	385	1.0	284	5.0	0.79	504	0.110
P4KE350A	332	368	1.0	300	5.0	0.83	482	0.110
P4KE400CA	360	440	1.0	324	5.0	0.70	574	0.110
P4KE400A	380	420	1.0	342	5.0	0.73	548	0.110
P4KE440CA	396	484	1.0	356	5.0	0.95	631	0.110
P4KE440A	418	462	1.0	376	5.0	1.00	602	0.110

Rating at = 25 °C ambient temperature unless otherwise specified

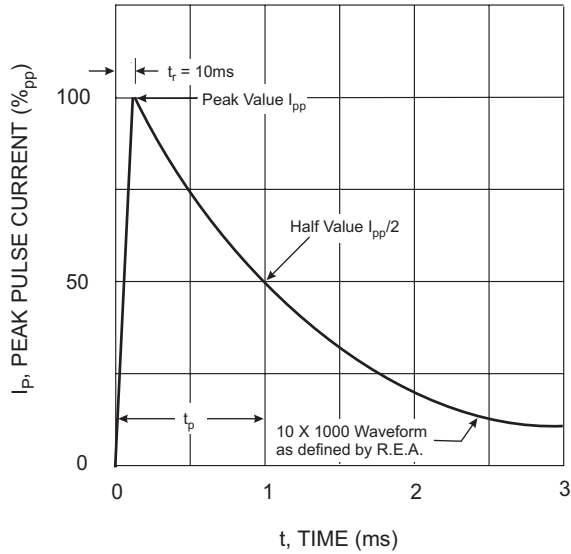


Fig. 1 Pulse Waveform

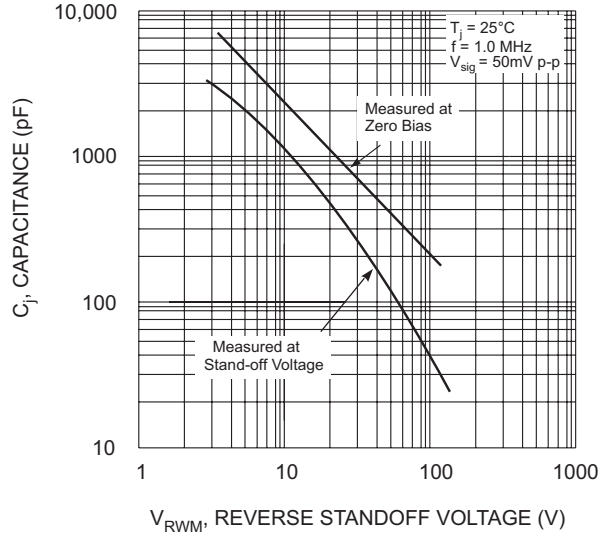


Fig. 2 Typical Junction Capacitance

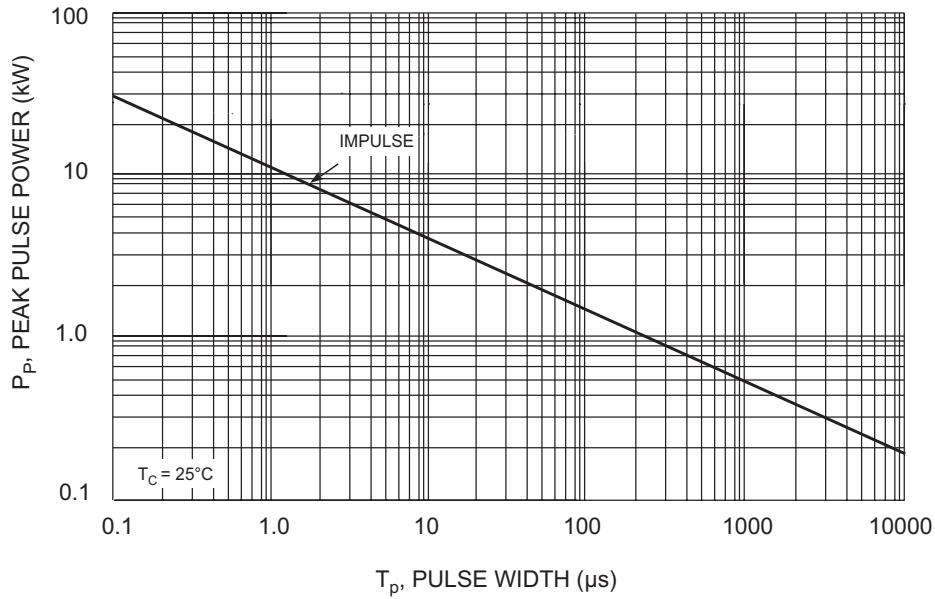


Fig. 3 Pulse Rating Curve

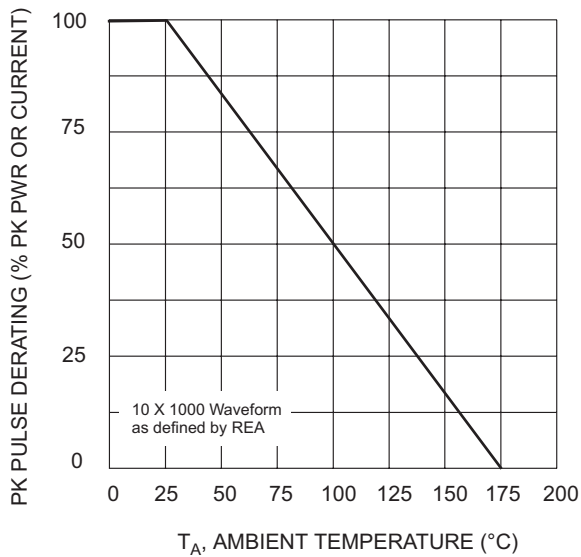


Fig. 4 Pulse Derating Curve

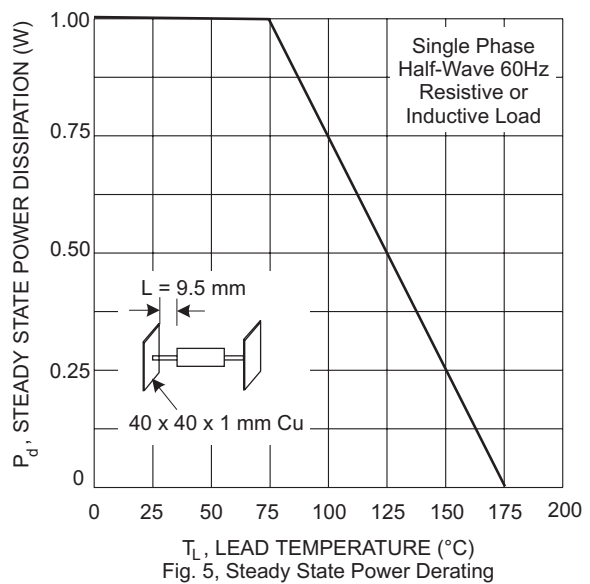


Fig. 5, Steady State Power Derating