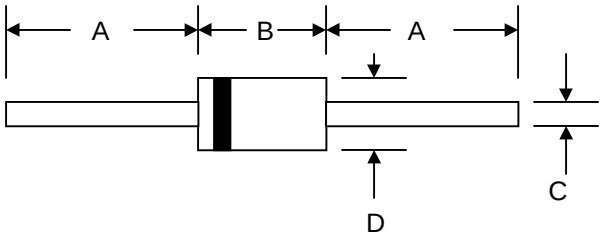
1.5KE6.8(C)A-1.5KE440(C)A

1500Watt Axial Lead Transient Voltage Suppressors

Features

- Glass Passivated Die Construction
- 1500W 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-201AE 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: 1.20 grams (approx.)

DO-201AE		
Dim	**Min**	**Max**
A	25.4	—
B	7.20	9.50
C	0.94	1.07
D	4.80	5.30
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°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}	1500 Minimum	W
Peak Forward Surge Current (Note 3)	I_{FSM}	200	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	Breakdown Voltage @ It (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}
Unidirectional	V_{BR} (V)		It	V_{RWM}	I_R	I_{RSM}	V_{RSM}	
Axial Lead	Min.	Max.	(mA)	(V)	(μA)	(A)	(V)	(% / °C)
1.5KE6.8CA	6.12	7.48	10	5.50	1000	139	10.8	0.057
1.5KE6.8A	6.45	7.14	10	5.80	1000	143	10.5	0.057
1.5KE7.5CA	6.75	8.25	10	6.05	500	128	11.7	0.061
1.5KE7.5A	7.13	7.88	10	6.40	500	132	11.3	0.061
1.5KE8.2CA	7.38	9.02	10	6.63	200	120	12.5	0.065
1.5KE8.2A	7.79	8.61	10	7.02	200	124	12.1	0.065
1.5KE9.1CA	8.19	10.0	1.0	7.37	50	109	13.8	0.068
1.5KE9.1A	8.65	9.55	1.0	7.78	50	112	13.4	0.068
1.5KE10CA	9.00	11.0	1.0	8.10	10	100	15.0	0.073
1.5KE10A	9.50	10.5	1.0	8.55	10	103	14.5	0.073
1.5KE11CA	9.90	12.1	1.0	8.92	5.0	93.0	16.2	0.075
1.5KE11A	10.5	11.6	1.0	9.40	5.0	96.0	15.6	0.075
1.5KE12CA	10.8	13.2	1.0	9.72	5.0	87.0	17.3	0.078
1.5KE12A	11.4	12.6	1.0	10.2	5.0	90.0	16.7	0.078
1.5KE13CA	11.7	14.3	1.0	10.5	5.0	79.0	19.0	0.081
1.5KE13A	12.4	13.7	1.0	11.1	5.0	82.0	18.2	0.081
1.5KE15CA	13.5	16.5	1.0	12.1	5.0	68.0	22.0	0.084
1.5KE15A	14.3	15.8	1.0	12.8	5.0	71.0	21.2	0.084
1.5KE16CA	14.4	17.6	1.0	12.9	5.0	64.0	23.5	0.086
1.5KE16A	15.2	16.8	1.0	13.6	5.0	67.0	22.5	0.086
1.5KE18CA	16.2	19.8	1.0	14.5	5.0	56.5	26.5	0.088
1.5KE18A	17.1	18.9	1.0	15.3	5.0	59.5	25.2	0.088
1.5KE20CA	18.0	22.0	1.0	16.2	5.0	51.5	29.1	0.090
1.5KE20A	19.0	21.0	1.0	17.1	5.0	54.0	27.7	0.090
1.5KE22CA	19.8	24.2	1.0	17.8	5.0	47.0	31.9	0.092
1.5KE22A	20.9	23.1	1.0	18.8	5.0	49.0	30.6	0.092
1.5KE24CA	21.6	26.4	1.0	19.4	5.0	43.0	34.7	0.094
1.5KE24A	22.8	25.2	1.0	20.5	5.0	45.0	33.2	0.094
1.5KE27CA	24.3	29.7	1.0	21.8	5.0	38.5	39.1	0.096
1.5KE27A	25.7	28.4	1.0	23.1	5.0	40.0	37.5	0.096
1.5KE30CA	27.0	33.0	1.0	24.3	5.0	34.5	43.5	0.097
1.5KE30A	28.5	31.5	1.0	25.6	5.0	36.0	41.4	0.097
1.5KE33CA	29.7	36.3	1.0	26.8	5.0	31.5	47.7	0.098
1.5KE33A	31.4	34.7	1.0	28.2	5.0	33.0	45.7	0.098
1.5KE36CA	32.4	39.6	1.0	29.1	5.0	29.0	52.0	0.099
1.5KE36A	34.2	37.8	1.0	30.8	5.0	30.0	49.9	0.099
1.5KE39CA	35.1	42.9	1.0	31.6	5.0	26.5	56.4	0.100
1.5KE39A	37.1	41.0	1.0	33.3	5.0	28.0	53.9	0.100
1.5KE43CA	38.7	47.3	1.0	34.8	5.0	24.0	61.9	0.101
1.5KE43A	40.9	45.2	1.0	36.8	5.0	25.3	59.3	0.101
1.5KE47CA	42.3	51.7	1.0	38.1	5.0	22.2	67.8	0.101
1.5KE47A	44.7	49.4	1.0	40.2	5.0	23.2	64.8	0.101
1.5KE51CA	45.9	56.1	1.0	41.3	5.0	20.4	73.5	0.102
1.5KE51A	48.5	53.6	1.0	43.6	5.0	21.4	70.1	0.102
1.5KE56CA	50.4	61.6	1.0	45.4	5.0	18.6	80.5	0.103
1.5KE56A	53.2	58.8	1.0	47.8	5.0	19.5	77.0	0.103
1.5KE62CA	55.8	68.2	1.0	50.2	5.0	16.9	89.0	0.104

Rating at = 25 °C ambient temperature unless otherwise specified

TYPE	Breakdown Voltage @ It (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}
Unidirectional	V_{BR} (V)		It	V_{RWM}	I_R	I_{RSM}	V_{RSM}	
Axial Lead	Min.	Max.	(mA)	(V)	(μA)	(A)	(V)	(% / °C)
1.5KE62A	58.9	65.1	1.0	53.0	5.0	17.7	85.0	0.104
1.5KE62CA	61.2	74.8	1.0	55.1	5.0	15.3	98.0	0.104
1.5KE68A	64.6	71.4	1.0	58.1	5.0	16.3	92.0	0.104
1.5KE75CA	67.5	82.5	1.0	60.7	5.0	13.9	108	0.105
1.5KE75A	71.3	78.8	1.0	64.1	5.0	14.6	103	0.105
1.5KE82CA	73.8	90.2	1.0	66.4	5.0	12.7	118	0.105
1.5KE82A	77.9	86.1	1.0	70.1	5.0	13.3	113	0.105
1.5KE91CA	81.9	100	1.0	73.7	5.0	11.4	131	0.106
1.5KE91A	86.5	95.5	1.0	77.8	5.0	12.0	125	0.106
1.5KE100CA	90.0	110	1.0	81.0	5.0	10.4	144	0.106
1.5KE100A	95.0	105	1.0	85.5	5.0	11.0	137	0.106
1.5KE110CA	99.0	121	1.0	89.2	5.0	9.5	158	0.107
1.5KE110A	105	116	1.0	94.0	5.0	9.9	152	0.107
1.5KE120CA	108	132	1.0	97.2	5.0	8.7	173	0.107
1.5KE120A	114	126	1.0	102	5.0	9.1	165	0.107
1.5KE130CA	117	143	1.0	105	5.0	8.0	187	0.107
1.5KE130A	124	137	1.0	111	5.0	8.4	179	0.107
1.5KE150CA	135	165	1.0	121	5.0	7.0	215	0.108
1.5KE150A	143	158	1.0	128	5.0	7.2	207	0.108
1.5KE160CA	144	176	1.0	130	5.0	6.5	230	0.108
1.5KE160A	152	168	1.0	136	5.0	6.8	219	0.108
1.5KE170CA	153	187	1.0	138	5.0	6.2	244	0.108
1.5KE170A	162	179	1.0	145	5.0	6.4	234	0.108
1.5KE180CA	162	198	1.0	146	5.0	5.8	258	0.108
1.5KE180A	171	189	1.0	154	5.0	6.1	246	0.108
1.5KE200CA	180	220	1.0	162	5.0	5.2	287	0.108
1.5KE200A	190	210	1.0	171	5.0	5.5	274	0.108
1.5KE220CA	198	242	1.0	175	5.0	4.3	344	0.108
1.5KE220A	209	231	1.0	185	5.0	4.6	328	0.108
1.5KE250CA	225	275	1.0	202	5.0	5.0	360	0.110
1.5KE250A	237	263	1.0	214	5.0	5.0	344	0.110
1.5KE300CA	270	330	1.0	243	5.0	5.0	430	0.110
1.5KE300A	285	315	1.0	256	5.0	5.0	414	0.110
1.5KE350CA	315	385	1.0	284	5.0	4.0	504	0.110
1.5KE350A	332	368	1.0	300	5.0	4.0	482	0.110
1.5KE400CA	360	440	1.0	324	5.0	4.0	574	0.110
1.5KE400A	380	420	1.0	342	5.0	4.0	548	0.110
1.5KE440CA	396	484	1.0	356	5.0	2.38	631	0.110
1.5KE440A	418	462	1.0	376	5.0	2.50	602	0.110

Rating at = 25 °C ambient temperature unless otherwise specified

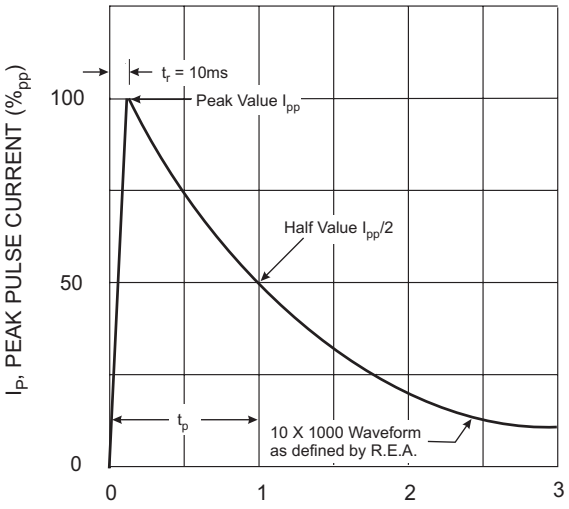


Fig. 1 Pulse Waveform

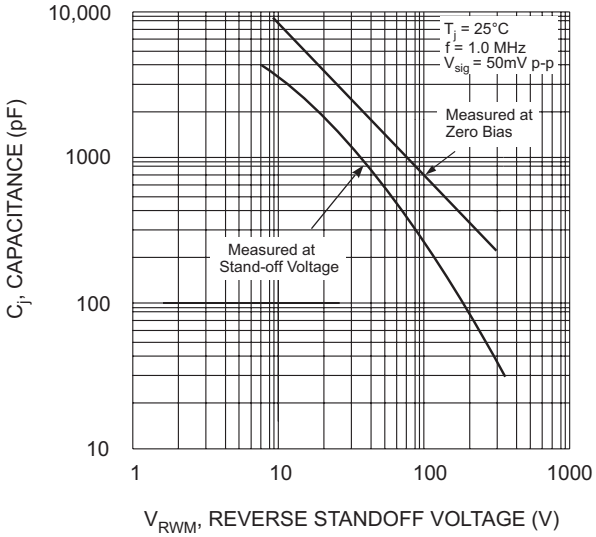


Fig. 2 Typical Junction Capacitance

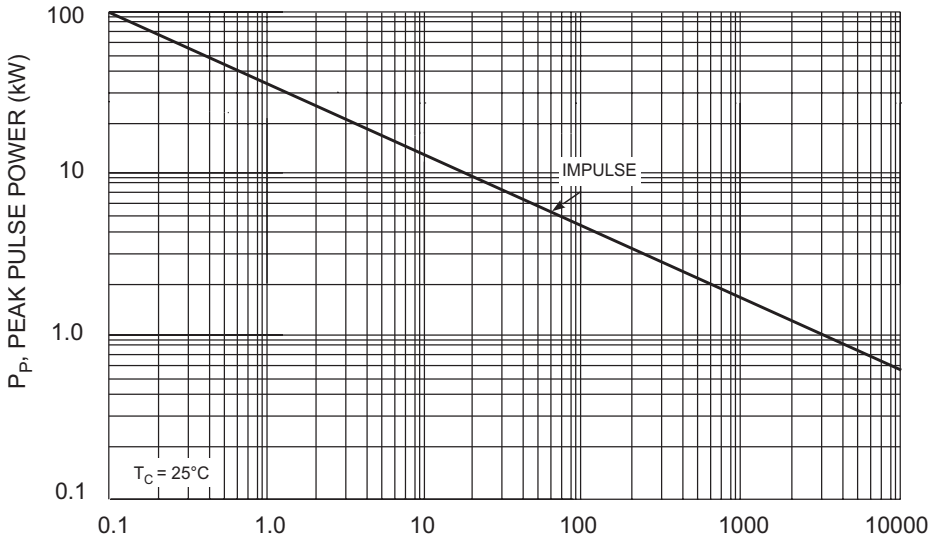


Fig. 3 Pulse Rating Curve

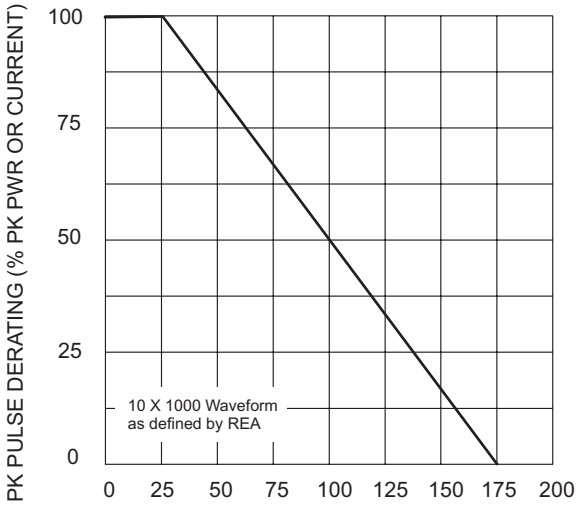


Fig. 4 Pulse Derating Curve

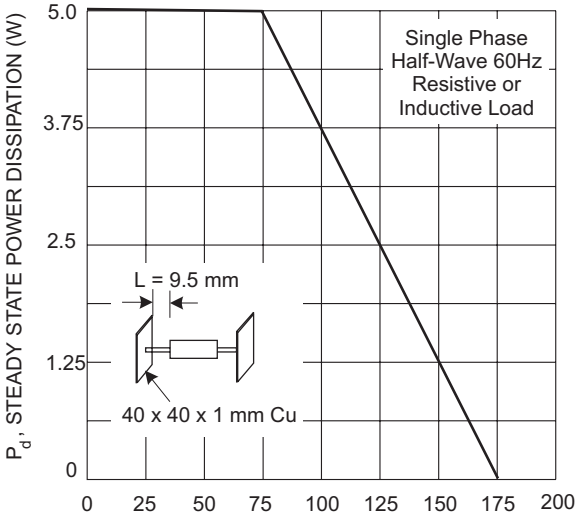


Fig. 5, Steady State Power Derating