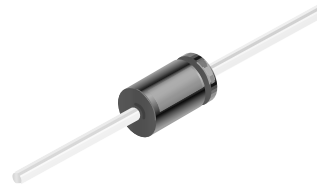




## Transient Voltage Suppressors 1.5KE6.8(C)A - 1.5KE440(C)A

### Features

- Glass passivated junction.
- 1500W Peak Pulse Power capability at 1.0 ms.
- Excellent clamping capability.
- Low incremental surge resistance.
- Fast response time; typically less than 1.0 ps from 0 volts to BV for unidirectional and 5.0 ns for bidirectional.
- Typical  $I_R$  less than 1.0  $\mu$ A above 10V.
- UL certified, UL #E210467.



**DO-201AE**  
COLOR BAND DENOTES CATHODE ON UNIDIRECTIONAL DEVICES ONLY. NO COLOR BAND ON BIDIRECTIONAL DEVICES.

### DEVICES FOR BIPOLAR APPLICATIONS

- Bidirectional types use CA suffix.
- Electrical Characteristics apply in both directions.

## 1500 Watt Transient Voltage Suppressors

### Absolute Maximum Ratings\* T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$P_{PPM}$	Peak Pulse Power Dissipation at $T_P=1ms$	1500	W
$I_{PPM}$	Peak Pulse Current	see table	A
$P_D$	Power Dissipation .375 " lead length @ $T_A = 75^\circ C$	5.0	W
$I_{FSM}$	Non-repetitive Peak Forward Surge Current superimposed on rated load (JEDEC method) (Note 1)	200	A
$T_{stg}$	Storage Temperature Range	-65 to +175	°C
$T_J$	Operating Junction Temperature	+ 175	°C

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**Note 1:** Measured on 8.3 ms single half-sine wave; Duty cycle = 4 pulses per minute maximum.

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

# Transient Voltage Suppressors

(continued)

## Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

Uni-directional Bi-directional (C) Device	Reverse Stand-off Voltage $V_{RWM}$ (V)	Breakdown Voltage $V_{BR}$ (V)		Test Current $I_T$ (mA)	Clamping Voltage @ $I_{PPM}$ $V_C$ (V)	Peak Pulse Current $I_{PPM}$ (A)	Reverse Leakage $V_{RWM}$ $I_R$ (uA)*
		Min	Max				
1.5KE6.8(C)A	5.80	6.45	7.14	10	10.5	143	1000
1.5KE7.5(C)A	6.40	7.13	7.88	10	11.3	133	500
1.5KE8.2(C)A	7.02	7.79	8.61	10	12.1	124	200
1.5KE9.1(C)A	7.78	8.65	9.55	1	13.4	112	50
1.5KE10(C)A	8.55	9.50	10.5	1	14.5	103	10
1.5KE11(C)A	9.40	10.5	11.6	1	15.6	96.2	5
1.5KE12(C)A	10.2	11.4	12.6	1	16.7	90.0	5
1.5KE13(C)A	11.1	12.4	13.7	1	18.2	82.0	5
1.5KE15(C)A	12.8	14.3	15.8	1	21.2	71.0	5
1.5KE16(C)A	13.6	15.2	16.8	1	22.5	67.0	5
1.5KE18(C)A	15.3	17.1	18.9	1	26.2	59.5	5
1.5KE20(C)A	17.1	19.0	21.0	1	27.7	54.2	5
1.5KE22(C)A	18.8	20.9	23.1	1	30.6	49.0	5
1.5KE24(C)A	20.5	22.8	25.2	1	33.2	45.2	5
1.5KE27(C)A	23.1	25.7	28.4	1	37.5	40.0	5
1.5KE30(C)A	25.6	28.5	31.5	1	41.4	36.2	5
1.5KE33(C)A	28.2	31.4	34.7	1	45.7	33.0	5
1.5KE36(C)A	30.8	34.2	37.8	1	49.9	30.1	5
1.5KE39(C)A	33.3	37.1	41.0	1	53.9	28.0	5
1.5KE43(C)A	36.8	40.9	45.2	1	59.3	25.3	5
1.5KE47(C)A	40.2	44.7	49.4	1	64.8	23.2	5
1.5KE51(C)A	43.6	48.5	53.6	1	70.1	21.4	5
1.5KE56(C)A	47.8	53.2	58.8	1	77.0	19.5	5
1.5KE62(C)A	53.0	58.9	65.1	1	85.0	17.7	5
1.5KE68(C)A	58.1	64.6	71.4	1	92.0	16.3	5
1.5KE75(C)A	64.1	71.3	78.8	1	104.0	14.6	5
1.5KE82(C)A	70.1	77.9	86.1	1	113.0	13.3	5
1.5KE91(C)A	77.8	86.5	95.5	1	125.0	12.0	5
1.5KE100(C)A	85.5	95.0	105.0	1	137.0	11.0	5
1.5KE110(C)A	94.0	106.0	116.0	1	152.0	9.9	5
1.5KE120(C)A	102.0	114.0	126.0	1	165.0	9.1	5
1.5KE130(C)A	111.0	124.0	137.0	1	179.0	8.4	5
1.5KE150(C)A	128.0	143.0	158.0	1	207.0	7.2	5
1.5KE160(C)A	136.0	152.0	168.0	1	219.0	6.8	5
1.5KE170(C)A	145.0	162.0	179.0	1	234.0	6.4	5
1.5KE180(C)A	154.0	171.0	189.0	1	246.0	6.1	5
1.5KE200(C)A	171.0	190.0	210.0	1	274.0	5.5	5
1.5KE220(C)A	185.0	209.0	231.0	1	328.0	4.6	5
1.5KE250(C)A	214.0	237.0	263.0	1	344.0	4.5	5
1.5KE300(C)A	256.0	285.0	315.0	1	414.0	3.8	5
1.5KE350(C)A	300.0	333.0	368.0	1	482.0	3.2	5
1.5KE400(C)A	342.0	380.0	420.0	1	548.0	2.8	5
1.5KE440(C)A	376.0	418.0	462.0	1	602.0	2.6	5

\* For bidirectional parts with  $V_{RWM} < 10V$ , the  $I_R$  max limit is doubled.

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

Typical Characteristics

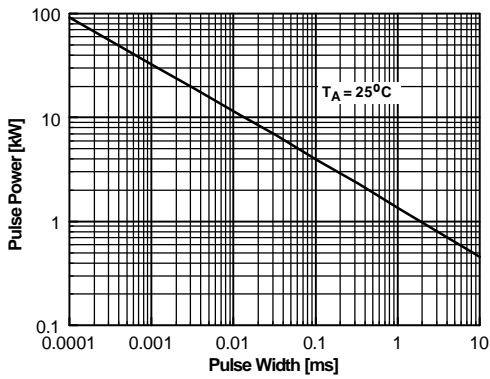


Figure 1. Peak Pulse Power Rating Curve

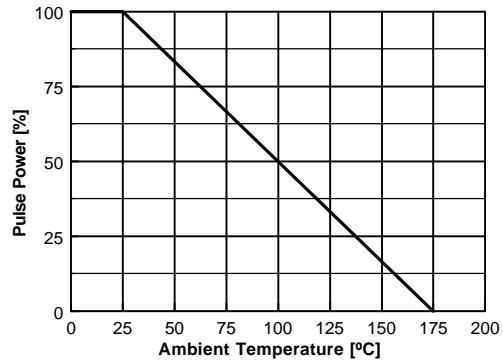


Figure 2. Pulse Derating Curve

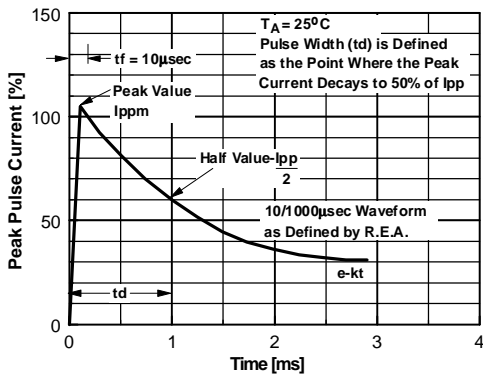


Figure 3. Pulse Waveform

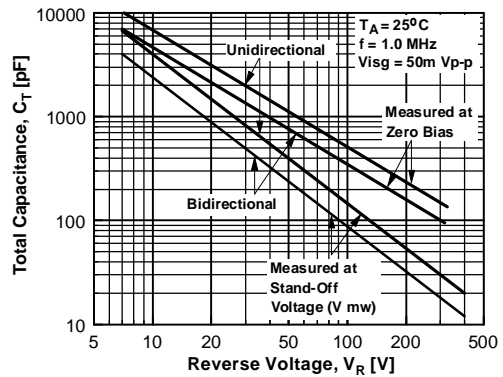


Figure 4. Total Capacitance

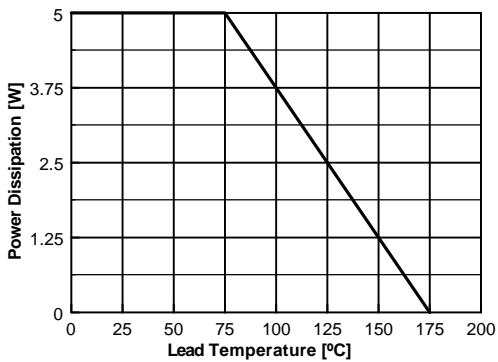


Figure 5. Steady State Power Derating Curve

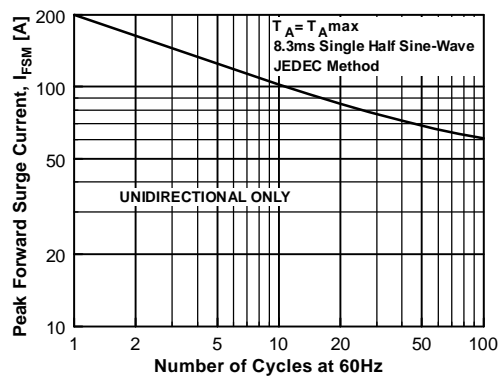


Figure 6. Non-Repetitive Surge Current

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