

1.5KE Series Protection Diodes

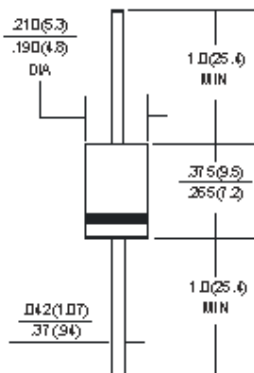
Transient Voltage Suppressors



Features:

- Glass passivated chip junction in Molded Plastic package.
- 1500W surge capability at 1ms.
- Low zener impedance.
- Excellent clamping capability.
- Fast response time : Typically less than 1.0ps from 0 volts to BV minimum.
- Typical I_R less than $1\mu A$ above 10V.
- High temperature soldering. : $260^\circ C/10$ seconds / .375", (9.5mm) lead length/5lbs. (2.3kg) tension.
- Low clamping voltages.
- Wide voltage range.
- High transient power dissipation.
- No wear-out limitation.
- Small physical size.

1.5KE Series



Dimensions : Inches (Millimetres)

Mechanical Data

- Case** : JEDEC DO-201AE molded plastic.
- Terminals** : Axial leads, solderable per MIL-STD-202, Method 208.
- Polarity** : Colour band denoted cathode except Bipolar.
- Mounting Position** : Any.
- Weight** : 0.045 ounce, 1.2 grams.



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Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Ratings	Symbol	Value	Units
		1.5KE Series	
Peak Power Dissipation at $T_A = 25^\circ\text{C}$, $T_P = 1\text{ms}$ (Note 1)	P_{PK}	Minimum 1500	Watts
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 5.8 to 7.6, 7.2 to 9.5 (Note 2)	PD	5.0	
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 3)	I_{FSM}	200	Amps
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175	$^\circ\text{C}$

Notes

1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on Copper Leaf area of 0.79in^2 (20mm^2).
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minutes maximum.

RATING AND CHARACTERISTIC CURVES

1.5KE SERIES

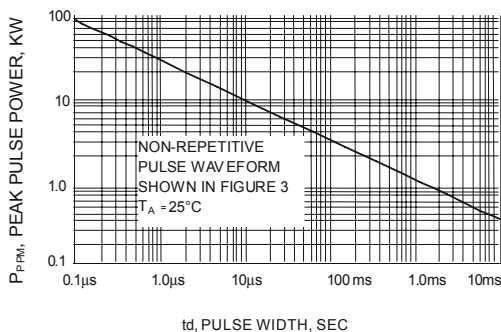


Fig. 1-PEAK PULSE POWER RATING CURVE

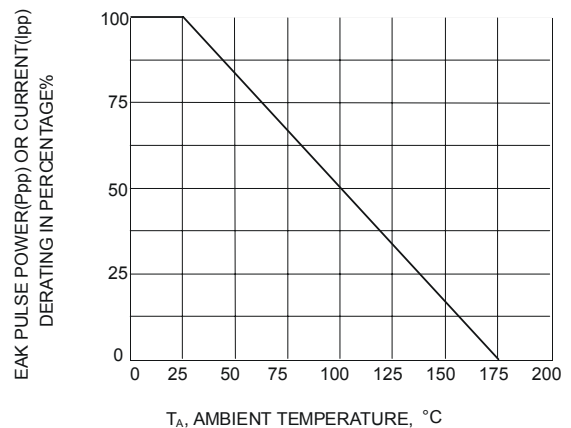


Fig. 2-PULSE DERATING CURVE



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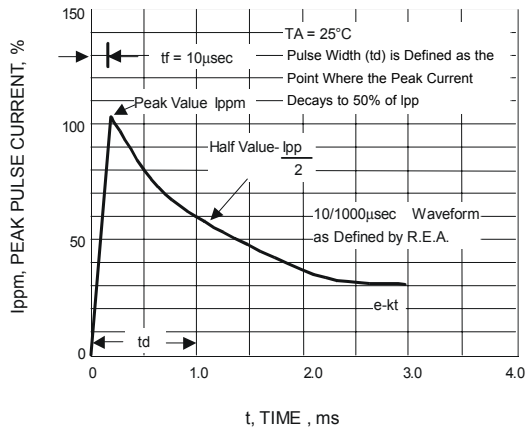


Fig. 3-PULSE WAVEFORM

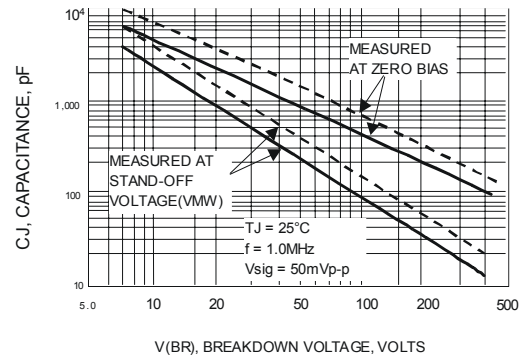


Fig. 4-TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

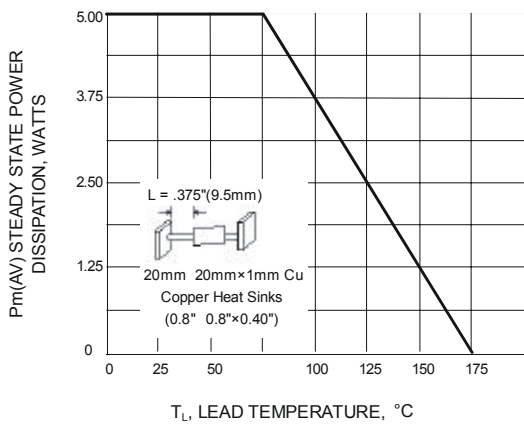


Fig. 5-STEADY STATE POWER DERATING CURVE

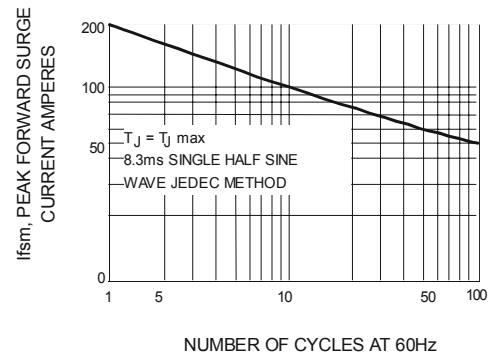


Fig. 6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL



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Uni-Directional 1500 Watt Axial Lead TVS

Stand-off Voltage V_{rm} (V)	Breakdown Voltage V_{br} (V) Minimum	Breakdown Voltage V_{br} (V) Maximum	I_{test} (mA)	Clamping Voltage V_{clamp} A	Maximum Peak Pulse Current I_{pp} (A)	P_{tot} @ $T_L=75^\circ\text{C}$ (W)	Uni-Directional Part Number	JEDEC Part Number
5.5	6.45	7.14	10	10.5	143.0	5	1.5KE6.8A	1N6267A
9.4	10.5	11.6	1	15.6	96.0		1.5KE11A	1N6272A
13.6	15.2	16.8		22.5	67.0		1.5KE16A	1N6276A
15.3	17.1	18.9		25.2	59.5		1.5KE18A	1N6277A
18.8	20.9	23.1		30.6	49.0		1.5KE22A	1N6279A
23.1	25.7	28.4		37.5	40.0		1.5KE27A	1N6281A
25.6	28.5	31.5		41.4	36.0		1.5KE30A	1N6282A
28.2	31.4	34.7		45.7	33.0		1.5KE33A	1N6283A
30.8	34.2	37.8		49.9	30.0		1.5KE36A	1N6284A
40.2	44.7	49.4		64.8	23.2		1.5KE47A	1N6287A
136.0	152.0	162.0		219.0	6.8		1.5KE160A	1N6300A
342.0	380.0	420.0		548.0	4.0		1.5KE400A	—

Bi-Directional 1500 Watt Axial Lead TVS

Stand-off Voltage V_{rm} (V)	Breakdown Voltage V_{br} (V) Minimum	Breakdown Voltage V_{br} (V) Maximum	I_{test} (mA)	Clamping Voltage V_{clamp} A	Maximum Peak Pulse Current I_{pp} (A)	P_{tot} @ $T_L=75^\circ\text{C}$ (W)	Bi-Directional Part Number	JEDEC Part Number
5.8	6.45	7.14	10	10.5	143.0	5	1.5KE6.8CA	1N6267CA
9.4	10.5	11.6	1	15.6	96.0		1.5KE11CA	1N6272CA
13.6	15.2	16.8		22.5	67.0		1.5KE16CA	1N6276CA
15.3	17.1	18.9		25.2	59.5		1.5KE18CA	1N6277CA
18.8	20.9	23.1		30.6	49.0		1.5KE22CA	1N6279CA
23.1	25.7	28.4		37.5	40.0		1.5KE27CA	1N6281CA
25.6	28.5	31.5		41.4	36.0		1.5KE30CA	1N6282CA
28.2	31.4	34.7		45.7	33.0		1.5KE33CA	1N6283CA
30.8	34.2	37.8		49.9	30.0		1.5KE36CA	1N6284CA
40.2	44.7	49.4		64.8	23.2		1.5KE47CA	1N6287CA
136.0	152.0	168.0		219.0	6.8		1.5KE160CA	1N6300CA
342.0	380.0	420.0		548.0	4.0		1.5KE400CA	—



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Notes:

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