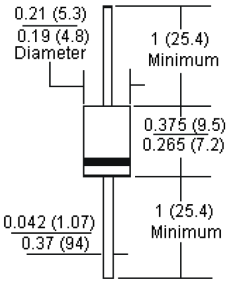
1.5KE Series Protection Diodes
Transient Voltage Suppressors

Dimensions:

1.5KE Series



Dimensions : Inches (Millimetres)

Features:

- Glass passivated chip junction in moulded plastic package
- 1,500 W surge capability at 1 ms
- Low zener impedance
- Excellent clamping capability
- Fast response time: Typically less than 1 ps from 0 volts to BV minimum
- Typical IR less than 1µA above 10V
- High temperature soldering: 260°C / 10 seconds /.375 inches, (9.5 mm) lead length / 5 lbs. (2.3 kg) tension
- Low clamping voltages
- Wide voltage range
- High transient power dissipation
- No wear-out limitation
- Small physical size

Mechanical Data

Case	: JEDEC DO-201AE moulded 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 g

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Ratings	Symbol	Value 1.5KE Series	Units
Peak Power Dissipation at T_A = 25°C , TP = 1 ms (Note 1)	P_{PK}	Minimum 1,500	Watts
Steady State Power Dissipation at T_L = 75°C Lead Lengths 5.8 to 7.6, 7.2 to 9.5 (Note 2)	P_D	5	
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JECED Method) (Note 3)	I_{FSM}	200	Amperes
Operating and Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

Notes

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

Rating and Characteristic Curves

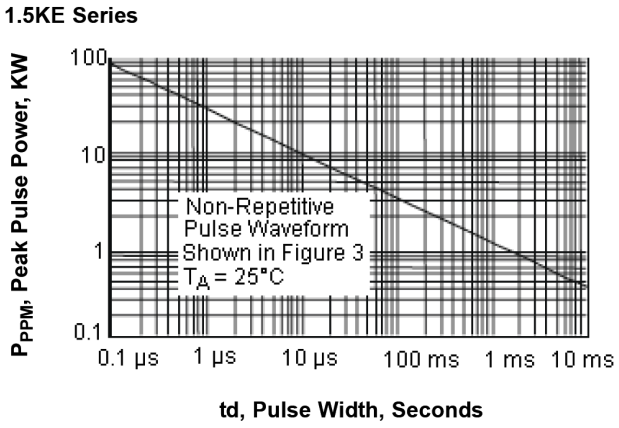


Fig. 1-Peak Pulse Power Rating Curve

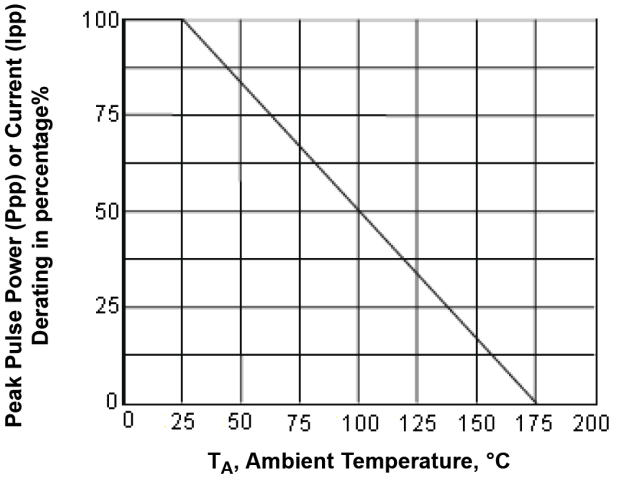


Fig. 2-Pulse Derating Curve

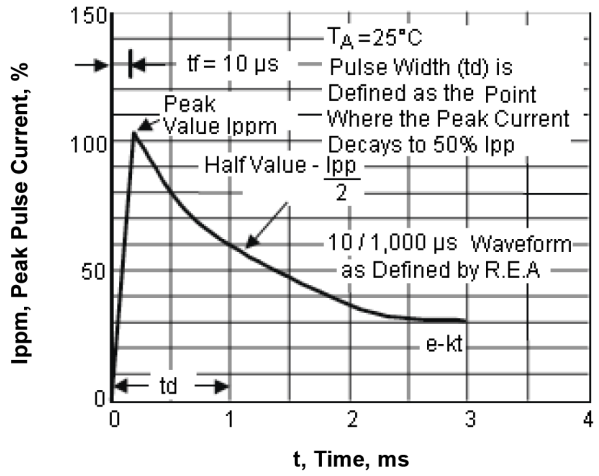


Fig. 3-Pulse Waveform

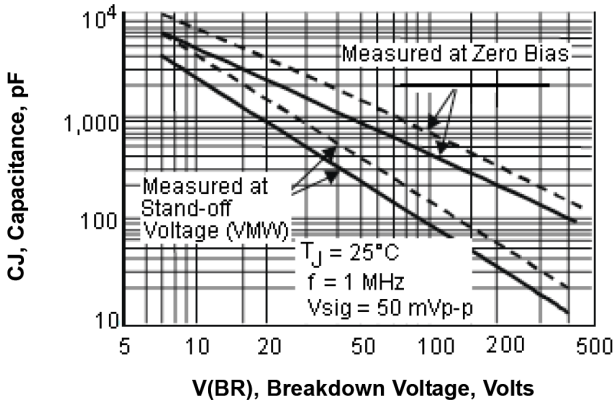


Fig. 4-Typical Junction Capacitance Unidirectional

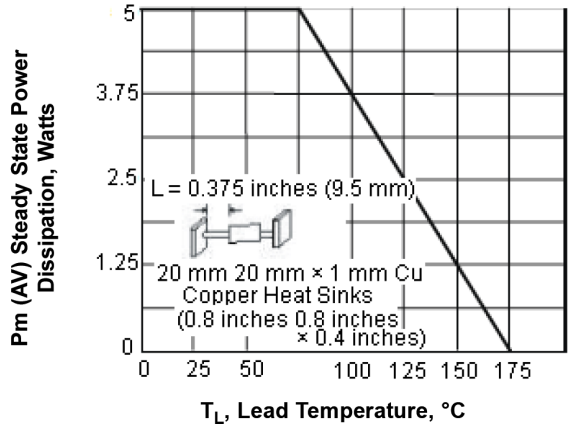


Fig. 5-Steady State Power Derating Curve

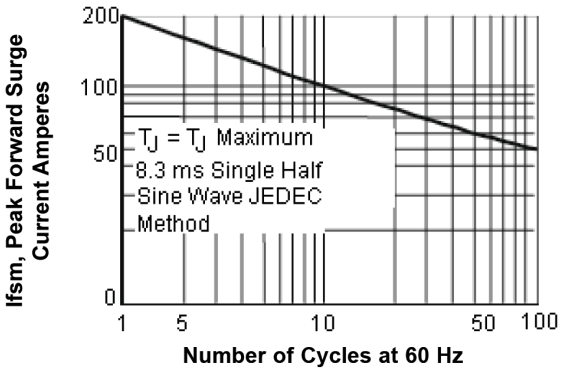


Fig. 6-Maximum Non-Repetitive Peak Forward Surge Current Unidirectional

1.5KE Series Protection Diodes
Transient Voltage Suppressors

Uni-Directional 1,500 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} at T_L = 75°C (W)	Uni-Directional Part Number
5.5	6.45	7.14	10	10.5	143	5	1.5KE6.8A+
13.6	15.2	16.8	1	22.5	67		1.5KE16A+
15.3	17.1	18.9		25.2	59.5		1.5KE18A+
23.1	25.7	28.4		37.5	40		1.5KE27A+
25.6	28.5	31.5		41.4	36		1.5KE30A+
30.8	34.2	37.8		49.9	30		1.5KE36A+
40.2	44.7	49.4		64.8	23.2		1.5KE47A+
136	152	162		219	6.8		1.5KE160A+
342	380	420		548	4		1.5KE400A+

Bi-Directional 1,500 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} at T_L = 75°C (W)	Bi-Directional Part Number
5.8	6.45	7.14	10	10.5	143	5	1.5KE6.8CA+
13.6	15.2	16.8	1	22.5	67		1.5KE16CA+
15.3	17.1	18.9		25.2	59.5		1.5KE18CA+
23.1	25.7	28.4		37.5	40		1.5KE27CA+
25.6	28.5	31.5		41.4	36		1.5KE30CA+
28.2	31.4	34.7		45.7	33		1.5KE33CA+
30.8	34.2	37.8		49.9	30		1.5KE36CA+
40.2	44.7	49.4		64.8	23.2		1.5KE47CA+
136	152	168		219	6.8		1.5KE160CA+
342	380	420		548	4		1.5KE400CA+