



1.5KE SERIES

Transient Voltage Suppressor Diodes



Voltage Range
 6.8 to 440 Volts
 1500 Watts Peak Power
 5.0 Watts Steady State

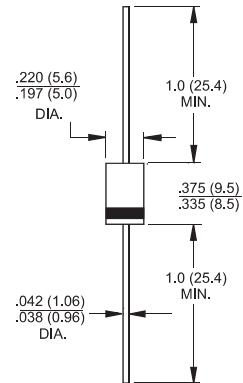
Features

- ✦ UL Recognized File # E-96005
- ✦ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ✦ Exceeds environmental standards of MIL-STD-19500
- ✦ 1500W surge capability at 10 x 100 us waveform, duty cycle: 0.01%
- ✦ Excellent clamping capability
- ✦ Low zener impedance
- ✦ Fast response time: Typically less than 1.0ps from 0 volts to VBR for unidirectional and 5.0 ns for bidirectional
- ✦ Typical I_R less than 1uA above 10V
- ✦ High temperature soldering guaranteed: 260°C / 10 seconds / .375", (9.5mm) lead length / 5lbs., (2.3kg) tension

Mechanical Data

- ✦ Case: Molded plastic
- ✦ Lead: Axial leads, solderable per MIL-STD-202, Method 208
- ✦ Polarity: Color band denotes cathode except bipolar
- ✦ Weight: 0.94gram

DO-201



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%

Type Number	Symbol	Value	Units
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 .375", 9.5mm (Note 2)	P_D	5.0	Watts
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 3)	I_{FSM}	200	Amps
Maximum Instantaneous Forward Voltage at 50.0A for Unidirectional Only (Note 4)	V_F	3.5 / 5.0	Volts
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 175	°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 Pad Area of 0.8 x 0.8" (20 x 20 mm) Per Fig. 4.
 3. 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minutes Maximum.
 4. $V_F=3.5\text{V}$ for Devices of $V_{BR} \leq 200\text{V}$ and $V_F=5.0\text{V}$ Max. for Devices $V_{BR} > 200\text{V}$.

Devices for Bipolar Applications

1. For Bidirectional Use C or CA Suffix for Types 1.5KE6.8 through Types 1.5KE440.
2. Electrical Characteristics Apply in Both Directions.

RATINGS AND CHARACTERISTIC CURVES (1.5KE SERIES)

FIG.1- PEAK PULSE POWER RATING CURVE

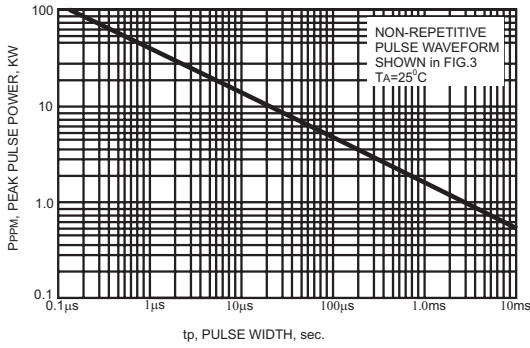


FIG.2- PULSE DERATING CURVE

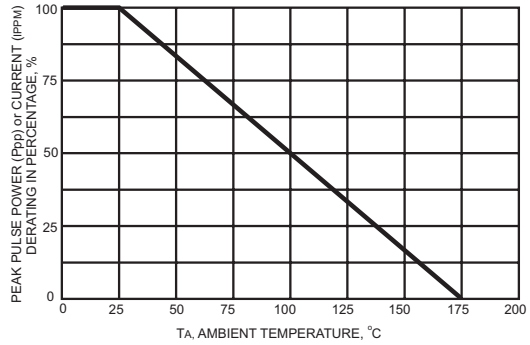


FIG.3- PULSE WAVEFORM

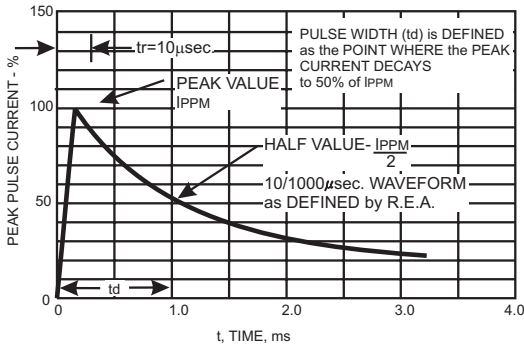


FIG.4- STEADY STATE POWER DERATING CURVE

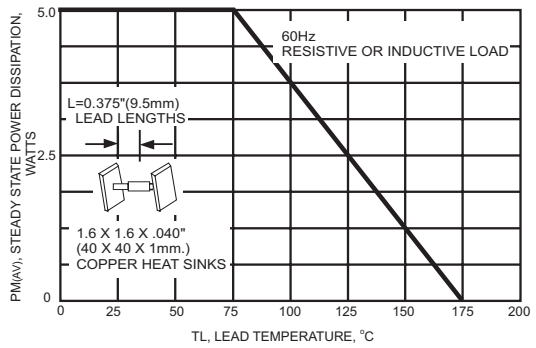


FIG.5- TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

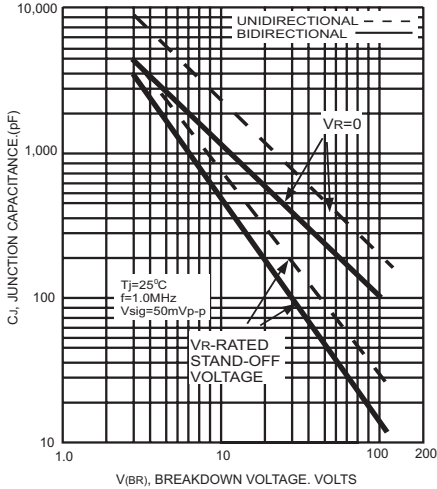


FIG.6- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY

