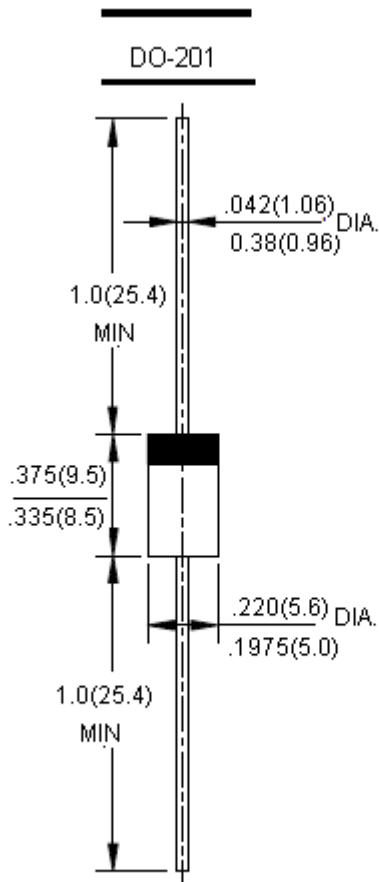


# Bidirectional Transient Voltage Suppressors



Dimensions in inches and (millimeters)

## Features:

- Glass passivate chip.
- Low leakage.
- Uni and bidirectional unit.
- Excellent clamping capability.
- Plastic material has UL recognition 94V-0.
- Fast response time.

## Mechanical Data:

- Case : Molded plastic.
- Marking : Unidirectional -type number and cathode band
- Weight : 1.2 grams.

## Maximum Ratings and Electrical Characteristics:

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

# Bidirectional Transient Voltage Suppressors



Characteristics	Symbol	Value	Unit
Peak Power Dissipation at $T_A=25^\circ\text{C}$ TP=1ms (NOTE1)	$P_{PK}$	Minimum 1500	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	IFSM	200	Amps
Steady State Power Dissipation at $T_L=75^\circ\text{C}$ Lead Lengths 0.375 inches (9.5mm), See Fig. 4	$PM_{(AV)}$	5.0	Watts
Maximum Instantaneous Forward Voltage at 50A for Unidirectional Devices Only (NOTE2)	$V_F$	See NOTE 3	Volts
Operating Temperature Range	$T_J$	-55 to + 150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 175	$^\circ\text{C}$

## Notes:

1. Non-repetitive current pulse, per Fig. 5 and derated above  $T_A=25^\circ\text{C}$  per Fig. 1 .
2. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).
3.  $V_F=3.5\text{V}$  on 1.5KE6.8 thru 1.5KE200A devices and  $V_F=5.0\text{V}$  on 1.5KE1100 thru 1.5KE400A devices.

FIG. 1-PULSE DERATING CURVE

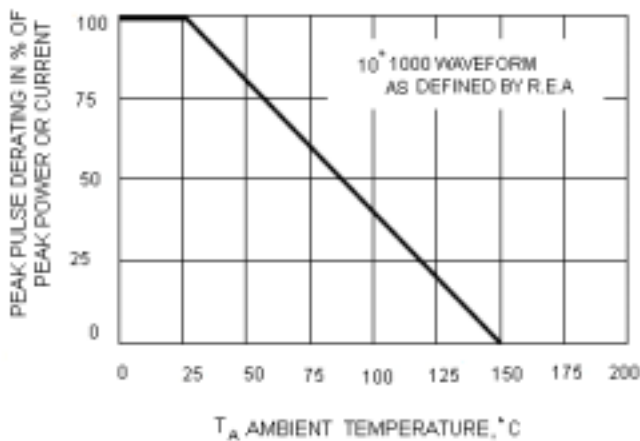
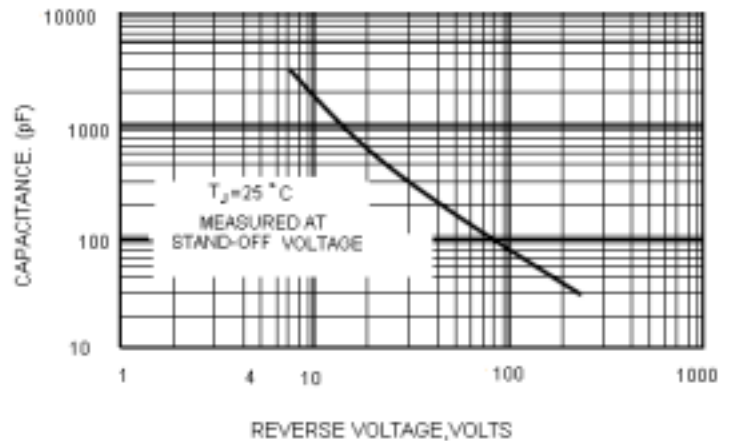


FIG. 2-TYPICAL JUNCTION CAPACITANCE



# Bidirectional Transient Voltage Suppressors



FIG.3-PULSE RATNG CURVE

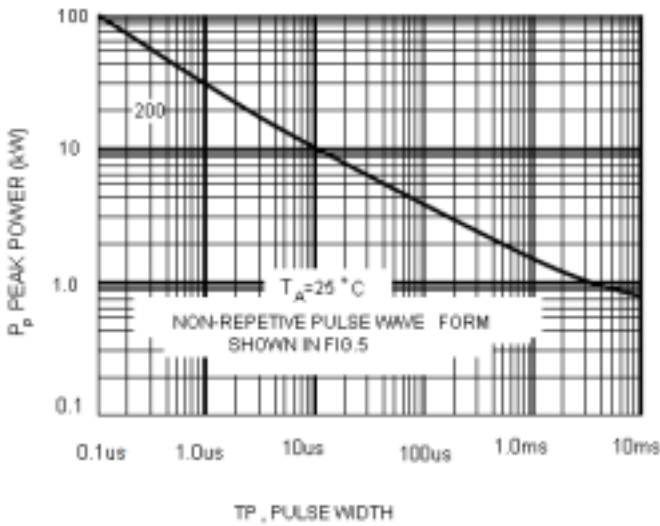


FIG.4-STEADY STATE POWER DERATING CURVE

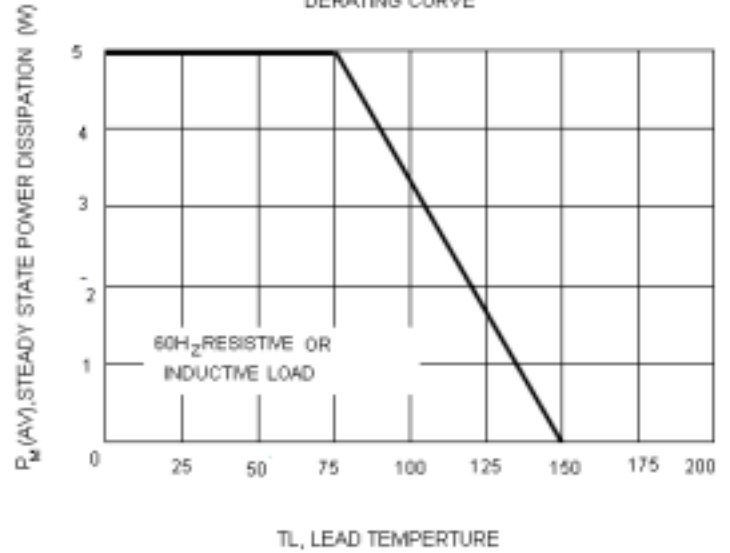
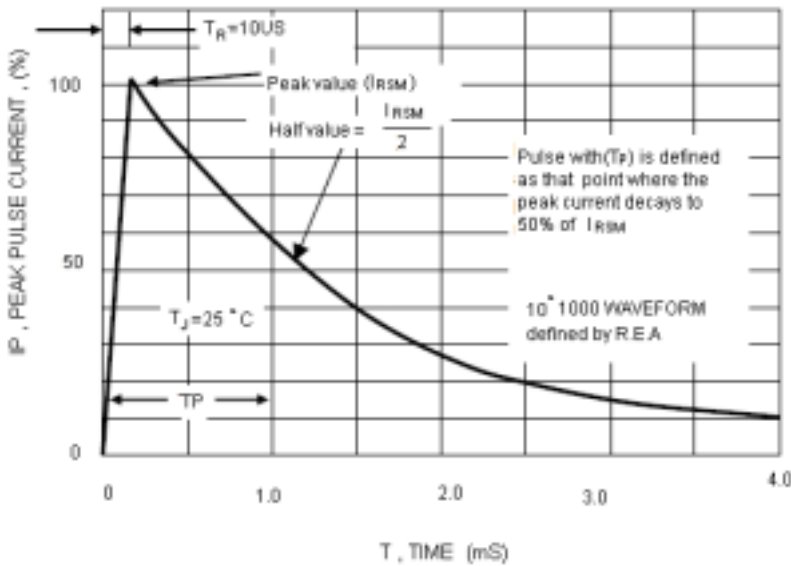


FIG.5-PULSE WAEFORM



Reverse Standoff Voltage	Breakdown Voltage BV Volts @ It			Maximum Reverse Leakage @ VR	Maximum Clamping Voltage @ Ipp	Maximum Peak Pulse Current	Maximum Voltage Temperature Variaton of Bv
	VR (V)	Minimum (V)	Maximum (V)				
7.02	7.79	8.61	10	IR (μA)	Vc (V)	Ipp (A)	mV/°C
				200	12.1	124	0.065



# Bidirectional Transient Voltage Suppressors



## Notes:

Suffix'C' denotes bidirectional device . Suffix'A' denotes 5% tolerance device .no suffix denotes 10% tolerance devive.

1. For bidirectional devices having VR of 10volts and under ,the IR limit is doubled .

## Part Number Table

Description	Part Number
Unidirectional and Bidirectional Transient Voltage Suppressors	1.5KE8.2CA

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