

1.5KE33A

Transient Voltage Suppressors

Pppm: 1500W

IFSM: 200A

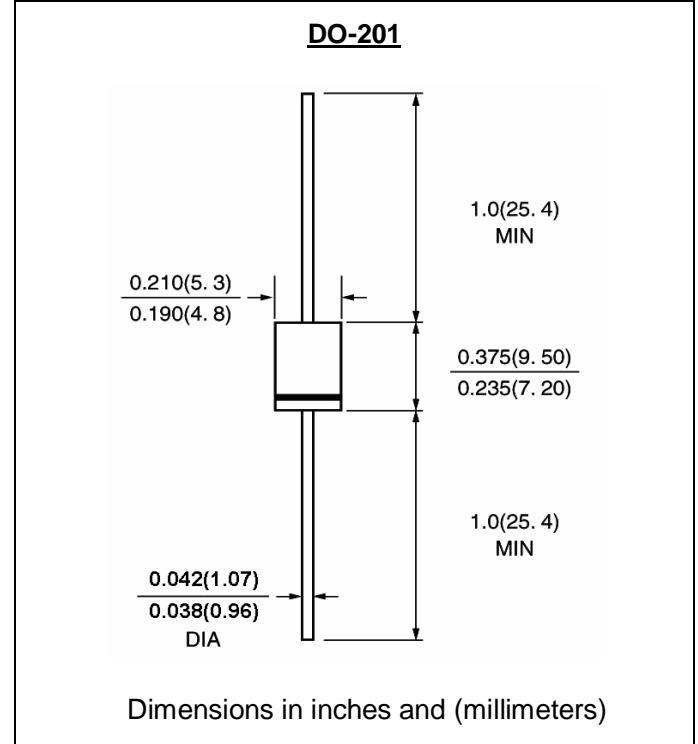


FEATURE

Low power loss
High surge capability
Ultra-fast recovery time for high efficiency
High temperature soldering guaranteed
250°C/10sec/0.375" lead length at 5 lbs tension

MECHANICAL DATA

Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
Polarity: color band denotes cathode
Mounting position: any



MAXIMUM RATINGS (TA = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	1.5KE33A	units
Peak power dissipation with a 10/1000 μ s waveform (1) (Fig. 1)	PPPM	1500	W
Peak pulse current with a 10/1000 μ s waveform (1)	IPPM	32.8	A
Breakdown Voltage at $I_T=1mA$	VBR	31.4min 34.7max	V
Maximum Reverse Leakage at $V_{WM}=28.2V$	IR	1.0	μ A
Maximum Clamping Voltage at IPPM	VC	45.7	V
Power dissipation on infinite heatsink at $T_L = 75^\circ C$ (Fig. 5)	PD	6.5	W
Peak forward surge current, 8.3 ms single half sine-wave (2)	IFSM	200	A
Maximum instantaneous forward voltage at 100 A for unidirectional only	VF	3.5	V
Typical thermal resistance junction-to-lead	Rth(jl)	20	$^\circ C/W$
Typical thermal resistance junction-to--ambient	Rth(ja)	75	$^\circ C/W$
Storage and Operating Junction Temperature	Tstg,Tj	-55 to +175	$^\circ C$

Note:

(1) Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ C$ per Fig. 2

(2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 per minute maximum

RATINGS AND CHARACTERISTIC CURVES 1.5KE33A

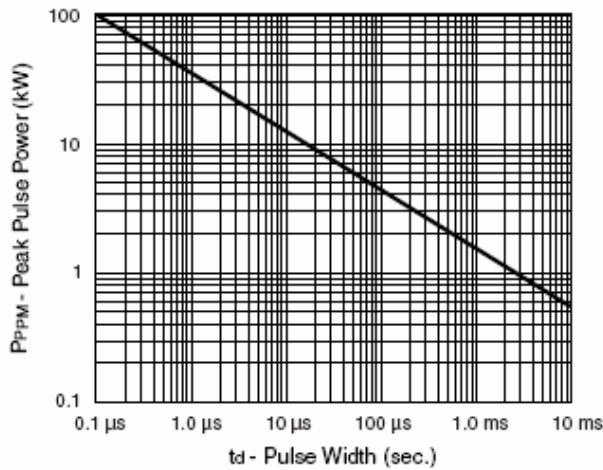


Figure 1. Peak Pulse Power Rating Curve

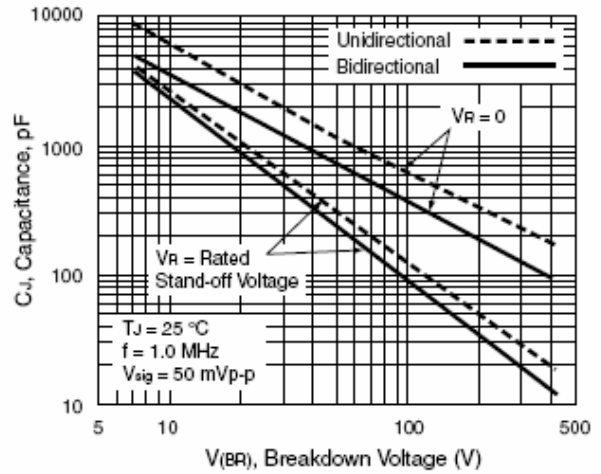


Figure 4. Typical Junction Capacitance

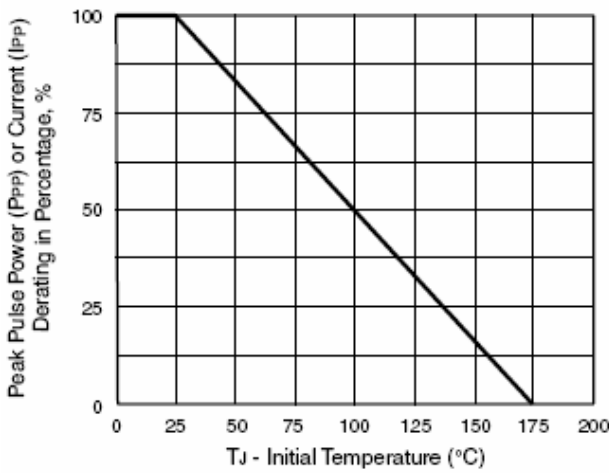


Figure 2. Pulse Power or Current versus Initial Junction Temperature

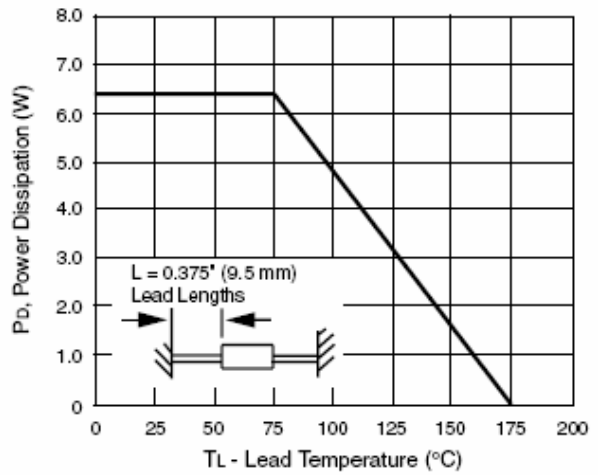


Figure 5. Power Derating Curve

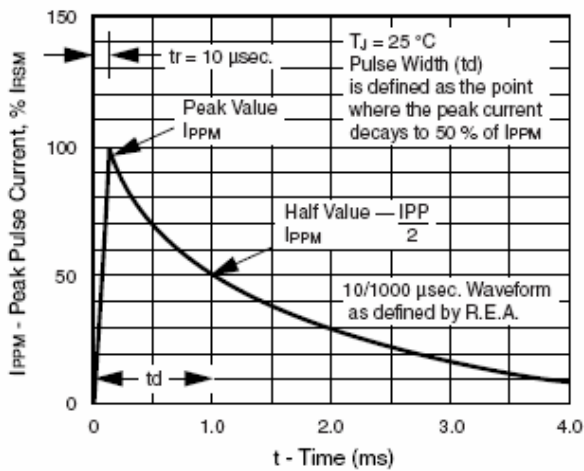


Figure 3. Pulse Waveform

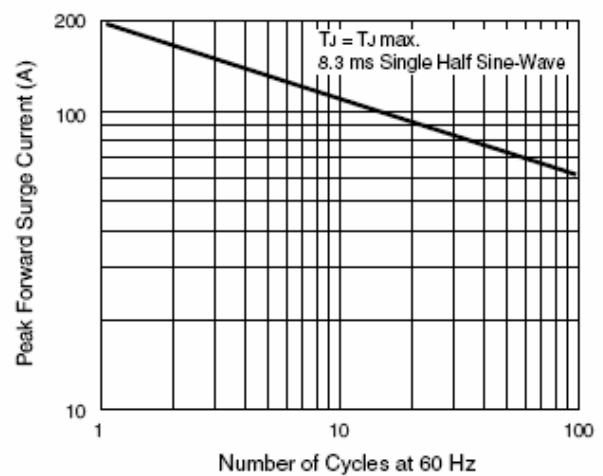


Figure 6. Maximum Non-repetitive Forward Surge Current Uni-Directional only

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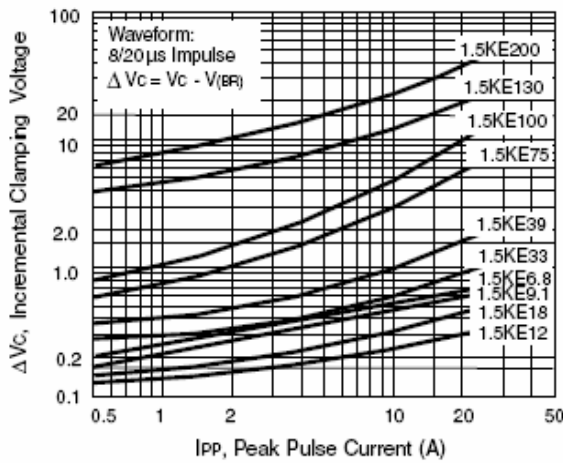


Figure 7. Incremental Clamping Voltage Curve (Unidirectional)

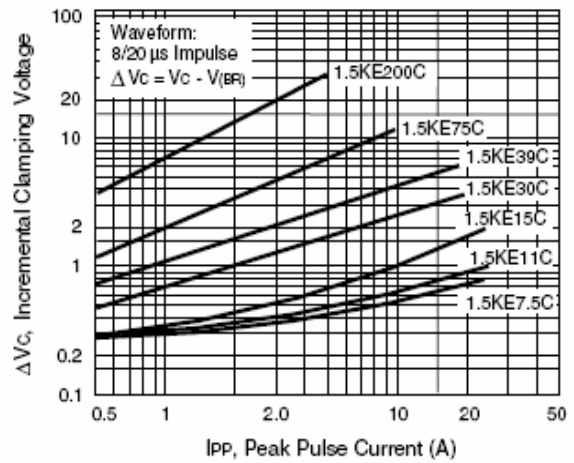


Figure 10. Incremental Clamping Voltage Curve (Bidirectional)

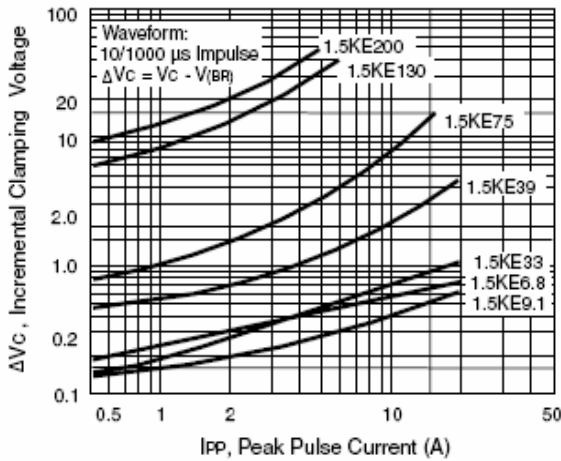


Figure 8. Incremental Clamping Voltage Curve (Unidirectional)

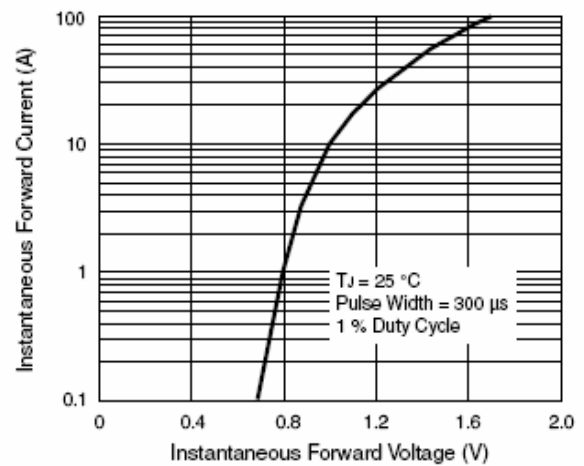


Figure 11. Instantaneous Forward Voltage Characteristics Curve

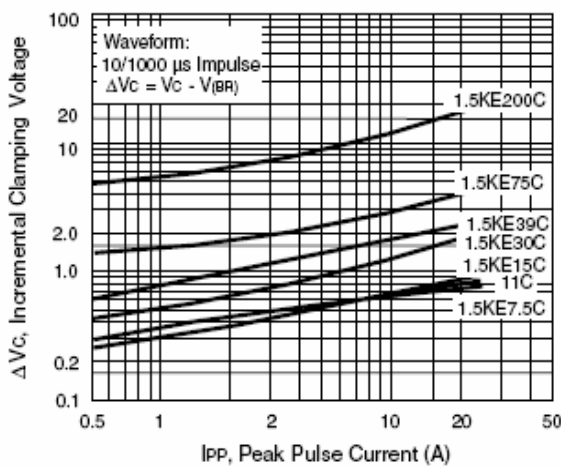


Figure 9. Incremental Clamping Voltage Curve (Bidirectional)

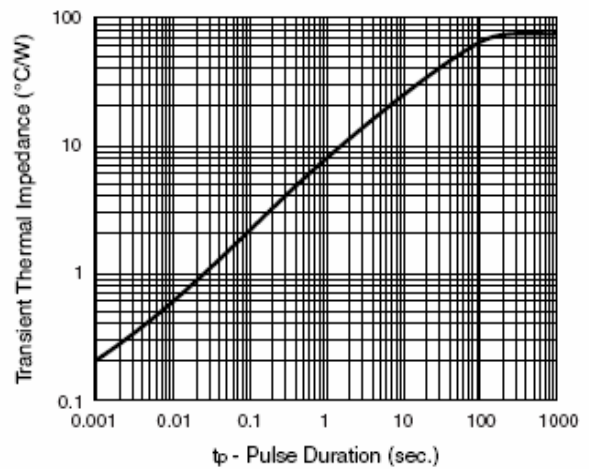


Figure 12. Typical Transient Thermal Impedance