

## FEATURES

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Exceeds environmental standards of MIL-S-19500/228
- Hermetically sealed
- Low leakage
- High surge capability
- Plastic package has Underwriters Laboratories
- Flammability Classification 94V-O utilizing
- Flame Retardant Epoxy Molding Compound

## MECHANICAL DATA

Case: Molded plastic, DO-201AD

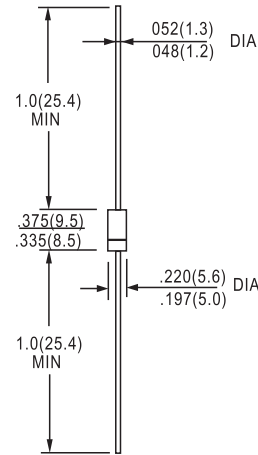
Terminals: Axial leads, solderable to MIL-STD-202,  
Method 208

Polarity: Color Band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.12 grams

DO-27



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	ER500	ER501	ER501A	ER502	ER503	ER504	ER506	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	150							A
Maximum Forward Voltage at 5.0A	$V_F$	0.95			1.25		1.70		V
Maximum DC Reverse Current $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j=125^\circ\text{C}$	$I_R$				1.0 300				$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1)	$t_{rr}$				35				ns
Typical Junction capacitance (Note 2)	$C_J$				65				pF
Typical Junction Resistance(Note 3)	$R_{\theta JA}$				20				$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$				-55 to +150				$^\circ\text{C}$

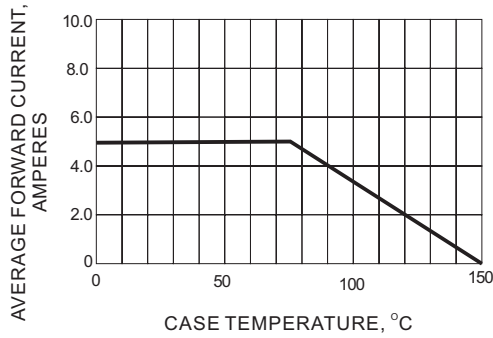
NOTES:1. Reverse Recovery Test Conditions:  $I_F=.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=.25\text{A}$

2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

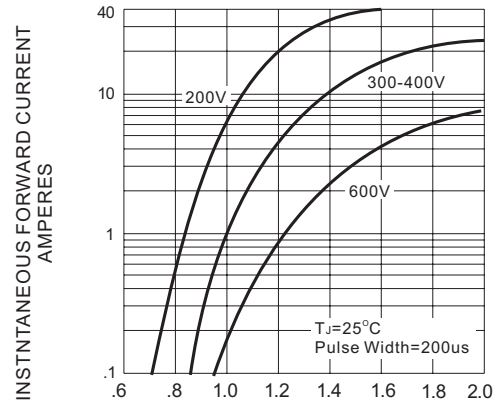
3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

**RATINGS AND CHARACTERISTICS CURVES**

**ER500 THRU ER506**

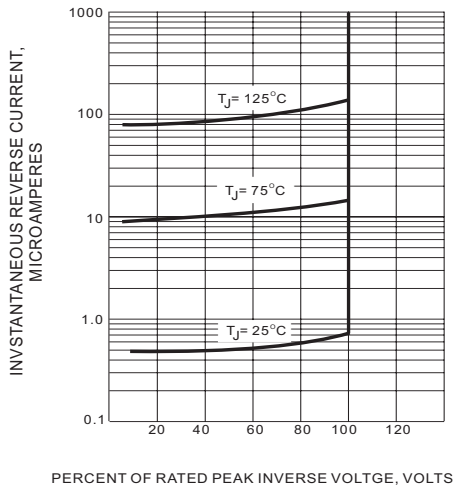


**Fig.1-FORWARD CURRENT DERATING CURVE**

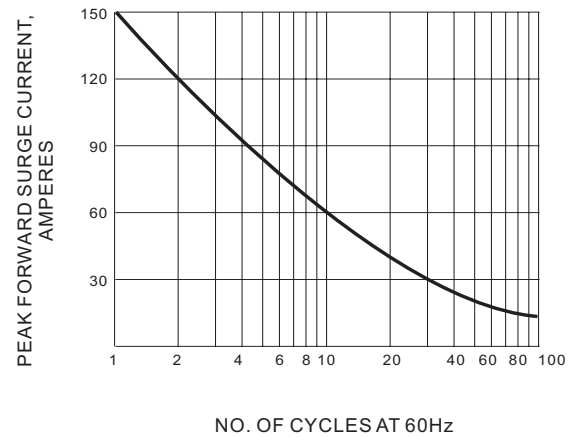


**INSTANTANEOUS FORWARD VOLTAGE, VOLTS**

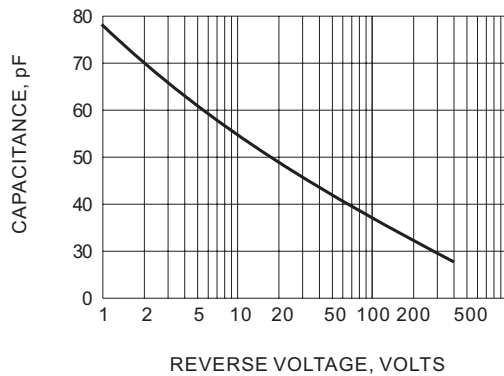
**Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig.3-TYPICAL REVERSE CHARACTERISTICS**



**Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT**



**Fig.5-TYPICAL JUNCTION CAPACITANCE**