



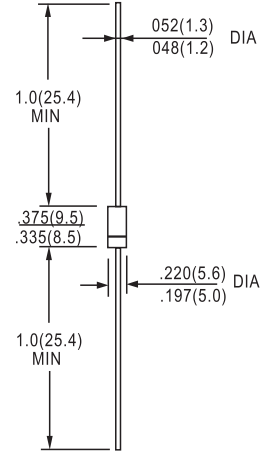
## FEATURES

- 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.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

## 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 gram

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.

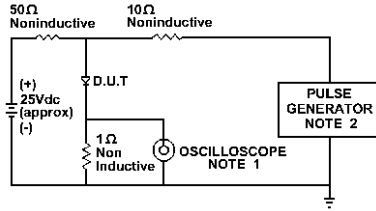
PARAMETER	SYMBOL	ER300	ER301	ER301A	ER302	ER303	ER304	ER306	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{AV}$	3.0							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	125							A
Maximum Forward Voltage at 3.0A DC	$V_F$	0.95			1.25		1.70		V
Maximum DC Reverse Current at $T_A=25^\circ\text{C}$ Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 300							$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1)	$T_{RR}$	35							ns
Typical Junction capacitance (Note 2)	$C_J$	35							pF
Typical Junction Resistance(Note 3)	$R_{\theta JA}$	20							$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range $T_J, T_{STG}$	$T_J, T_{STG}$	-55 TO +150							$^\circ\text{C}$

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

## ER300 THRU ER306



NOTE: 1. Rise Time = 7ns max.  
Input Impedance = 1 megohm. 22pF  
2. Rise Time = 10ns max.  
Source Impedance = 50 Ohms

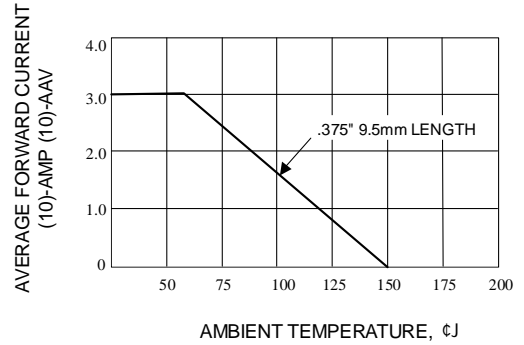
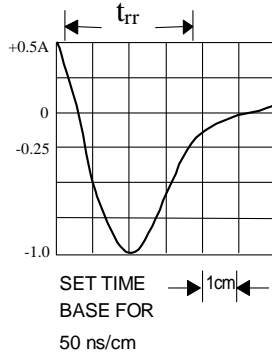


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

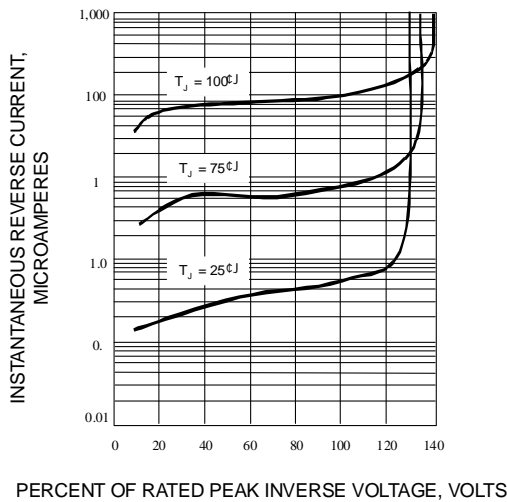


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

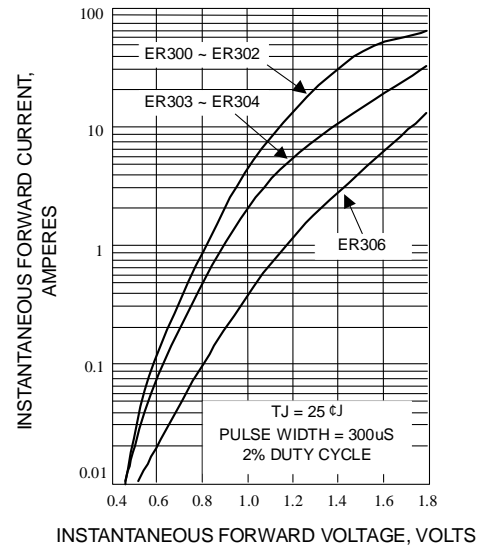


Fig. 4-FORWARD CURRENT DERATING CURVE

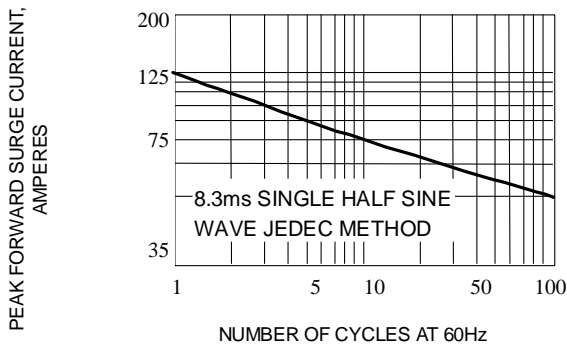


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

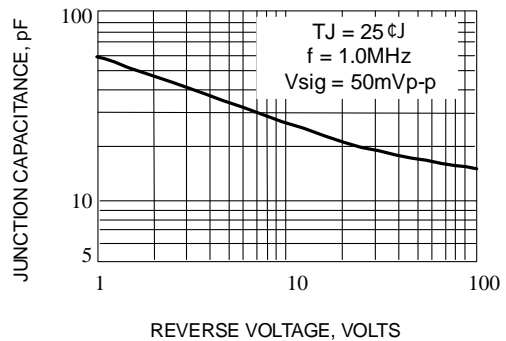


Fig. 6-TYPICAL JUNCTION CAPACITANCE