

# HER301 - HER308

PRV : 50 - 1000 Volts

Io : 3.0 Amperes

## FEATURES :

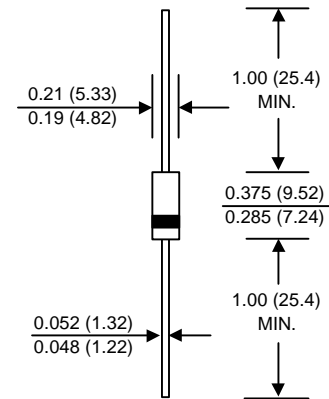
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : DO-201AD Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 1.16 grams

# HIGH EFFICIENT RECTIFIER DIODES

## DO-201AD



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%.

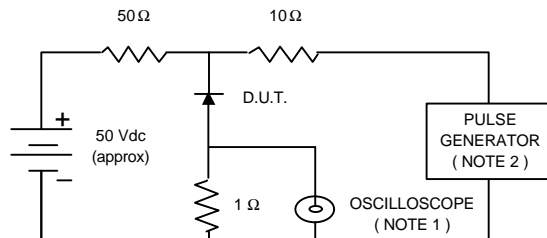
RATING	SYMBOL	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	UNIT	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	V	
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	3.0								A	
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150								A	
Maximum Forward Voltage at $I_F = 3.0\text{ A}$	$V_F$	1.1					1.7				V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	$I_R$	10								$\mu\text{A}$	
	$I_{R(H)}$	50								$\mu\text{A}$	
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	50					75				ns
Typical Junction Capacitance ( Note 2 )	$C_J$	50								pf	
Junction Temperature Range	$T_J$	- 65 to + 150								$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	- 65 to + 150								$^\circ\text{C}$	

## Notes :

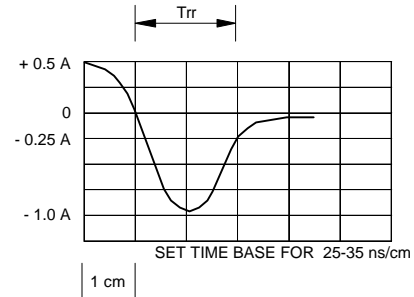
- ( 1 ) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( HER301 - HER308 )

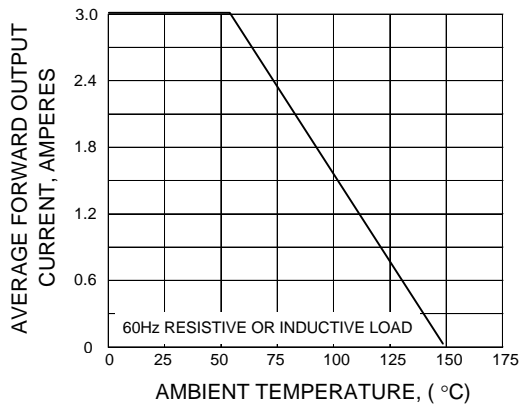
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



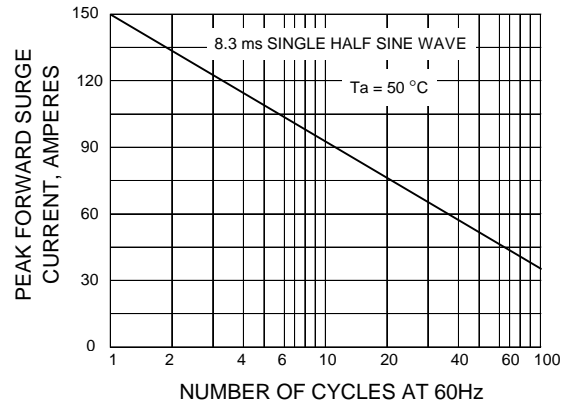
- NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



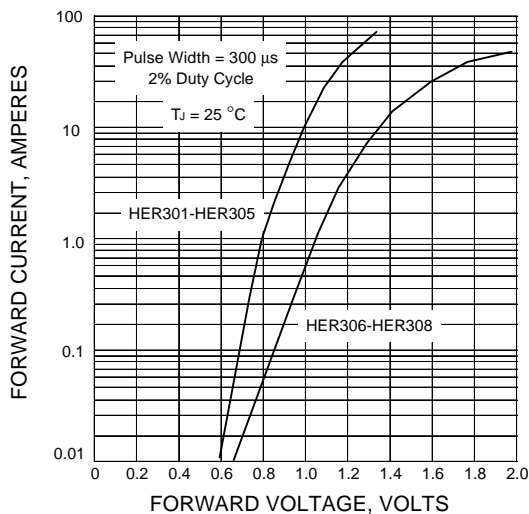
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

