

# HER301 -HER308

## 3.0 AMPS. High Efficient Rectifiers

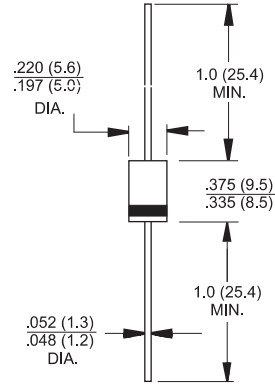
### DO-201AD

## Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application.

## Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.2grams



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%

Type Number	Symbol	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	Units
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 Rectified Current .375 (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{(AV)}$	3.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	150								A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.0			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	$I_R$	10 250								$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	50				75				nS
Typical Junction capacitance (Note 2)	$C_j$	70				50				pF
Typical Thermal Resistance	$R_{\theta JA}$	40								$^\circ C/W$
Operating Temperature Range	$T_J$	-65 to +150								$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +150								$^\circ C$

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
  3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

RATINGS AND CHARACTERISTIC CURVES (HER301 THRU HER308)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

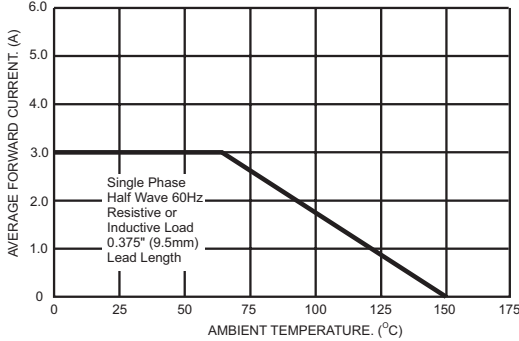


FIG.2- TYPICAL REVERSE CHARACTERISTICS

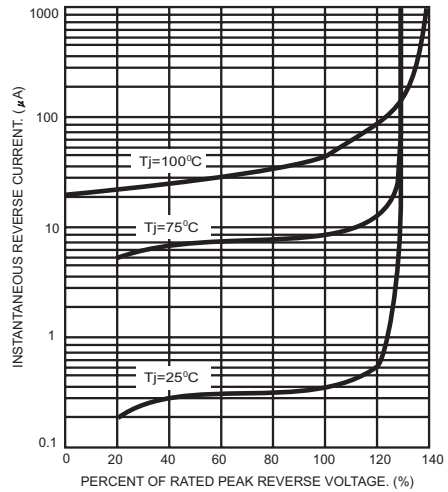


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

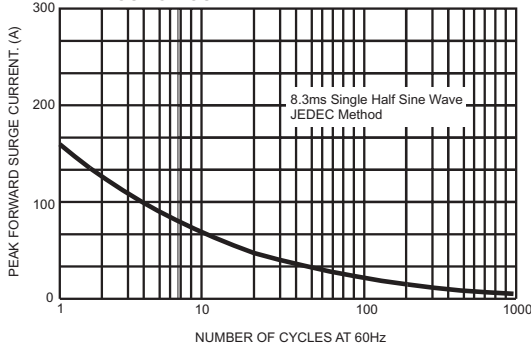


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

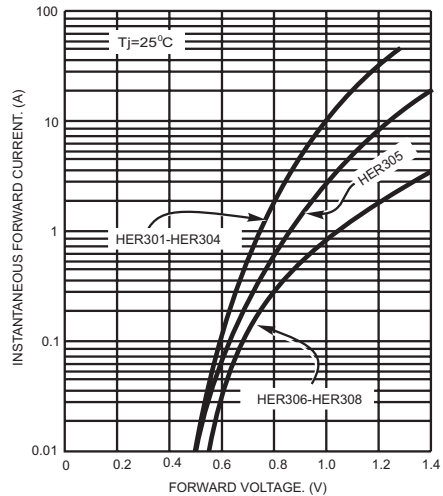


FIG.4- TYPICAL JUNCTION CAPACITANCE

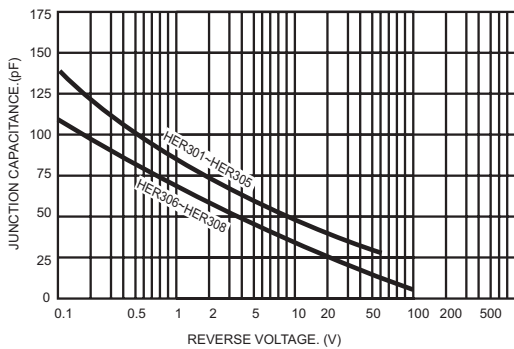


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

