

# HER101 - HER108

## 1.0 AMP. High Efficient Rectifiers

### DO-41

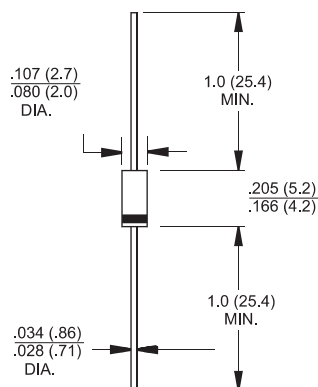


## Features

- ✧ 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 DO-41
- ✧ 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: 0.34gram



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 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	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 @ $T_A = 55^\circ C$	$I_{(AV)}$	1.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.0			1.3		1.7			V	
Maximum DC Reverse Current $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=125^\circ C$	$I_R$	5.0					150				$\mu A$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	50				75				nS	
Typical Junction Capacitance ( Note 2 )	$C_j$	25				20				pF	
Typical Thermal Resistance	$R_{\theta JA}$	70								$^\circ C/W$	
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 5mm x 5mm on PCB.

## RATINGS AND CHARACTERISTIC CURVES (HER101 THRU HER108)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

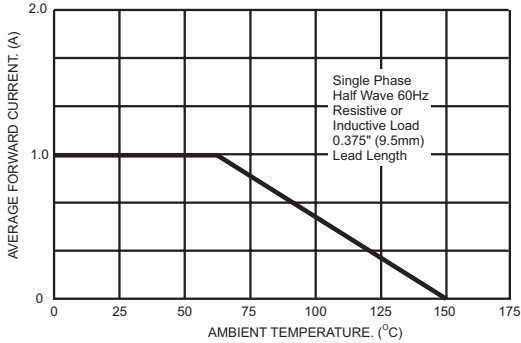


FIG.2- TYPICAL REVERSE CHARACTERISTICS

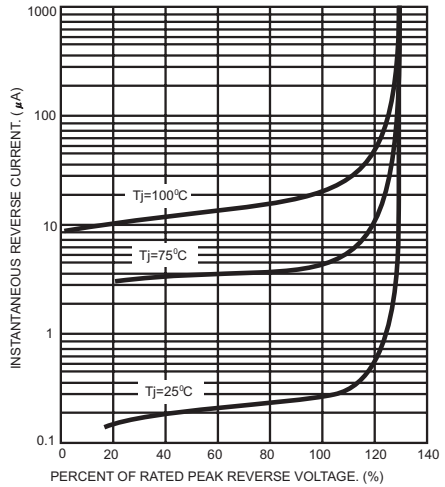


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

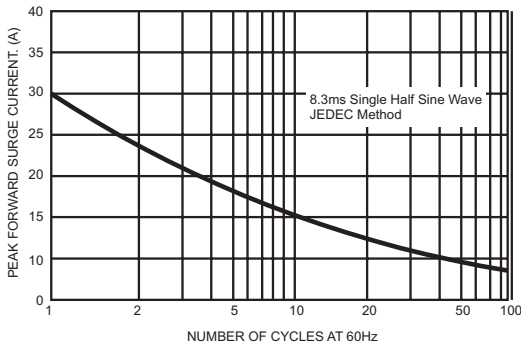


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

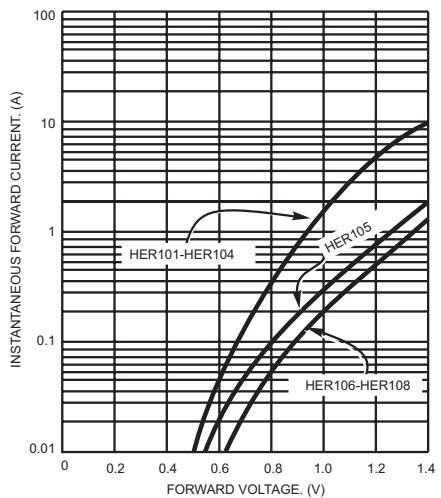


FIG.4- TYPICAL JUNCTION CAPACITANCE

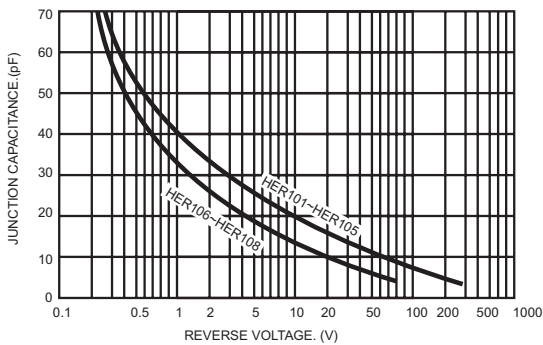
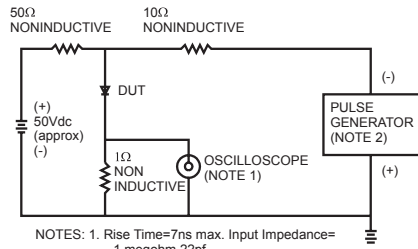


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance=50 ohms

