

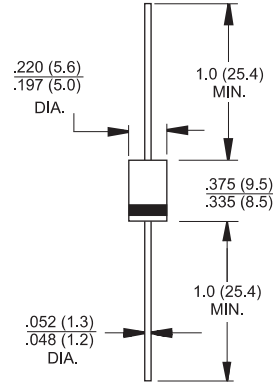


# HER501G-HER508G

5.0 AMP. Glass Passivated High Efficient Rectifiers



## DO-201AD



## Features

- ◇ Glass passivated chip junction.
- ◇ 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
- ◇ 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: 1.2 grams

Dimensions in inches and (millimeters)

## Maximum Rating 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 501G	HER 502G	HER 503G	HER 504G	HER 505G	HER 506G	HER 507G	HER 508G	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMD}$	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 @ $T_A = 55^\circ\text{C}$	$I_{(AV)}$	5.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200								A
Maximum Instantaneous Forward Voltage @5.0A	$V_F$	1.0		1.3		1.7				V
Maximum DC Reverse Current @ $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_a=125^\circ\text{C}$	$I_R$	10				200				$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	50				75				nS
Typical Junction Capacitance ( Note 2 )	$C_j$	100				65				pF
Typical Thermal Resistance	$R_{\theta JA}$	40								$^\circ\text{C}/\text{W}$
Operating 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 MHz and applied reverse voltage of 4.0 V D.C.
  3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.



### RATINGS AND CHARACTERISTIC CURVES (HER501G THRU HER508G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

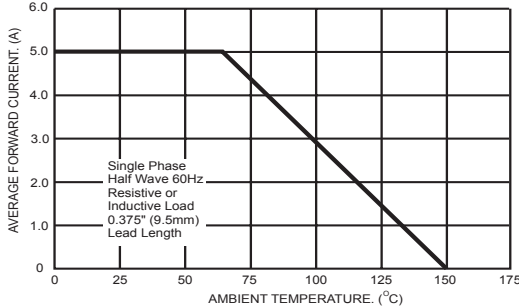


FIG.2- TYPICAL REVERSE CHARACTERISTICS

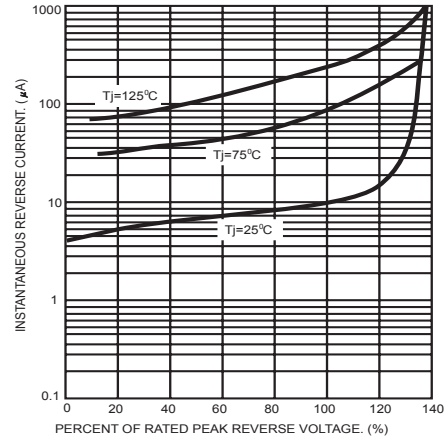


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

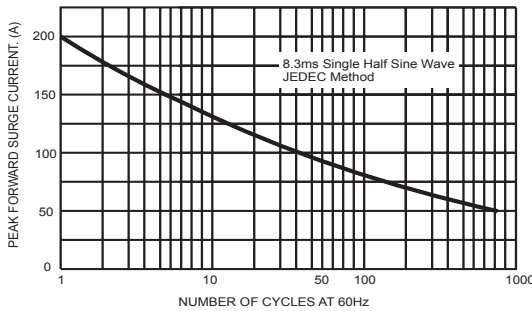


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

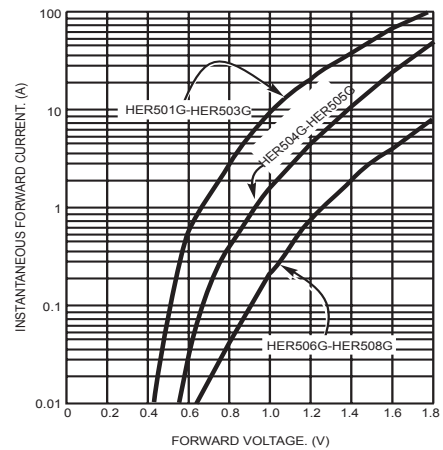


FIG.4- TYPICAL JUNCTION CAPACITANCE

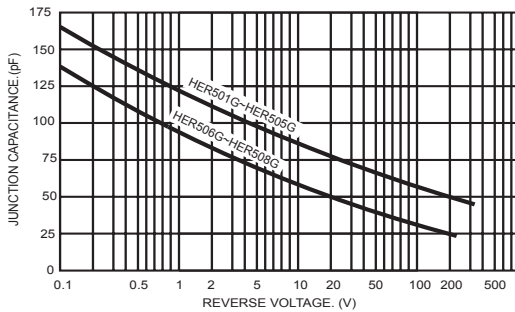
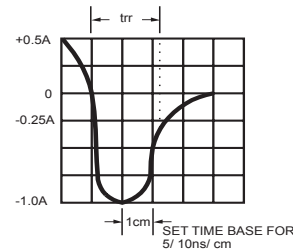
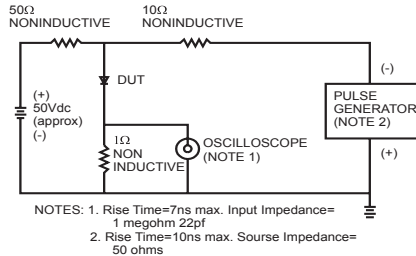


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-27	1250/AMMO	12500	40X26.5X30	14.00	12.00