

# HER101SG - HER108SG

1.0 AMP. Glass Passivated High Efficient Rectifiers

**A-405**

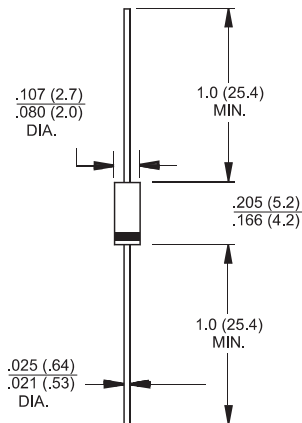


## Features

- ✧ 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

- ✧ Case: Molded plastic A-405
- ✧ 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
- ✧ Mounting position: Any
- ✧ Weight: 0.22 gram



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 101SG	HER 102SG	HER 103SG	HER 104SG	HER 105SG	HER 106SG	HER 107SG	HER 108SG	Units	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	1000	V	
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ T <sub>A</sub> = 55 °C	I <sub>(AV)</sub>	1.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	V <sub>F</sub>	1.0			1.3		1.7			V	
Maximum DC Reverse Current @ T <sub>A</sub> =25 °C at Rated DC Blocking Voltage @ T <sub>A</sub> =125 °C	I <sub>R</sub>					5.0					uA
						150					uA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	50				75				nS	
Typical Junction Capacitance ( Note 2 )	C <sub>j</sub>	20				15				pF	
Typical Thermal Resistance	R <sub>θJA</sub>	90								°C/W	
Operating Temperature Range	T <sub>J</sub>	-65 to +150								°C	
Storage Temperature Range	T <sub>STG</sub>	-65 to +150								°C	

- Notes:
1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=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 (HER101SG THRU HER108SG)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

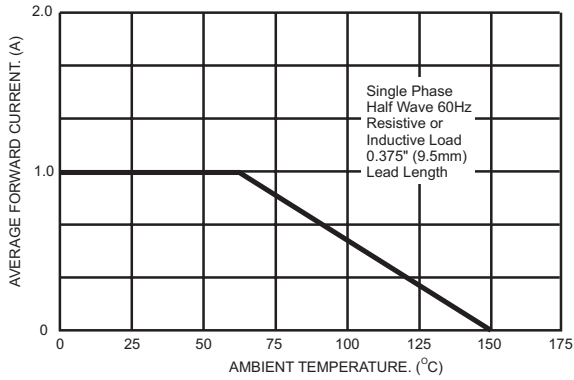


FIG.2- TYPICAL REVERSE CHARACTERISTICS

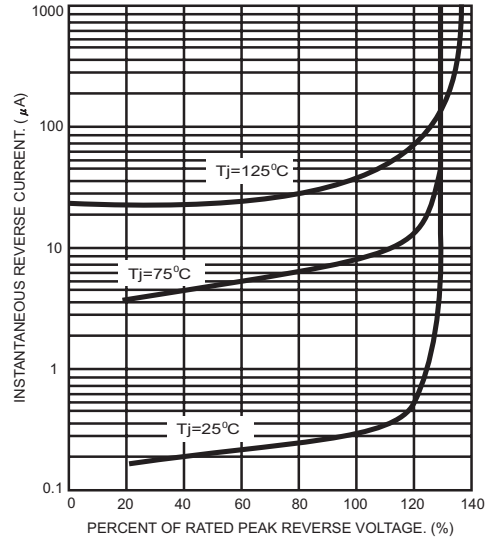


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

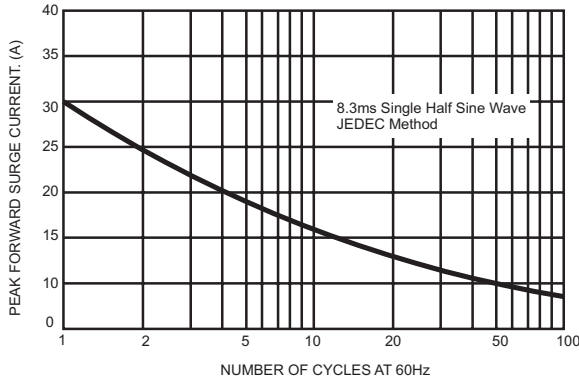


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

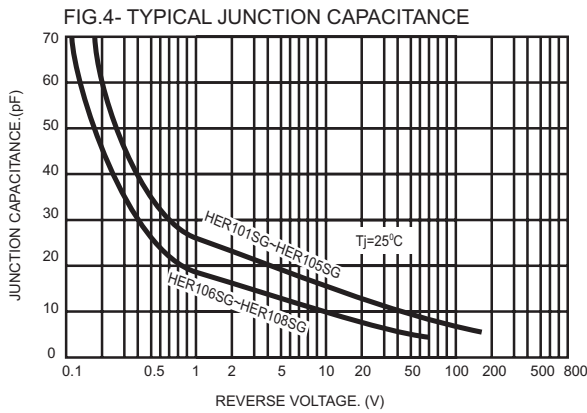
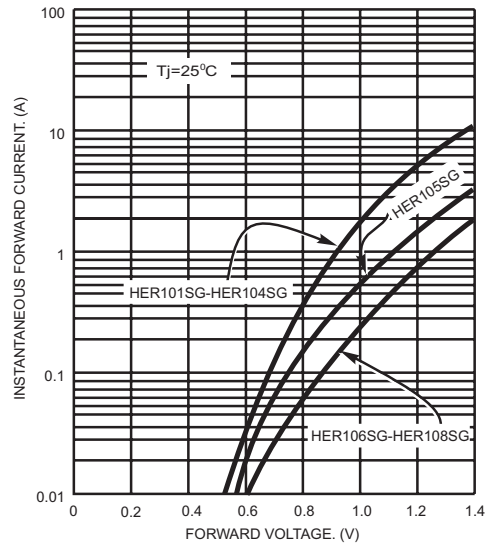
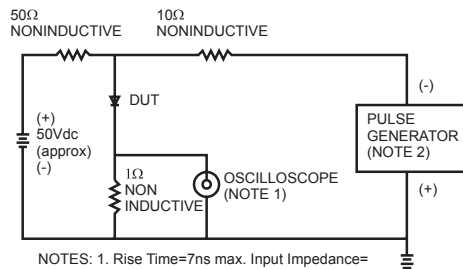


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

