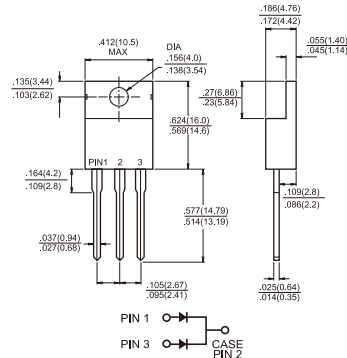


# HER1001G - HER1008G

10.0 AMPS. Glass Passivated High Efficient Rectifiers



## TO-220AB



Dimensions in inches and (millimeters)

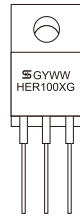
## Features

- ◇ UL Recognized File # E-326243
- ◇ 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.
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode.

## Mechanical Data

- ◇ Case: TO-220AB molded plastic
- ◇ Epoxy: UL 94V0 rate flame retardant
- ◇ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: As marked
- ◇ High temperature soldering guaranteed: 260°C/10 seconds .16",(4.06mm) from case.
- ◇ Weight: 2.24 grams

## Marking Diagram



- HER100XG = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

## 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 1001G	HER 1002G	HER 1003G	HER 1004G	HER 1005G	HER 1006G	HER 1007G	HER 1008G	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 @ T <sub>C</sub> = 100 °C	I <sub>F(AV)</sub>	10								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	125								A
Maximum Instantaneous Forward Voltage @ 5.0A	V <sub>F</sub>	1.0			1.3		1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ T <sub>A</sub> =25 °C ( Note 1) @ T <sub>A</sub> =125 °C	I <sub>R</sub>	10				400				uA uA
Maximum Reverse Recovery Time ( Note 4 )	T <sub>rr</sub>	50				80				nS
Typical Junction Capacitance ( Note 2 )	C <sub>j</sub>	60				40				pF
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	1.5								°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. Pulse Test with PW=300 usec,1% Duty Cycle  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
3. Mounted on Heatsink Size of 2" x 3" x 0.25" Al-Plate.  
4. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

RATINGS AND CHARACTERISTIC CURVES (HER1001G THRU HER1008G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

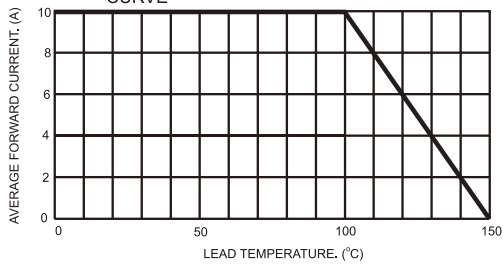


FIG.2- TYPICAL REVERSE CHARACTERISTICS

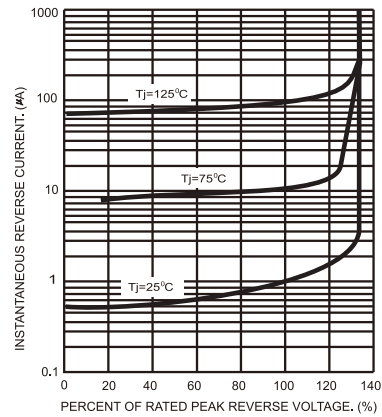


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

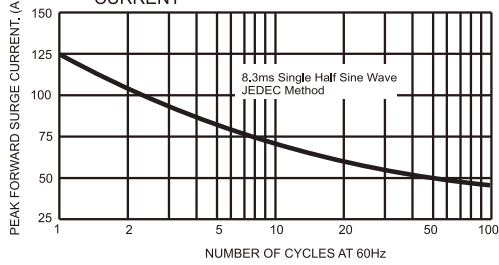


FIG.5- TYPICAL FORWARD CHARACTERISTICS

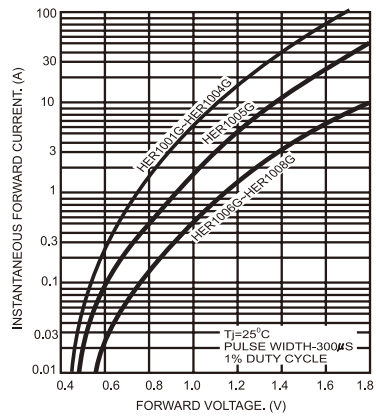


FIG.4- TYPICAL JUNCTION CAPACITANCE

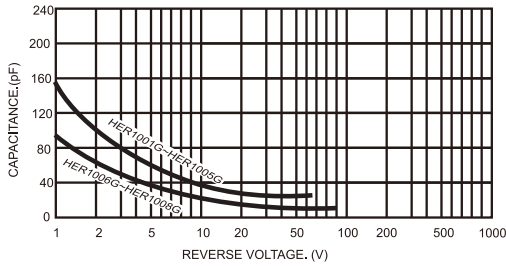


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

