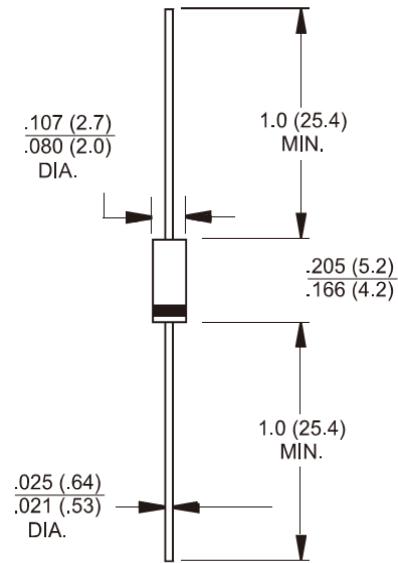


## HER101SG - HER108SG

1.0AMP. 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

### Mechanical Data

- ✧ Case: Molded plastic A-405
- ✧ Epoxy: UL 94V-0 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/10s / .375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ✧ Mounting position: Any
- ✧ Weight: 0.22 grams

### Dimensions in inches and (millimeters)

#### Marking Diagram



- HER10XSG = 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 101SG	HER 102SG	HER 103SG	HER 104SG	HER 105SG	HER 106SG	HER 107SG	HER 108SG	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 @ $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1								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 (Note 1) @ 1 A	$V_F$	1.0			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	5 150								uA uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	50				75			nS	
Typical Junction Capacitance (Note 3)	$C_j$	20				15			pF	
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	90								$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 65 to + 150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150								$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $IRR=0.25\text{A}$

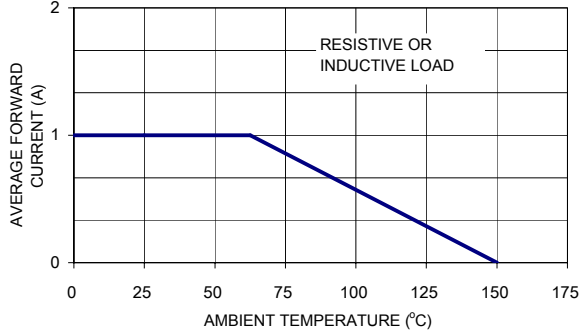
Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

Note 4: Mount on Cu-Pad Size 5mm x 5mm on PCB

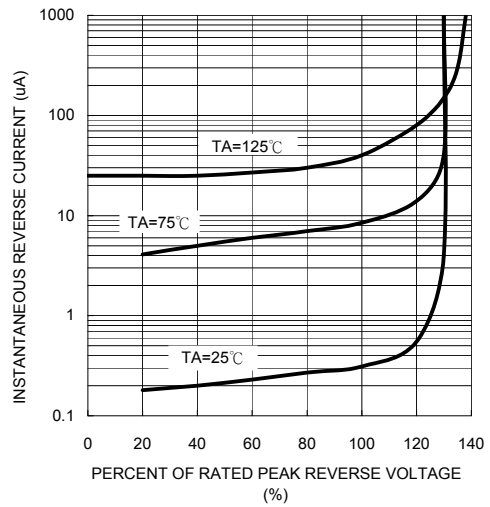
Version:C10

**RATINGS AND CHARACTERISTIC CURVES (HER101SG THRU HER108SG)**

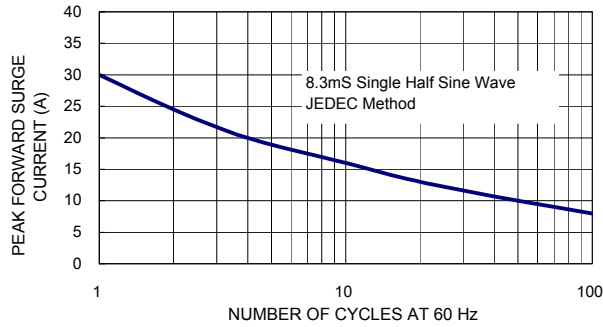
**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**



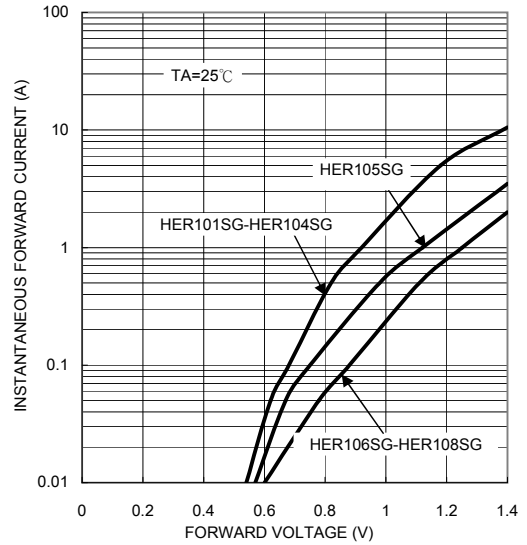
**FIG. 2- TYPICAL REVERSE CHARACTERISTICS**



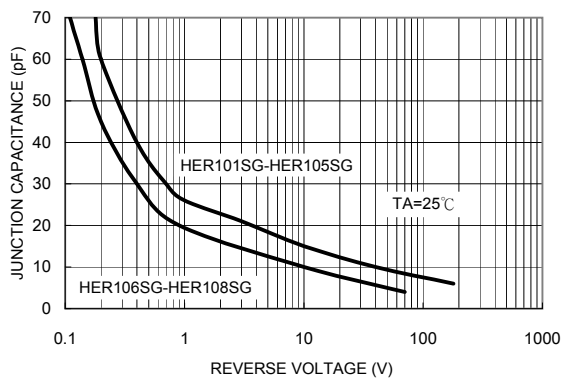
**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



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

