

# HERAF1601G - HERAF1608G

Isolated 16.0 AMPS.

Glass Passivated High Efficient Rectifiers

**ITO-220AC**

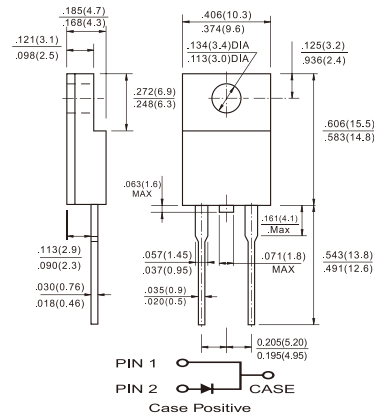


## Features

- ✧ 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.

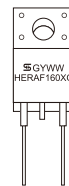
## Mechanical Data

- ✧ Cases: ITO-220AC 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 0.25", (6.35mm) from case.
- ✧ Mounting torque : 5 in – 1bs. max.
- ✧ Weight: 2.24 grams



Dimensions in inches and (millimeters)

Marking Diagram



HERAF160XG= 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.

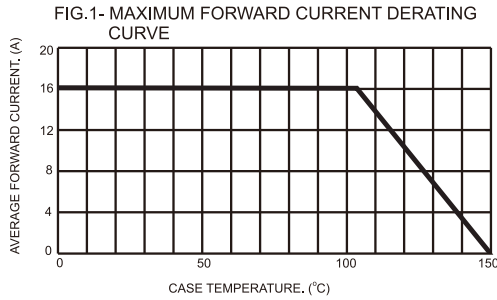
For capacitive load, derate current by 20%

| Type Number                                                                                                                 | Symbol             | HERAF<br>1601G | HERAF<br>1602G | HERAF<br>1603G | HERAF<br>1604G | HERAF<br>1605G | HERAF<br>1606G | HERAF<br>1607G | HERAF<br>1608G | Units    |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                                      | VRRM               | 50             | 100            | 200            | 300            | 400            | 600            | 800            | 1000           | V        |
| Maximum RMS Voltage                                                                                                         | VRMS               | 35             | 70             | 140            | 210            | 280            | 420            | 560            | 700            | V        |
| Maximum DC Blocking Voltage                                                                                                 | VDC                | 50             | 100            | 200            | 300            | 400            | 600            | 800            | 1000           | V        |
| Maximum Average Forward Rectified Current<br>@T <sub>C</sub> =100 °C                                                        | I <sub>F(AV)</sub> | 16             |                |                |                |                |                |                |                | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed<br>on Rated Load (JEDEC method )                   | I <sub>FSM</sub>   | 250            |                |                |                |                |                |                |                | A        |
| Maximum Instantaneous Forward Voltage<br>@16.0A                                                                             | V <sub>F</sub>     | 1.0            |                |                |                | 1.3            | 1.7            |                |                | V        |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage @T <sub>A</sub> =25 °C<br>( Note 1 )<br>@ T <sub>A</sub> =125 °C | I <sub>R</sub>     | 10<br>400      |                |                |                |                |                |                |                | uA<br>uA |
| Maximum Reverse Recovery Time ( Note 4 )                                                                                    | T <sub>rr</sub>    | 50             |                |                |                |                | 80             |                |                | nS       |
| Typical Junction Capacitance ( Note 2 )                                                                                     | C <sub>j</sub>     | 150            |                |                |                |                | 110            |                |                | pF       |
| Typical Thermal Resistance (Note 3)                                                                                         | R <sub>θJC</sub>   | 2.0            |                |                |                |                |                |                |                | °C/W     |
| Operating Temperature Range                                                                                                 | T <sub>J</sub>     | -65 to +150    |                |                |                |                |                |                |                | °C       |
| Storage Temperature Range                                                                                                   | T <sub>STG</sub>   | -65 to +150    |                |                |                |                |                |                |                | °C       |

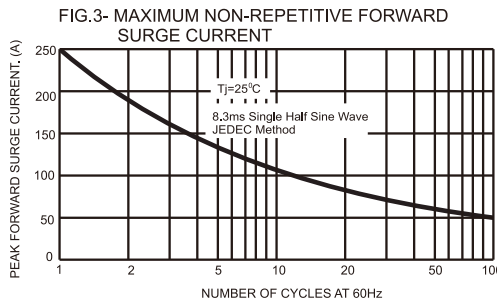
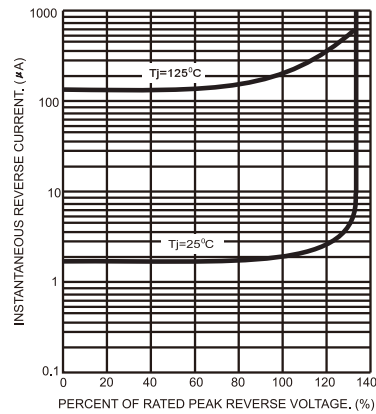
- Notes:
1. Pulse Test with PW=300 usec, 1% Duty Cycle
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D. C.
  3. Mounted on Heatsink Size of 2 in x 3 in x 0.25 in Al-Plate.
  4. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

Version: D10

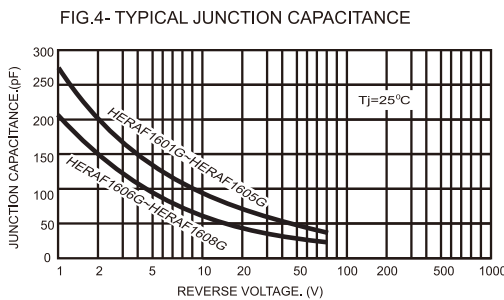
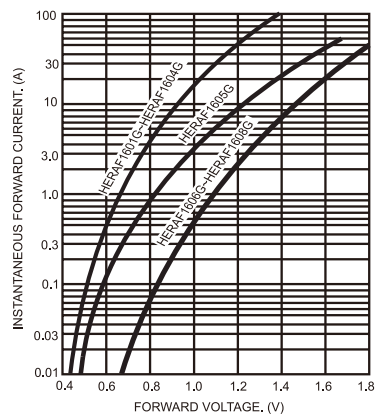
## RATINGS AND CHARACTERISTIC CURVES (HERAF1601G THRU HERAF1608G)



**FIG.2- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL FORWARD CHARACTERISTICS**



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

