



# HERAF1601G THRU HERAF1608G

Isolation 16.0 AMPS. Glass Passivated High Efficient Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
16.0 Amperes

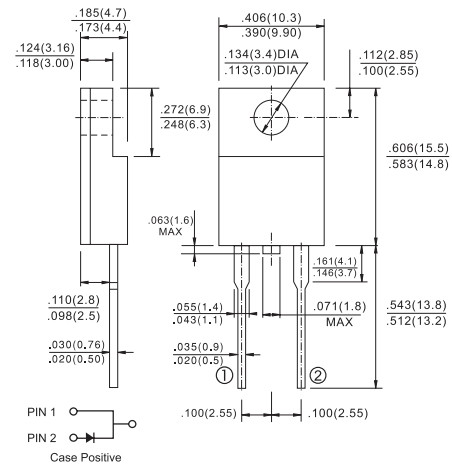
## Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

## Mechanical Data

- ✧ Cases: ITO-220AC molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Terminals: Leads 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

## ITO-220AC



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            | 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  | 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>(AV)</sub> | 16.0           |                |                |                |                |                |                |                | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )   | I <sub>FSM</sub>  | 250            |                |                |                |                |                |                |                | A        |
| Maximum Instantaneous Forward Voltage @16.0A  | 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>    | 10.0<br>400    |                |                |                |                |                |                |                | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)  | 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. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$

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.

## RATINGS AND CHARACTERISTIC CURVES (HERAF1601G THRU HERAF1608G)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

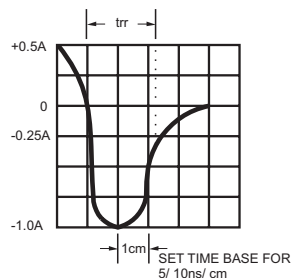
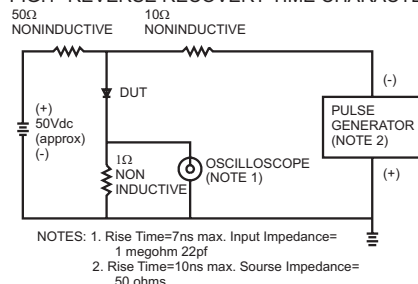


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

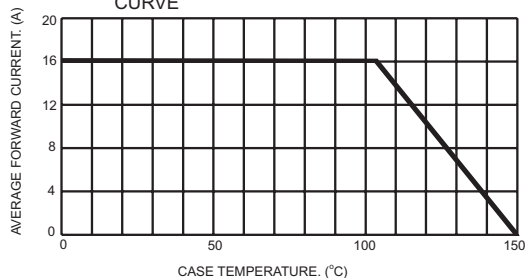


FIG.3- TYPICAL REVERSE CHARACTERISTICS

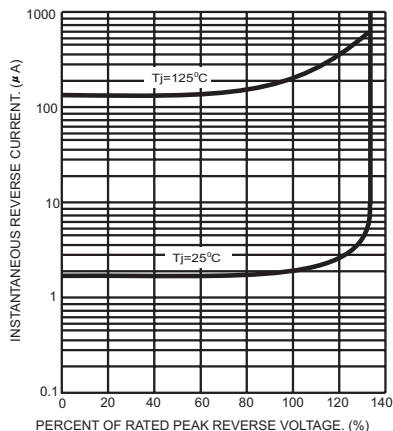


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

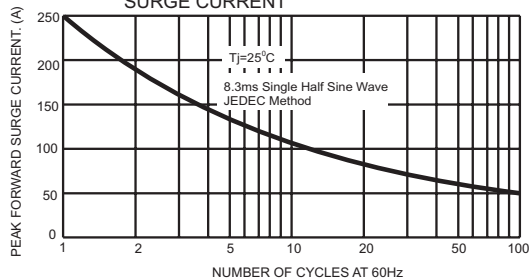


FIG.6- TYPICAL FORWARD CHARACTERISTICS

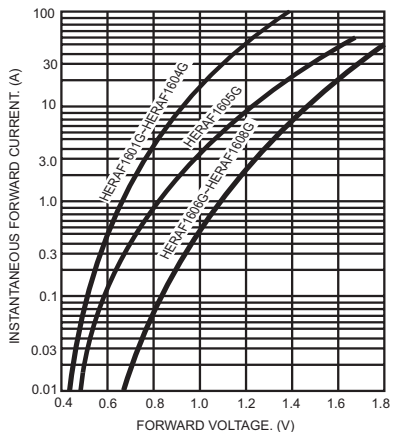


FIG.5- TYPICAL JUNCTION CAPACITANCE

