



# HER1601G THRU HER1608G

**16.0 AMPS. GLASS PASSIVATED  
HIGH EFFICIENT RECTIFIERS**

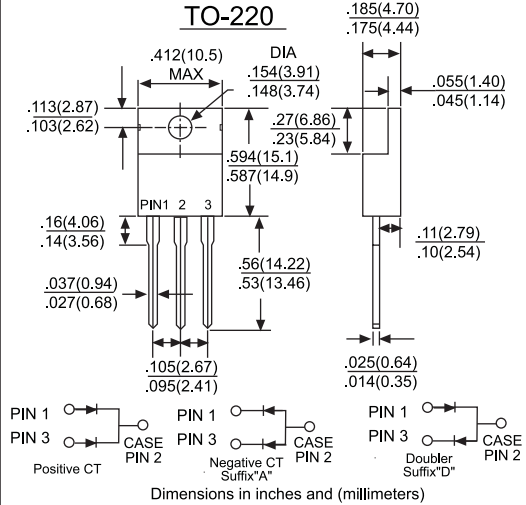
**Voltage Range  
50 to 1000 Volts  
Current  
16.0 Amperes**

**Features**

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

**Mechanical Data**

- Cases: TO-220 molded plastic
- Epoxy: UL 94V-O rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: As marked
- High temperature soldering guaranteed: 250°C/10 seconds/.16", (4.06mm) from case.
- Weight: 2.24 grams



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

| Type Number   | HER 1601G          | HER 1602G   | HER 1603G | HER 1604G | HER 1605G   | HER 1606G | HER 1607G | HER 1608G | UNITS |          |
|---|--------------------|-------------|-----------|-----------|-------------|-----------|-----------|-----------|-------|----------|
| Maximum Repetitive 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<br>.375"(9.5mm) Lead Length @T <sub>A</sub> = 55°C                | I <sub>F(AV)</sub> | 16.0        |           |           |             |           |           |           |       | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated Load<br>(JEDEC method)    | I <sub>FSM</sub>   | 125         |           |           |             |           |           |           |       | A        |
| Maximum Instantaneous Forward Voltage<br>@6.0A  | V <sub>F</sub>     | 1.0         |           |           | 1.3         |           | 1.7       |           |       | V        |
| Maximum DC Reverse Current @ T <sub>A</sub> = 25°C<br>at Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C | I <sub>R</sub>     |             |           |           | 10.0<br>400 |           |           |           |       | µA<br>µA |
| Maximum Reverse Recovery Time (Note 1)  | T <sub>RR</sub>    | 50          |           |           |             |           | 80        |           |       | nS       |
| Typical Junction Capacitance (Note 2)   | C <sub>J</sub>     | 80          |           |           |             |           | 50        |           |       | pF       |
| Typical Thermal Resistance (Note 3)   | R <sub>θJC</sub>   | 3.0         |           |           |             |           |           |           |       | °C/W     |
| Operating Temperature Range   | T <sub>J</sub>     | -55 to +150 |           |           |             |           |           |           |       | °C       |
| Storage Temperature Range   | T <sub>STG</sub>   | -55 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. Thermal Resistance from Junction to Case per Leg Mounted on Heatsink.

# RATING AND CHARACTERISTIC CURVES HER1601G THRU HER1608G



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

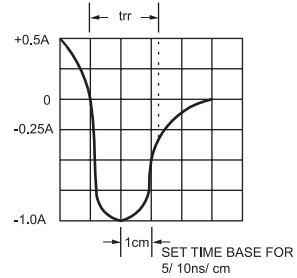
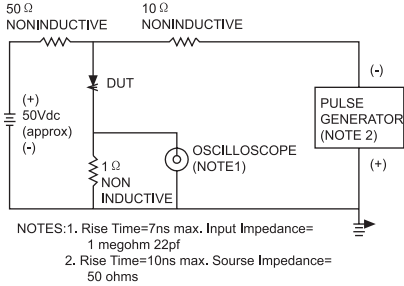


FIG.3-TYPICAL REVERSE CHARACTERISTICS PER LEG

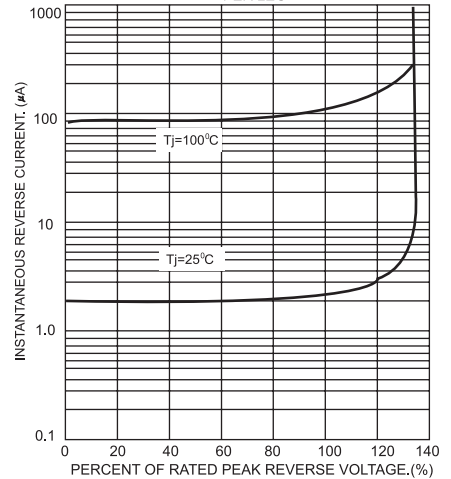


FIG.6-TYPICAL FORWARD CHARACTERISTICS PER LEG

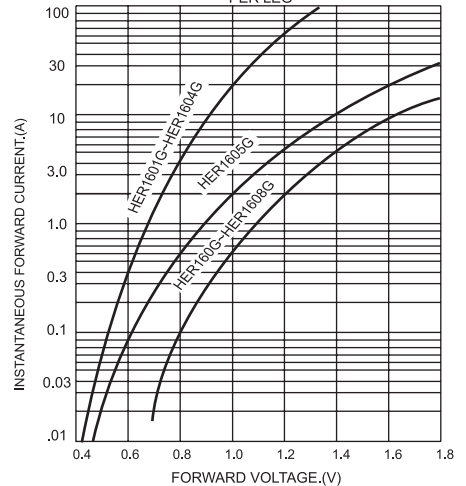


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

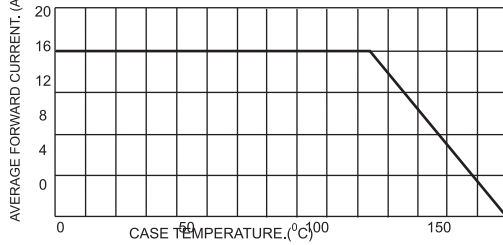


FIG.5-MAXIMUM NON-REPETITIVE SURGE CURRENT

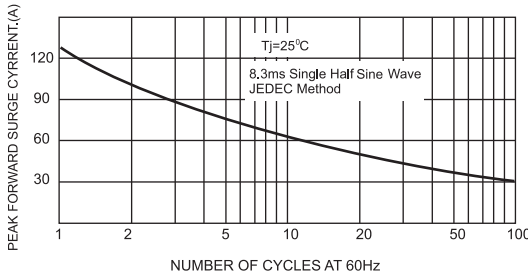


FIG.5-TYPICAL JUNCTION CAPACITANCE PER LEG

