



# HER301/UF5400 THRU HER308/UF5408

**3.0 AMPS. HIGH EFFICIENT  
RECTIFIERS**

Voltage Range  
50 to 1000 Volts  
Current  
3.0 Amperes

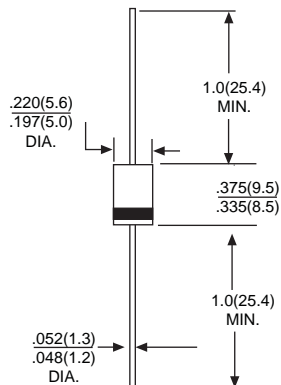
**Features**

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

**Mechanical Data**

- \*Cases: Molded plastic
- \*Epoxy: UL 94V-O rate flame retardant
- \*Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- \*Polarity: Color band denotes cathode end
- \*High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- \*Weight: 1.2 grams

**DO-201AD**



Dimensions in inches and (millimeters)

**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%

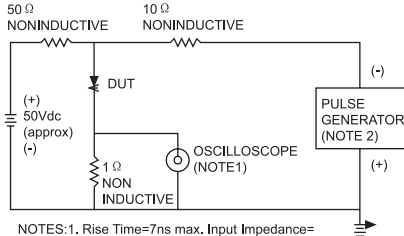
| Type Number                                                                                                 |                    | HER301<br>UF5400 | HER302<br>UF5401 | HER303<br>UF5402 | HER304<br>UF5403 | HER305<br>UF5404 | HER306<br>UF5406 | HER307<br>UF5407 | HER308<br>UF5408 | UNITS |          |
|-------------------------------------------------------------------------------------------------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------|----------|
| 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> | 3.0              |                  |                  |                  |                  |                  |                  |                  |       | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated Load<br>(JEDEC method)    | I <sub>FSM</sub>   | 150              |                  |                  |                  |                  |                  |                  |                  |       | A        |
| Maximum Instantaneous Forward Voltage<br>@ 3.0A                                                             | 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>200      |                  |                  |                  |                  |                  |                  |                  |       | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                                      | T <sub>RR</sub>    | 50               |                  |                  |                  | 75               |                  |                  |                  | nS    |          |
| Typical Junction Capacitance (Note 2)                                                                       | C <sub>J</sub>     | 80               |                  |                  |                  | 50               |                  |                  |                  | pF    |          |
| Operating Temperature Range                                                                                 | T <sub>J</sub>     | -55 to +125      |                  |                  |                  |                  |                  |                  |                  |       | °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.

# RATING AND CHARACTERISTIC CURVES HER301/UF5400 THRU HER308/UF5408



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



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance= 50 ohms

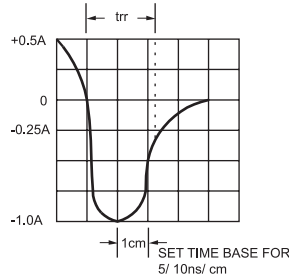


FIG.2-MAXIMUM AVERAGE FORWARD CURRENT DERATING

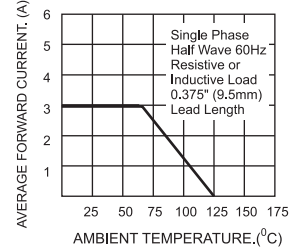


FIG.3-TYPICAL REVERSE CHARACTERISTICS

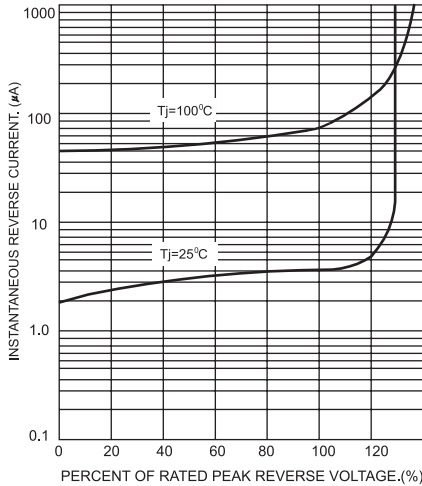


FIG.5-TYPICAL FORWARD CHARACTERISTICS

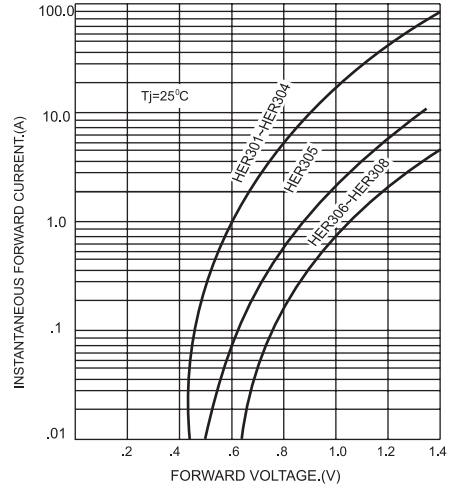


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

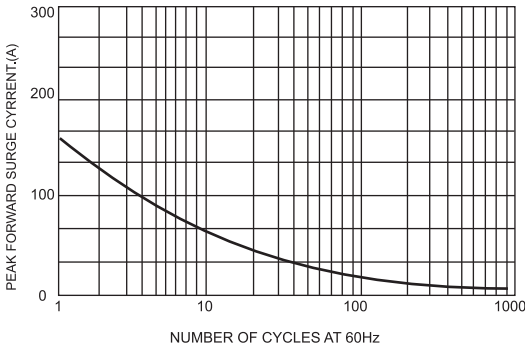


FIG.6-TYPICAL JUNCTION CHARACTERISTICS

