

# HER301 THRU HER308



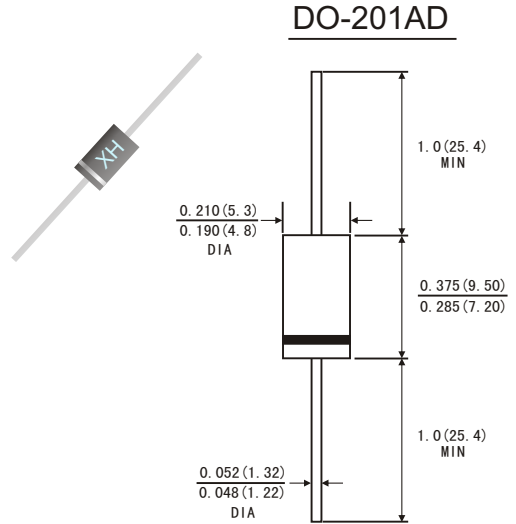
HIGH EFFICIENCY RECTIFIER  
Reverse Voltage: 50 to 1000 Volts  
Forward Current: 3.0 Amperes

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low forward voltage drop
- High current capability, High reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, Low leakage
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

## MECHANICAL DATA

- Case: JEDED DO-201AD molded plastic body
- Epoxy: UL94V-0 rate flame retardant
- Lead: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.042ounce, 1.19 grams



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%.)

|  | Symbols                            | HER 301     | HER 302 | HER 303 | HER 304 | HER 305 | HER 306 | HER 307 | HER 308 | Units |
|--|------------------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent peak reverse voltage   | V <sub>RRM</sub>                   | 50          | 100     | 200     | 300     | 400     | 600     | 800     | 1000    | Volts |
| Maximum RMS Voltage  | V <sub>RMS</sub>                   | 35          | 70      | 140     | 210     | 280     | 420     | 560     | 700     | Volts |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                    | 50          | 100     | 200     | 300     | 400     | 600     | 800     | 1000    | Volts |
| Maximum Average Forward Rectified Current<br>0.375"(9.5mm)lead length at T <sub>A</sub> =55°C    | I <sub>(AV)</sub>                  | 3.0         |         |         |         |         |         |         |         | Amps  |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                   | 150.0       |         |         |         |         |         |         |         | Amps  |
| Maximum Instantaneous Forward Voltage at 3.0 A   | V <sub>F</sub>                     | 1.0         |         | 1.3     |         | 1.7     |         |         | Volts   |       |
| Maximum DC Reverse Current at rated DC blocking voltage  | T <sub>A</sub> =25°C               | 10.0        |         |         |         |         |         |         |         | μA    |
|  | T <sub>A</sub> =100°C              | 150         |         |         |         |         |         |         |         |       |
| Maximum reverse recovery time(Note1)   | T <sub>rr</sub>                    | 50          |         |         |         |         | 75      |         |         | ns    |
| Typical junction capacitance(Note2)  | C <sub>J</sub>                     | 70          |         |         |         |         | 50      |         |         | pF    |
| Operating junction and storage temperature range   | T <sub>J</sub><br>T <sub>STG</sub> | -65 to +150 |         |         |         |         |         |         |         | °C    |

Note: 1. Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.

2. Measured at 1MHz and applied reverse voltage of 4.0 Volts.

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

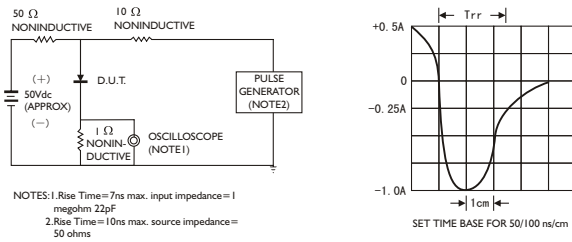


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

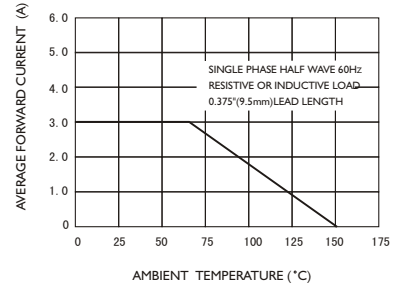


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

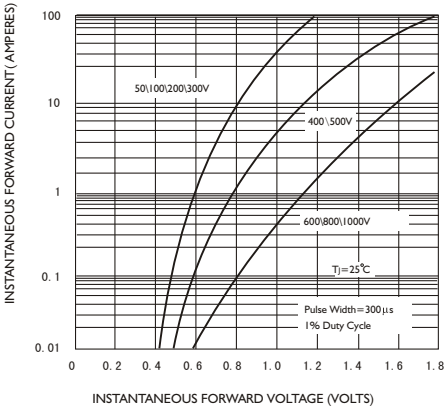


FIG.4-TYPICAL REVERSE CHARACTERISTICS

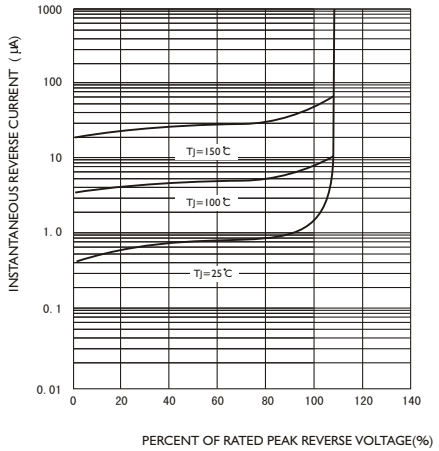


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

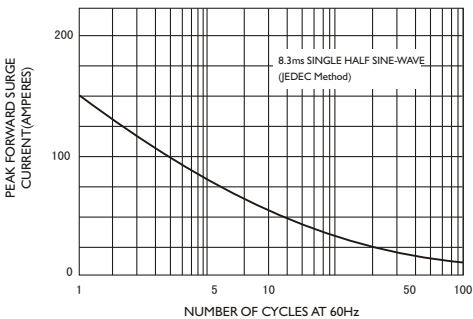


FIG.6-TYPICAL JUNCTION CAPACITANCE

