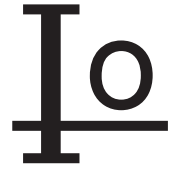


# HER301 THRU HER308

3.0 AMP HIGH EFFICIENCY RECTIFIERS



## FEATURES

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

## MECHANICAL DATA

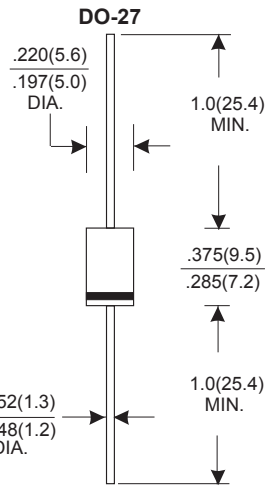
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.10 grams

## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

3.0 Amperes



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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     | HER302 | HER303 | HER304 | HER305 | HER306 | HER307 | HER308 | UNITS |
|---|------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage  | 50         | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | V     |
| Maximum RMS Voltage   | 35         | 70     | 140    | 210    | 280    | 420    | 560    | 700    | V     |
| Maximum DC Blocking Voltage   | 50         | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=50°C                      | 3.0        |        |        |        |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 150        |        |        |        |        |        |        |        | A     |
| Maximum Instantaneous Forward Voltage at 3.0A   | 1.0        |        | 1.3    |        | 1.85   |        |        |        | V     |
| Maximum DC Reverse Current Ta=25°C  | 10         |        |        |        |        |        |        |        | μA    |
| at Rated DC Blocking Voltage Ta=100°C   | 200        |        |        |        |        |        |        |        | μA    |
| Maximum Reverse Recovery Time (Note 1)  | 50         |        |        |        | 70     |        |        |        | nS    |
| Typical Junction Capacitance (Note 2)   | 75         |        |        |        |        |        |        |        | pF    |
| Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>                             | -65 — +150 |        |        |        |        |        |        |        | °C    |

### NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (HER301 THRU HER308)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

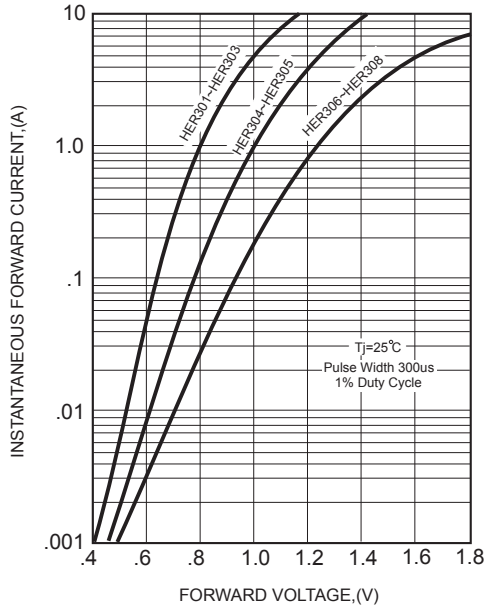


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

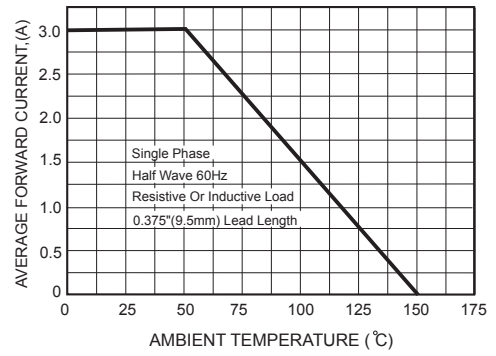
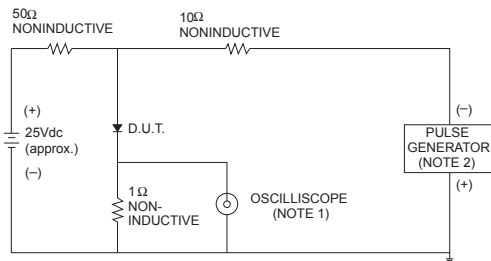


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

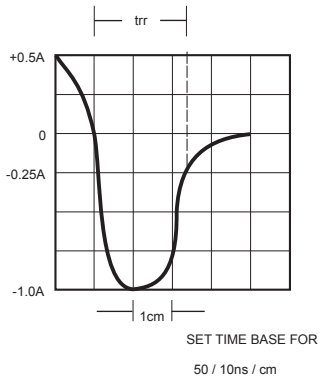


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

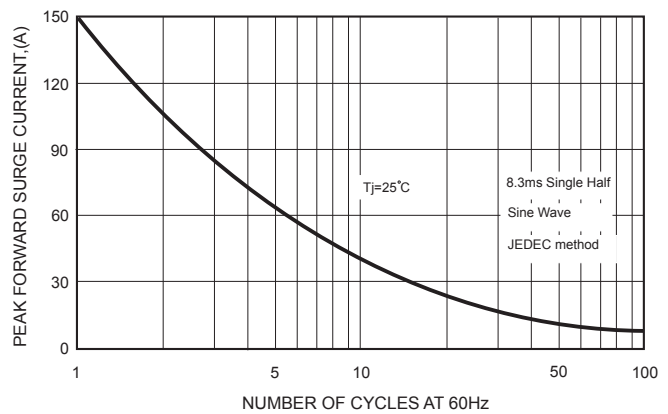


FIG.5-TYPICAL JUNCTION CAPACITANCE

