

# HER601 THRU HER608

6.0 AMP HIGH EFFICIENCY RECTIFIERS



## FEATURES

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

## MECHANICAL DATA

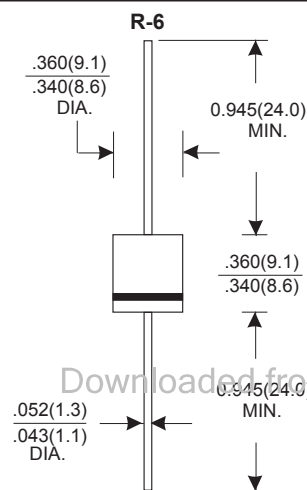
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.65 grams
- \* Both normal and Pb free product are available:
- \* Normal: 80~95%Sn, 5~20%Pb
- \* Pb free: 99 Sn above can meet Rohs environment substance directive request

## VOLTAGE RANGE

50 TO 1000 Volts

## CURRENT

6.0 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                                                                                           | HER601     | HER602 | HER603 | HER604 | HER605 | HER606 | HER607 | HER608 | 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                      | 6.0        |        |        |        |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 300        |        |        |        |        |        |        |        | A     |
| Maximum Instantaneous Forward Voltage at 6.0A                                                         | 1.0        |        |        |        | 1.3    | 1.70   |        |        | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 10.0       |        |        |        |        |        |        |        | μA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 200        |        |        |        |        |        |        |        | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 50         |        |        |        |        | 75     |        |        | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 100        |        |        |        |        |        |        |        | pF    |
| Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>                             | -55 — +150 |        |        |        |        |        |        |        | °C    |

### NOTES:

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

## RATING AND CHARACTERISTIC CURVES (HER601 THRU HER608)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

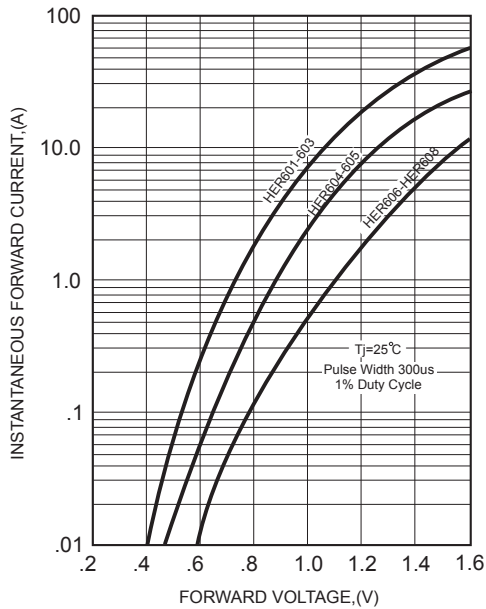


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

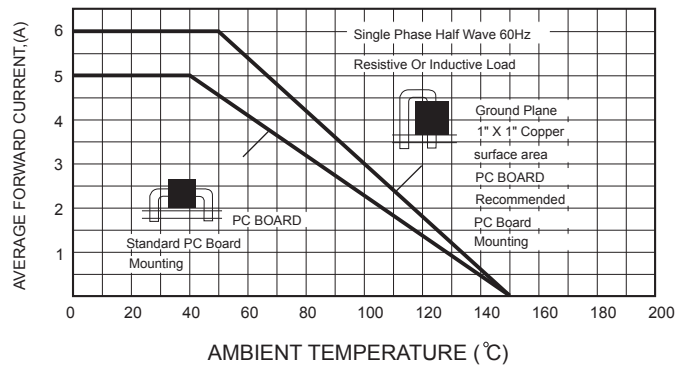
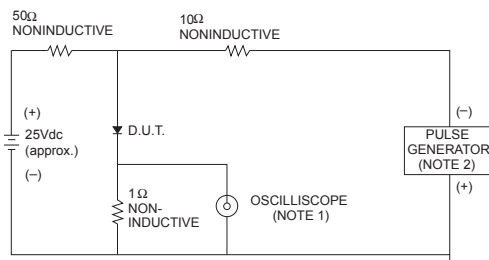


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

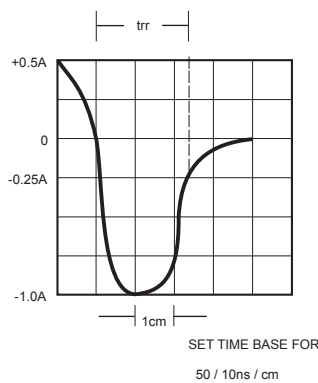


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

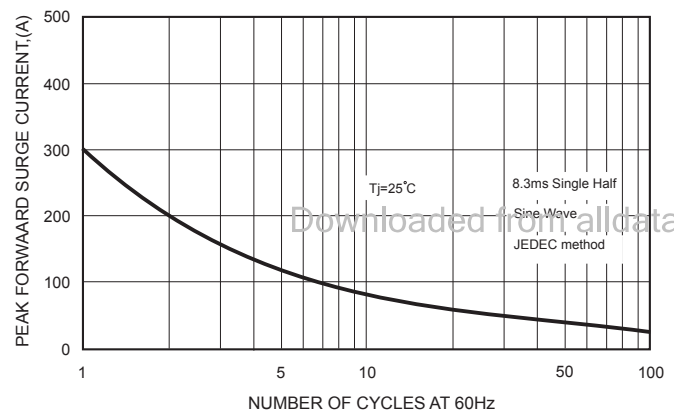


FIG.5-TYPICAL JUNCTION CAPACITANCE

