

# HER1601 THRU HER1606

16.0 AMP HIGH EFFICIENCY RECTIFIERS



## FEATURES

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

## MECHANICAL DATA

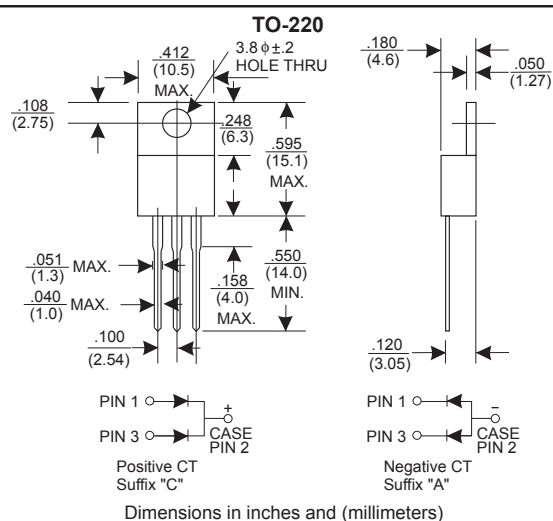
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 2.24 grams

## VOLTAGE RANGE

50 to 600 Volts

## CURRENT

16.0 Ampere



## 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                                                                                           | HER1601    | HER1602 | HER1603 | HER1604 | HER1605 | HER1606 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100     | 200     | 300     | 400     | 600     | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70      | 140     | 210     | 280     | 420     | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100     | 200     | 300     | 400     | 600     | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Tc=75°C                      | 16.0       |         |         |         |         |         | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 200        |         |         |         |         |         | A     |
| Maximum Instantaneous Forward Voltage at 8.0A                                                         | 1.0        |         | 1.3     |         | 1.85    |         | V     |
| Maximum DC Reverse Current Tc=25°C                                                                    | 10.0       |         |         |         |         |         | μA    |
| at Rated DC Blocking Voltage Tc=100°C                                                                 | 200        |         |         |         |         |         | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 60         |         |         |         |         | 100     | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 65         |         |         |         |         |         | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -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 (HER1601 THRU HER1606)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

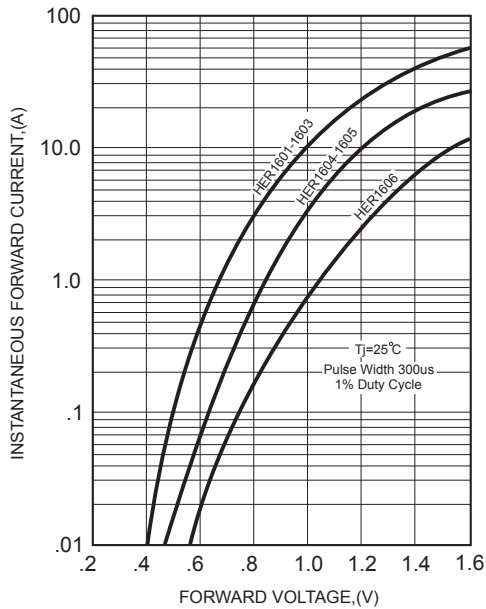


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

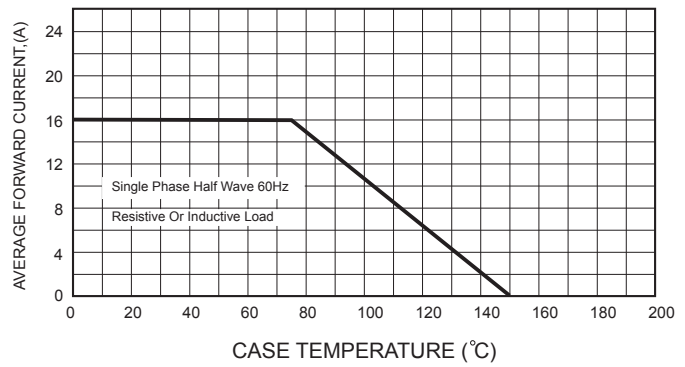


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

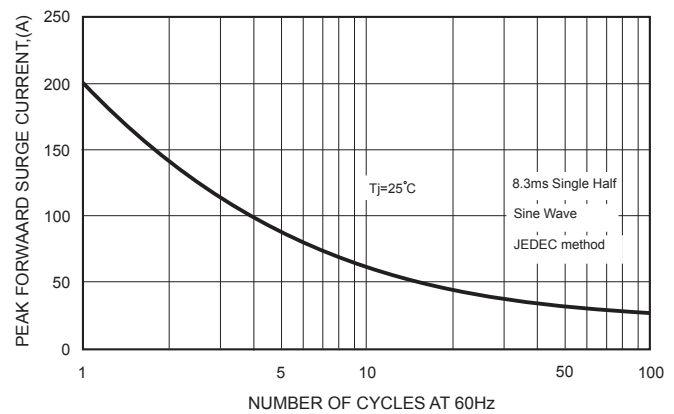
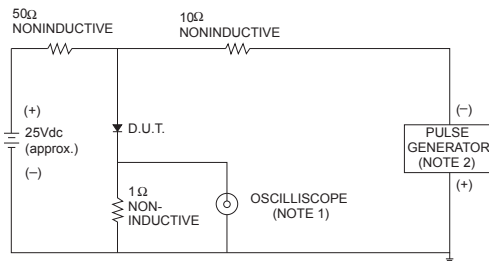


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

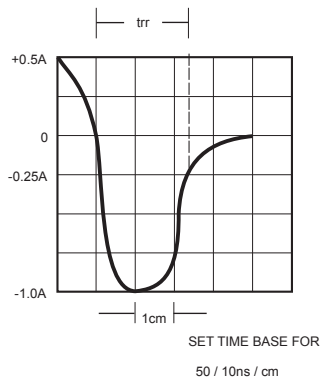


FIG.5-TYPICAL JUNCTION CAPACITANCE

