

**16A HIGH EFFICIENCY RECTIFIER**
**HER1601 THRU HER1608**


## FEATURES

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

## MECHANICAL DATA

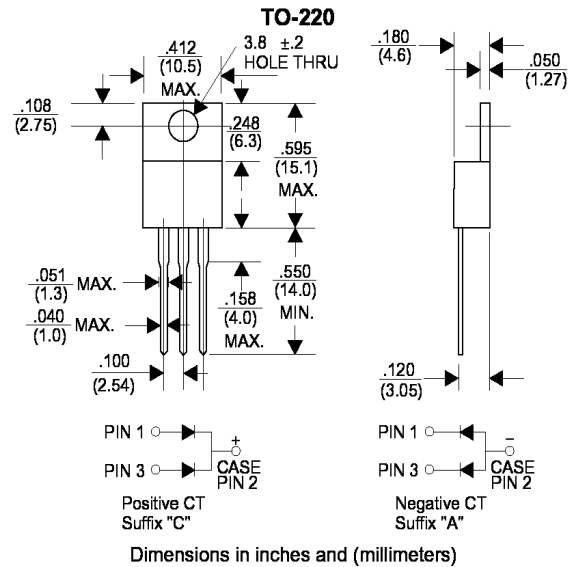
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 2.24 grams

## 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 .375"(9.5mm) Lead Length at T <sub>c</sub> =75°C	16.0						A
Peak Forward Surge Current, 8.3 ms single half sine-wave 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 T <sub>c</sub> =25°C	10.0						A
at Rated DC Blocking Voltage T <sub>c</sub> =100°C	200						A
Maximum Reverse Recovery Time (Note 1)	60					100	nS
Typical Junction Capacitance (Note 2)	65						pF
Operating and Storage Temperature Range T <sub>j</sub> , T <sub>stg</sub>	-55 — +150						°C

### NOTES:

1. Reverse Recovery Time test condition: I<sub>F</sub>=0.5A, I<sub>R</sub>=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

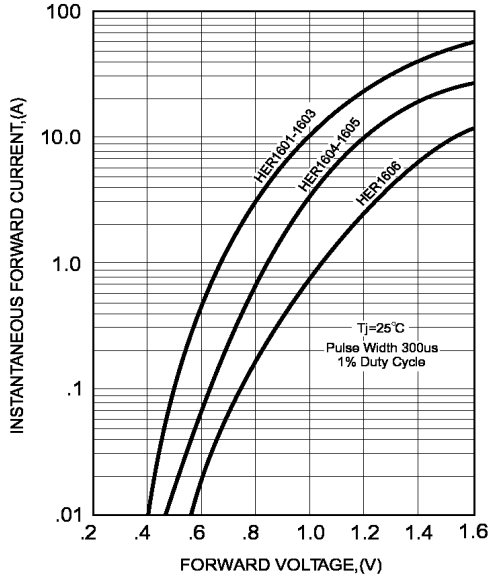


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

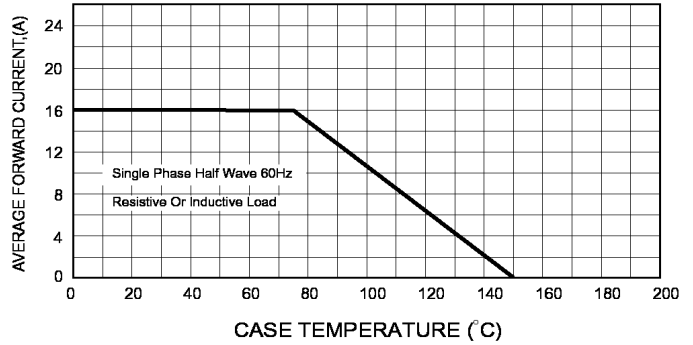


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

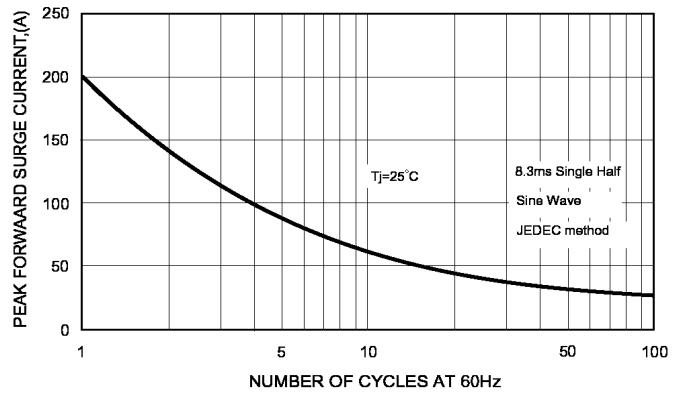
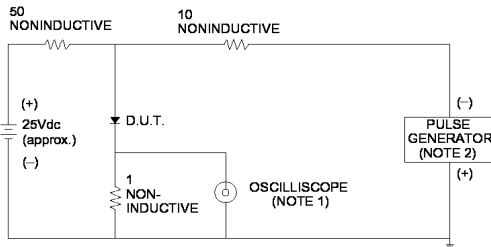


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

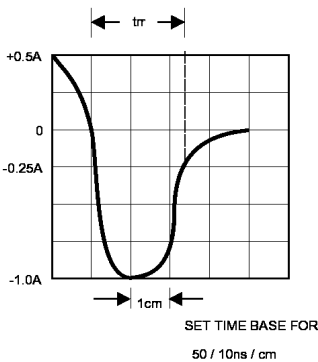


FIG.5-TYPICAL JUNCTION CAPACITANCE

