

# 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

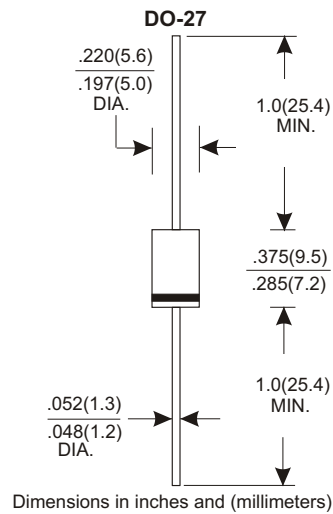
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

3.0 Amperes



## 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										
.375"(9.5mm) Lead Length at Ta=55°C									3.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave 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									5.0	μA
at Rated DC Blocking Voltage Ta=100°C									100	μA
Maximum Reverse Recovery Time (Note 1)	50					75			nS	
Typical Junction Capacitance (Note 2)									75	pF
Operating and Storage Temperature Range Tj, Tstg									-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

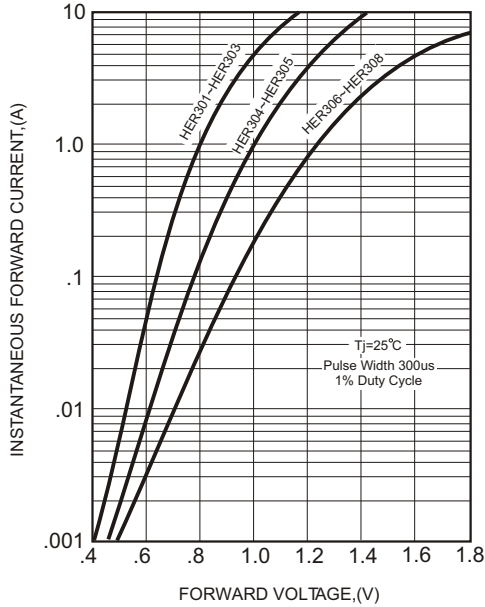


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

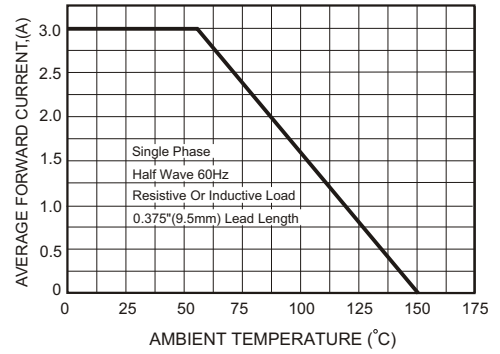
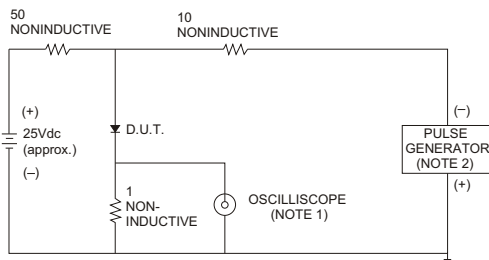


FIG. 3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

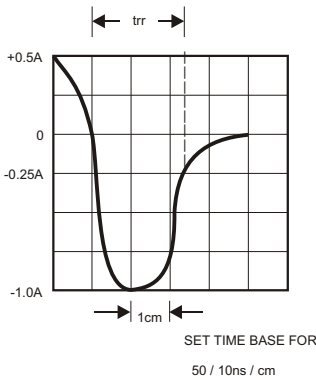


FIG. 4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

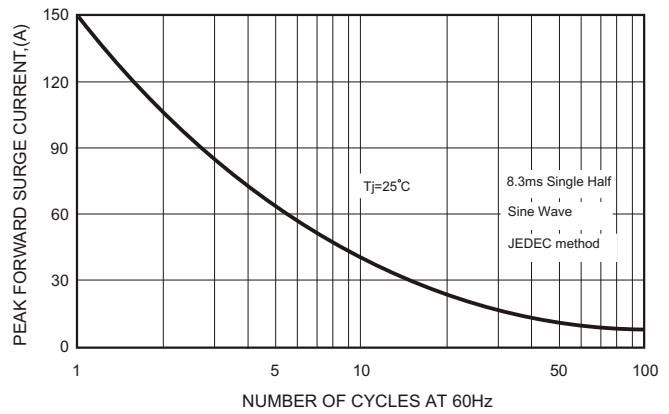


FIG. 5-TYPICAL JUNCTION CAPACITANCE

