



## HIGH EFFICIENCY RECTIFIER

**HER201 THRU HER208**

**VOLTAGE RANGE**  
**CURRENT**

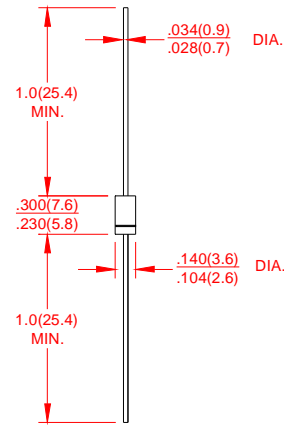
**50 to 1000 Volts**  
**2.0Ampere**

### FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.014ounce, 0.39 grams



DO-15

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	HER 201	HER 202	HER 203	HER 204	HER 205	HER 206	HER 207	HER 208	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	2.0								Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	60								Amps
Maximum Instantaneous Forward Voltage @ 1.5A	$V_F$	1.0			1.3	1.5	1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	5.0								$\mu\text{A}$
	$T_A=125^\circ\text{C}$	250								
Maximum Full Load Recovery Current,full cycle average 0.375”(9.5mm)lead length at $T_L=55^\circ\text{C}$	$I_{R(AV)}$	100								$\mu\text{A}$
Maximum Reverse Recovery Time(NOTE 1)	$t_{rr}$	50				75			ns	
Typical Thermal Resistance (NOTE 2)	$C_J$	30				20			PF	
Typical Thermal Resistance(NOTE 3)	$R_{\theta JA}$	40								$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J, T_{STG}$	(-55 to +150)								$^\circ\text{C}$

#### Notes:

1. Test Condition:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
2. Measured at 1 MHz and applied reverse of 4.0 volts.
3. Thermal resistance from junction to ambient with .375”(9.5mm)lead length, P.C.B. mounted.



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## RATING AND CHARACTERISTIC CURVES HER201 THRU HER208

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

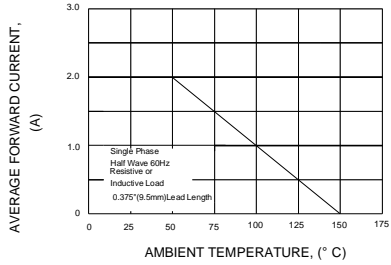


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

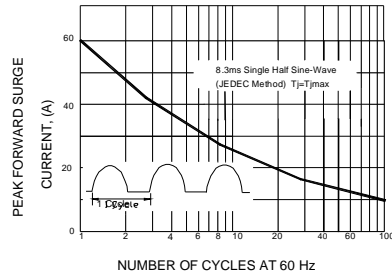


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

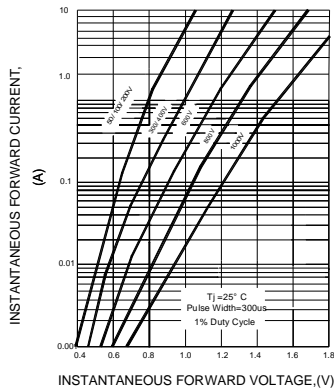


FIG.4-TYPICAL REVERSE CHARACTERISTICS

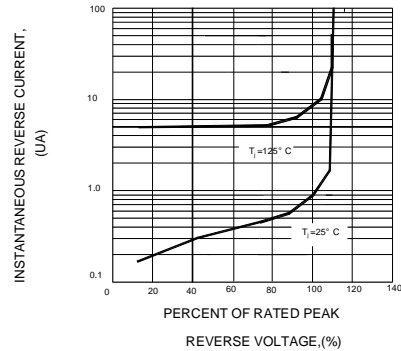


FIG.5-TYPICAL JUNCTION CAPACITANCE

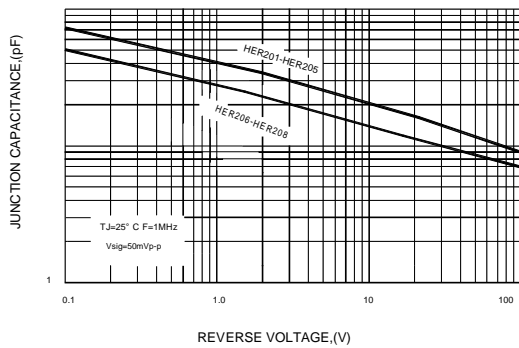
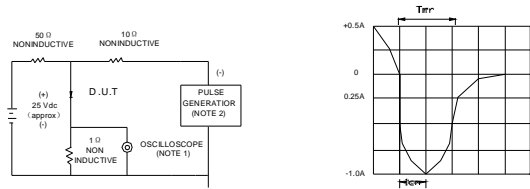
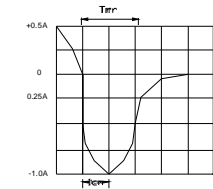


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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



SET TIME BASE FOR 50 /100NS /cm