

# HER201 thru HER208

## HIGH EFFICIENCY RECTIFIER



**CHENG-YI  
ELECTRONIC**



### FEATURES

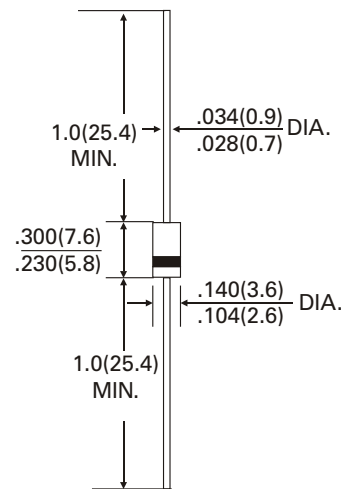
- Low power loss, high efficiency
- Low leakage
- Low forward voltage
- High current capability
- High speed switching
- High surge capability
- High reliability

### MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: MIL-STD-202E method 208C guaranteed
- Mounting position: Any
- Weight: 0.35 grams

HIGH EFFICIENCY RECTIFIER  
VOLTAGE RANGE -50 to 1000 Volts  
CURRENT-2.0 Amperese

### 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%.

**MAXIMUM RATINGS** ( At  $T_A=25^\circ\text{C}$  unless otherwise noted)

RATINGS	SYMBOL	HER201	HER202	HER203	HER204	HER205	HER206	HER207	HER208	UNITS
Maximum Recurrent 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 .375" (9.5mm) lead length @ $T_A=55^\circ\text{C}$	$I_o$	2.0								Amps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	60								Amps
Typical Junction Capacitance (Note 2)	$C_J$	30					20			pF
Operating and Storage Temperature Range	$T_J$ $T_{STG}$	-65 to +150								$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** ( At  $T_A=25^\circ\text{C}$  unless otherwise noted)

CHARACTERISTICS	SYMBOL	HER201	HER202	HER203	HER204	HER205	HER206	HER207	HER208	UNITS	
Maximum Instantaneous Forward Voltage at 2.0A DC	$V_F$	1.0			1.3		1.85			Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ\text{C}$	$I_R$	5.0									$\mu\text{Amps}$
Maximum Full Load Reverse Current Average, Full Cycle .375, (9.5mm) Lead Length at @ $T_L=55^\circ\text{C}$		100									$\mu\text{Amps}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	50				70				nSec	

Notes : 1. Test Condition:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$   
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

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### RATING AND CHARACTERISTICS CURVES HER201 THRU HER208

Fig. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

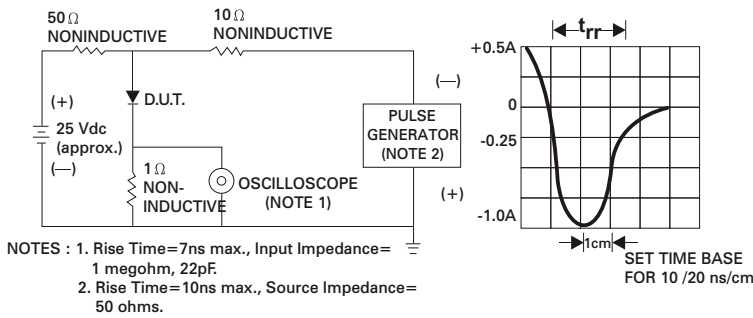


Fig. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

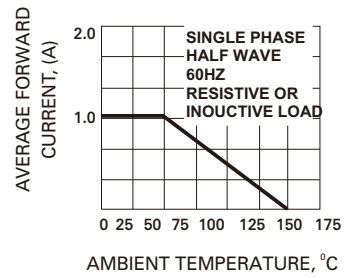


Fig.3 - TYPICAL REVERSE CHARACTERISTICS

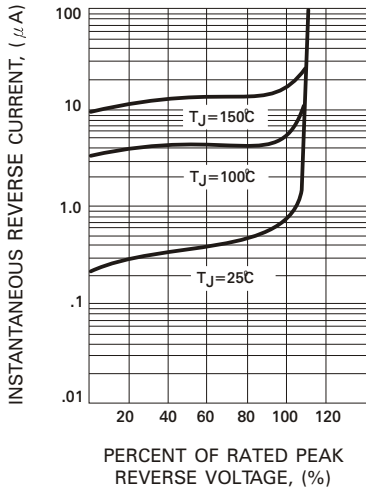


Fig. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

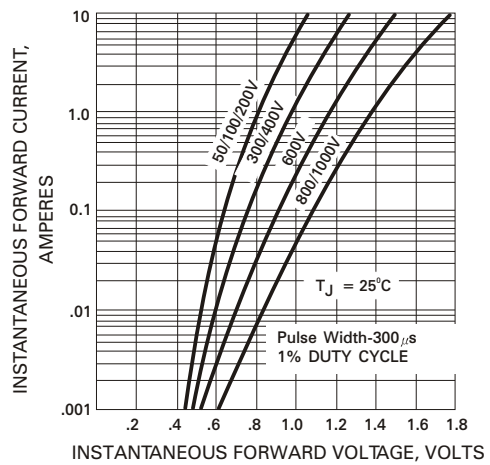


Fig.5 -MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

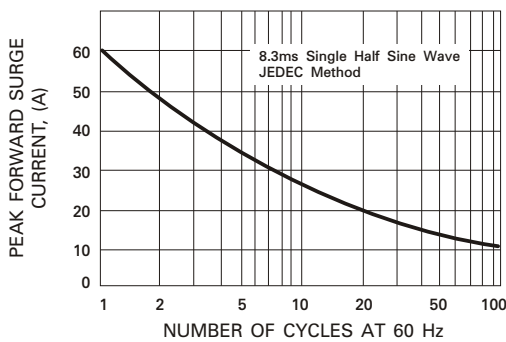


Fig.6 - TYPICAL JUNCTION CAPACITANCE

