



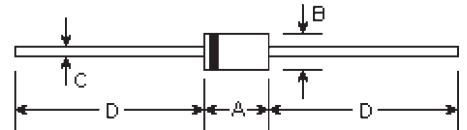
# HER3001 THRU HER3007

**HIGH EFFICIENCY RECTIFIER**  
**Reverse Voltage - 50 to 1000 Volts**  
**Forward Current - 3.0 Amperes**

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low cost
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Low leakage
- High surge capability
- High temperature soldering guaranteed:  
 250°C, 0.375" (9.5mm) lead length for 10 seconds,  
 5 lbs. (2.3Kg) tension

## DO-201AD



## Mechanical Data

- **Case:** DO-201AD, molded plastic body over passivated chip
- **Terminals:** Plated axial leads solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.042 ounce, 1.19 grams

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.283	0.374	7.20	9.50	
B	0.189	0.208	4.80	5.30	ϕ
C	0.048	0.051	1.20	1.30	ϕ
D	1.000	-	25.40	-	

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	HER 3001	HER 3002	HER 3003	HER 3004	HER 3005	HER 3006	HER 3007	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) at $T_A=55^\circ\text{C}$	$I_{FSM}$	150.0							Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.0				1.7			Volts
Maximum DC reverse current at rated DC blocking voltage $T_J=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$					10.0 50.0			$\mu\text{A}$
Maximum reverse recovery time (Note 1) $T_J=25^\circ\text{C}$	$T_{rr}$	50.0				100.0			nS
Typical junction capacitance (Note 2)	$C_J$	45.0							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$					20.0 8.5			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

### Notes:

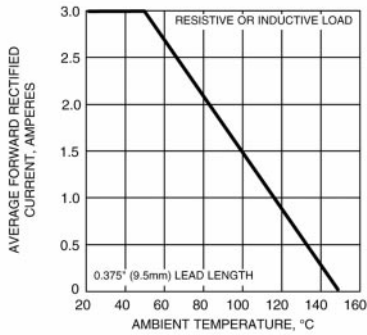
(1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

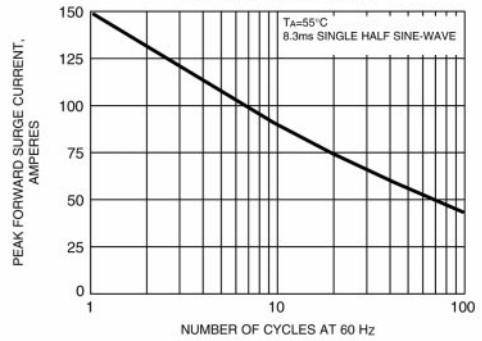
(3) Thermal resistance from junction to lead and from junction to ambient with 0.375" (9.5mm) lead length, both leads attached to heatsink

# RATINGS AND CHARACTERISTIC CURVES

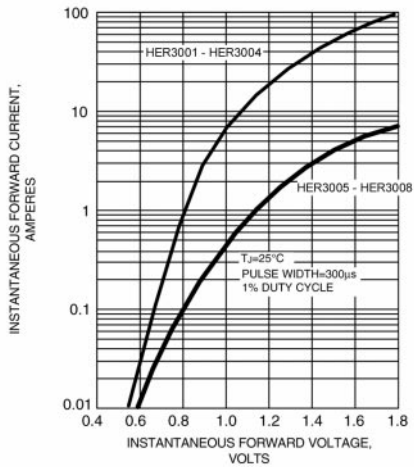
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



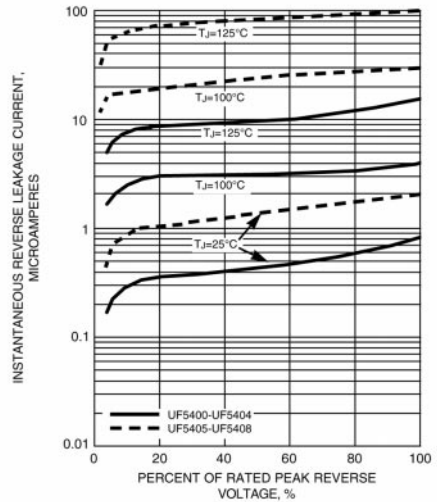
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

