



# HER1001 thru HER1007

High Efficient Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

## Features

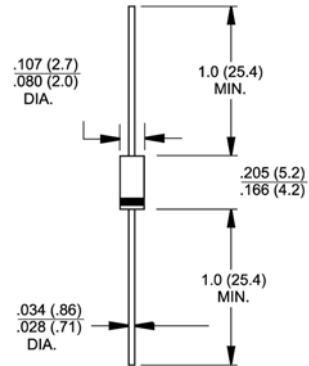
- ◆ Low cost
- ◆ Diffused junction
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage current
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0
- ◆  $T_J$  is 150°C (Max.) and  $T_{STG}$  is 175°C (Max.) with PI glue



DO-204AL (DO-41)

## Mechanical Data

- ◆ Case : JEDEC DO-204AL(DO-41) molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : 0.012 ounce, 0.33 gram
- ◆ Mounting position : Any



## Maximum Ratings and Electrical Characteristics

Dimensions in inches and (millimeters)

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%

Parameter	Symbols	HER 1001	HER 1002	HER 1003	HER 1004	HER 1005	HER 1006	HER 1007	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 @ $T_A=55^\circ\text{C}$	$I_{F(AV)}$					1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$					30.0			Amps
Maximum forward voltage at 1.0A DC	$V_F$	1.0			1.3		1.7		Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	$I_R$					5.0			$\mu\text{A}$ $\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{tr}$	50					100		nS
Typical junction capacitance (Note 2)	$C_J$	20					10		pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$					25			$^\circ\text{C/W}$
Operating junction temperature range	$T_J$					-55 to +125			$^\circ\text{C}$
Storage temperature range	$T_{STG}$					-55 to +150			$^\circ\text{C}$

- Notes:**
1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$ .
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  3. Thermal Resistance Junction to Ambient.

## RATINGS AND CHARACTERISTIC CURVES

