



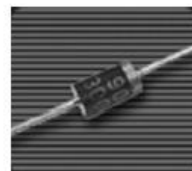
SYNSEMI SEMICONDUCTOR

HER3001 thru HER3007

3.0 Amps. High Efficient Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 3.0 Amperes

Features

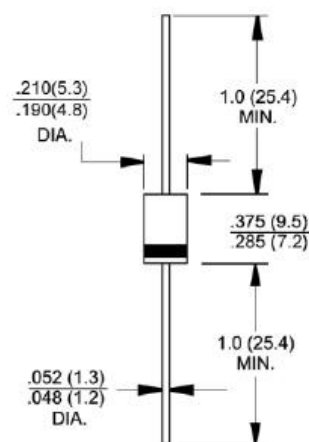
- ◆ Low cost
- ◆ Diffused junction
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage current
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0



DO-201AD

Mechanical Data

- ◆ Case : JEDEC DO-201AD molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : 0.042 ounce, 1.19 grams
- ◆ Mounting position : Any



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%

Parameter	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 @ $T_A=55^{\circ}C$	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							Amps
Maximum forward voltage at 3.0A DC	V_F	1.0			1.3	1.7			Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^{\circ}C$ @ $T_J=100^{\circ}C$	I_R	5.0 100							μA μA
Maximum reverse recovery time (Note 1)	t_{rr}	50				75			nS
Typical junction capacitance (Note 2)	C_J	75				50			pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	20							$^{\circ}C/W$
Operating temperature range	T_J	-55 to +125							$^{\circ}C$
Storage temperature range	T_{STG}	-55 to +150							$^{\circ}C$

- 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.

HER3001 thru HER3007

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

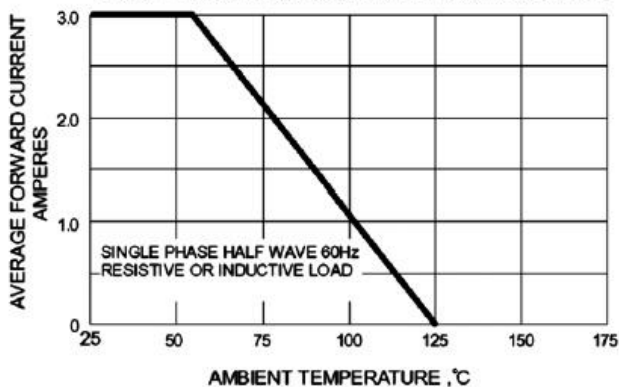


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

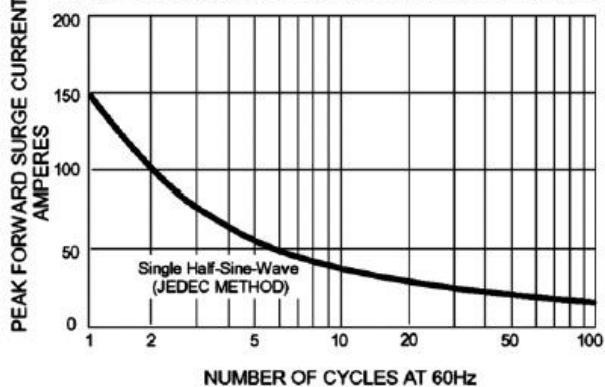


FIG.3 - TYPICAL JUNCTION CAPACITANCE

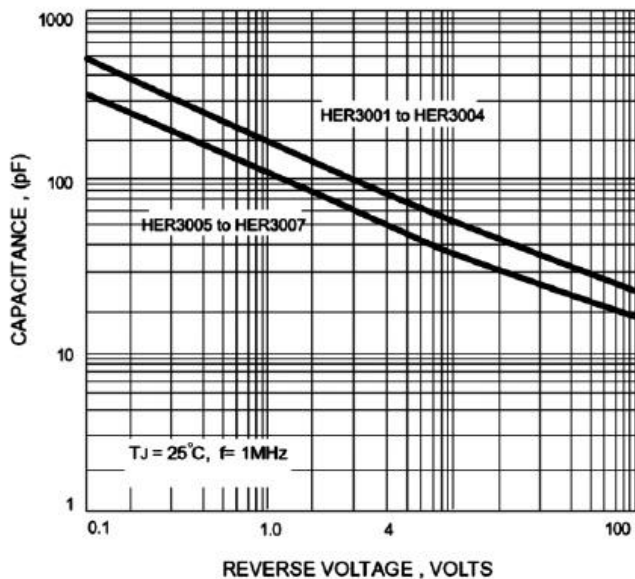


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

