

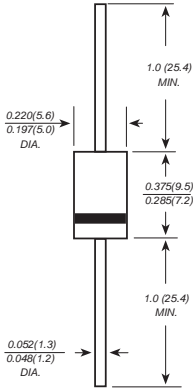


# HER301 THRU HER308

## HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ High switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.04 ounce, 1.10 grams

### 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 current derate by 20%.

	SYMBOLS	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	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 $T_A=50$ C	$I_{AV}$	3.0								Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200.0				150.0				Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.0		1.3		1.70				Volts
Maximum DC reverse current $T_A=25$ C at rated DC blocking voltage $T_A=100$ C	$I_R$	5.0 150.0								$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	50				70				ns
Typical junction capacitance (NOTE 2)	$C_J$	70.0				50				pF
Typical thermal resistance (NOTE 3)	$R_{JA}$	20.0								C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150								C

**Note:** 1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

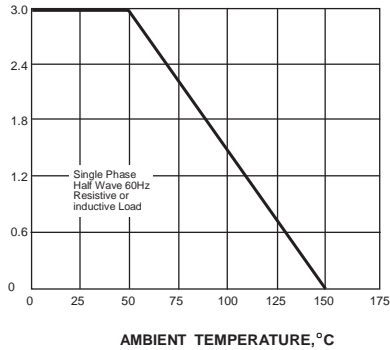
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES HER301 THRU HER308

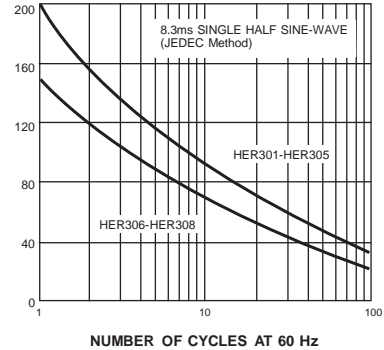
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



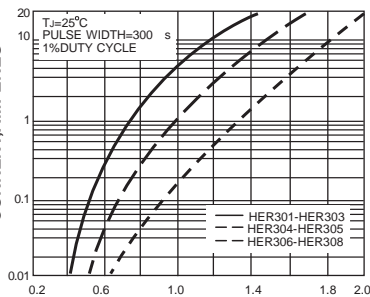
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



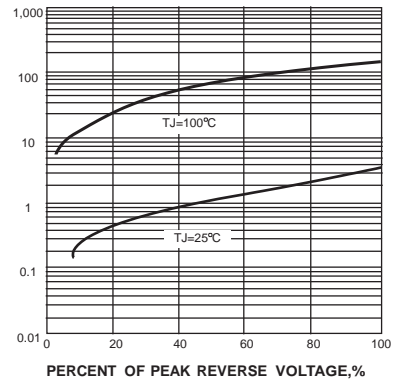
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



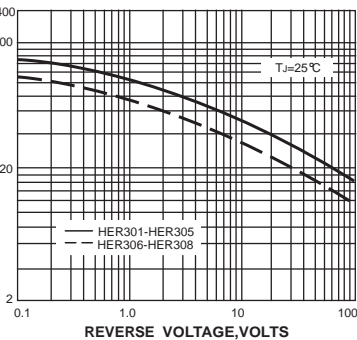
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

