

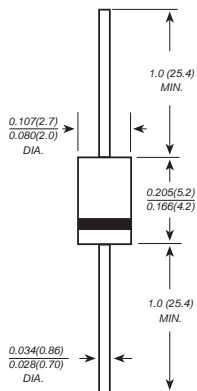


# HER101 THRU HER108

## HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

### DO-41



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ High speed 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-41 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounce, 0.34 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%.

| MDD Catalog Number   | SYMBOLS         | HER 101                | HER 102 | HER 103                 | HER 104 | HER 105 | HER 106 | HER 107 | HER 108       | 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<br>0.375" (9.5mm) lead length at $T_A=50^\circ\text{C}$      | $I_{(AV)}$      | 1.0                    |         |                         |         |         |         |         |               | Amps                      |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method) | $I_{FSM}$       | 30.0                   |         |                         |         |         |         |         |               | Amps                      |
| Maximum instantaneous forward voltage at 1.0A  | $V_F$           | 1.0                    |         | 1.3                     |         | 1.70    |         |         | Volts         |                           |
| Maximum DC reverse current<br>at rated DC blocking voltage   | $I_R$           | $T_A=25^\circ\text{C}$ |         | $T_A=100^\circ\text{C}$ |         | 5.0     |         |         | $\mu\text{A}$ |                           |
| Maximum reverse recovery time (NOTE 1)   | $t_{rr}$        | 50                     |         |                         | 70      |         |         | ns      |               |                           |
| Typical junction capacitance (NOTE 2)  | $C_J$           | 15.0                   |         |                         | 12.0    |         |         | pF      |               |                           |
| Typical thermal resistance (NOTE 3)  | $R_{\theta JA}$ | 50.0                   |         |                         |         |         |         |         |               | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range   | $T_J, T_{STG}$  | -65 to +150            |         |                         |         |         |         |         |               | $^\circ\text{C}$          |

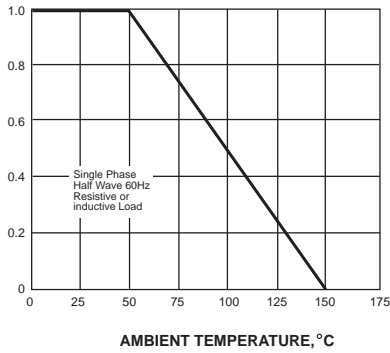
**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



# RATINGS AND CHARACTERISTIC CURVES HER101 THRU HER108

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

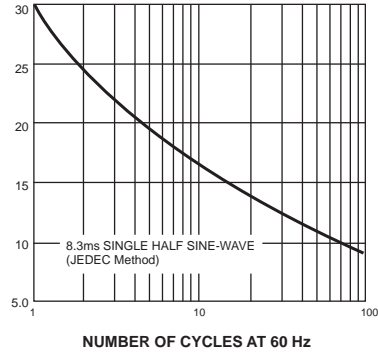


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

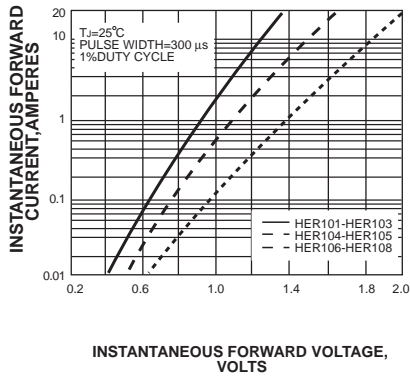


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

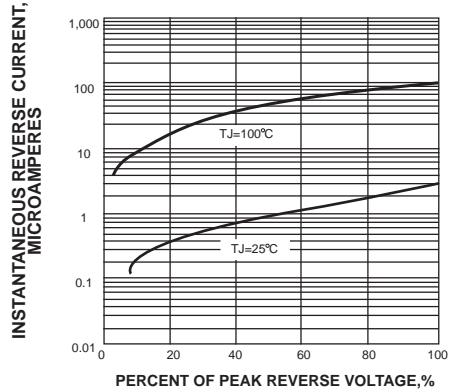
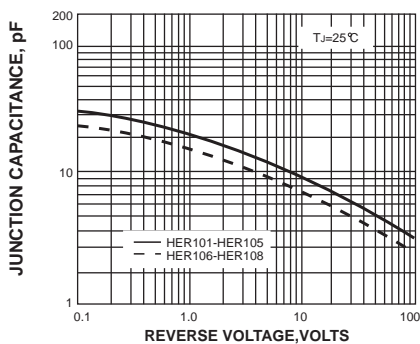
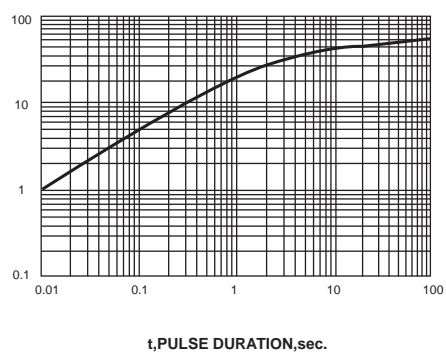


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考!)

