

## HER301 ~ HER308

### 3.0Amp High Efficiency Rectifiers

#### 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

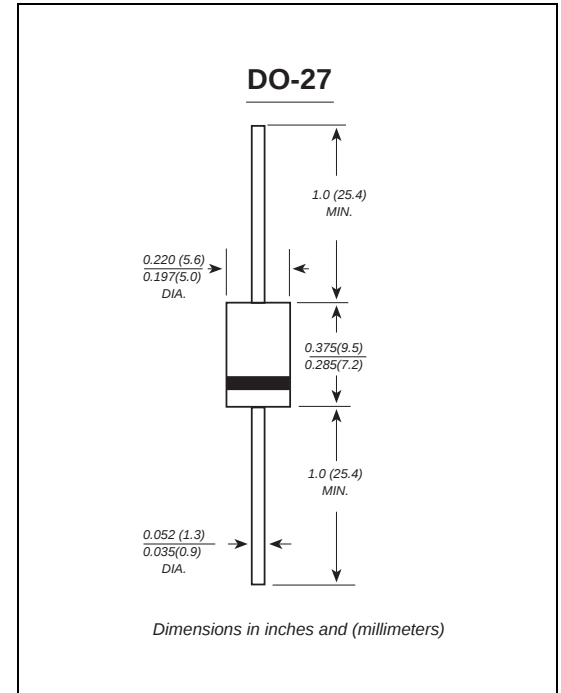
**Case:** JEDEC DO-27 molded plastic body

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight :** 0.04 ounce, 1.10grams



#### 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 <sub>RRM</sub>                  | 50           | 100     | 200     | 300     | 400     | 600     | 800     | 1000    | VOLTS |
| Maximum RMS voltage                                                                                             | V <sub>RMS</sub>                  | 35           | 70      | 140     | 210     | 280     | 420     | 560     | 700     | VOLTS |
| Maximum DC blocking voltage                                                                                     | V <sub>DC</sub>                   | 50           | 100     | 200     | 300     | 400     | 600     | 800     | 1000    | VOLTS |
| Maximum average forward rectified current<br>0.375”(9.5mm) lead length at T <sub>A</sub> =50°C                  | I <sub>(AV)</sub>                 | 3.0          |         |         |         |         |         |         |         | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)          | I <sub>FSM</sub>                  | 150.0        |         |         |         |         |         |         |         | Amps  |
| Maximum instantaneous forward voltage at 3.0A                                                                   | V <sub>F</sub>                    | 1.0          |         |         | 1.3     |         | 1.70    |         |         | Volts |
| Maximum DC reverse current      T <sub>A</sub> =25°C<br>at rated DC blocking voltage      T <sub>A</sub> =100°C | I <sub>R</sub>                    | 5.0<br>150.0 |         |         |         |         |         |         |         | µA    |
| Maximum reverse recovery time      (NOTE 1)                                                                     | t <sub>rr</sub>                   | 50           |         |         |         |         | 75      |         |         | ns    |
| Typical junction capacitance (NOTE 2)                                                                           | C <sub>J</sub>                    | 70.0         |         |         |         |         | 50      |         |         | pF    |
| Typical thermal resistance (NOTE 3)                                                                             | R <sub>θJA</sub>                  | 20.0         |         |         |         |         |         |         |         | °C/W  |
| Operating junction and storage temperature range                                                                | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150  |         |         |         |         |         |         |         | °C    |

**Note:** 1.Reverse recovery time test 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 HER301 THRU HER308

FIG. 1- FORWARD CURRENT DERATING CURVE

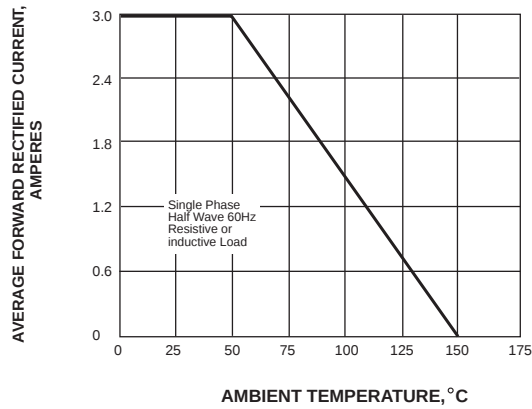


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

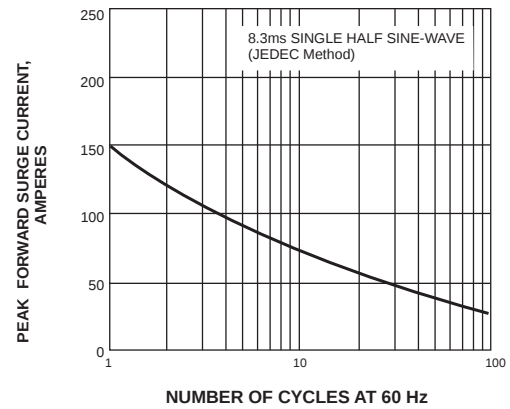


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

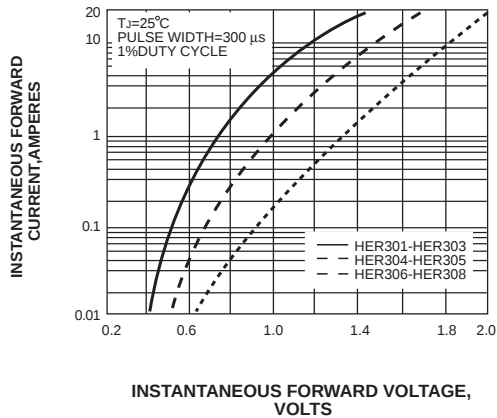


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

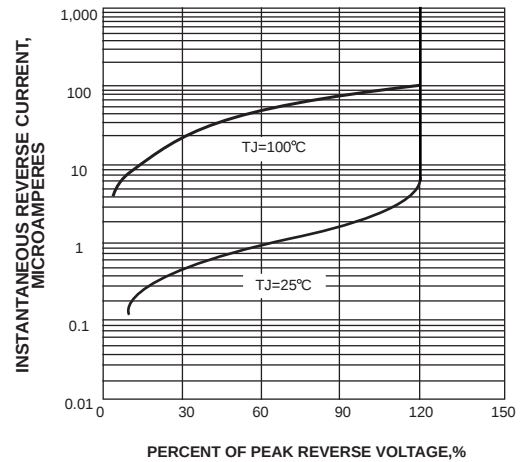


FIG. 5-TYPICAL JUNCTION CAPACITANCE

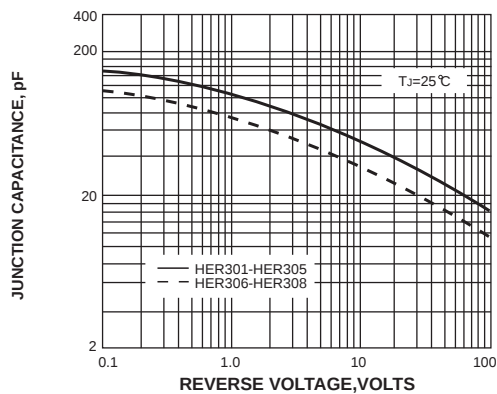


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

