

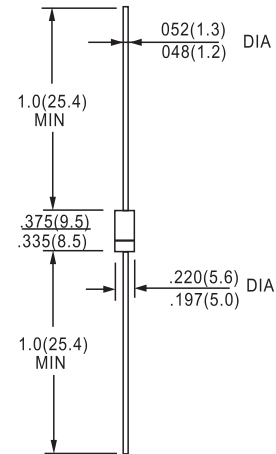
FEATURES

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Epoxy: UL 94V-O rate flame retardant

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | HER 301 | HER 302 | HER 303 | HER 304 | HER 305 | HER 306 | HER 307 | HER 308 | Unit |
|--|--------------|-------------|---------|---------|---------|---------|---------|---------|---------|------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | | | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| DC Blocking Voltage | V_R | | | | | | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1) | I_O | 3.0 | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150 | | | | | | | | A |
| Forward Voltage @ $I_F = 3.0A$ | V_{FM} | 1.0 | | | 1.3 | | 1.7 | | | V |
| Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 100^\circ C$ | I_{RM} | | | | | 10.0 | | 100 | | μA |
| Reverse Recovery Time (Note 2) | t_{rr} | 50 | | | | 75 | | | | nS |
| Typical Junction Capacitance (Note 3) | C_j | 80 | | | | 50 | | | | pF |
| Operating Temperature Range | T_j | -65 to +125 | | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | | | | | | $^\circ C$ |

***Glass passivated forms are available upon request**

- Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
2. Measured with $I_F = 0.5A$, $I_R = 1.0A$, $IRR = 0.25A$. See figure 5.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (HER301 THRU HER308)

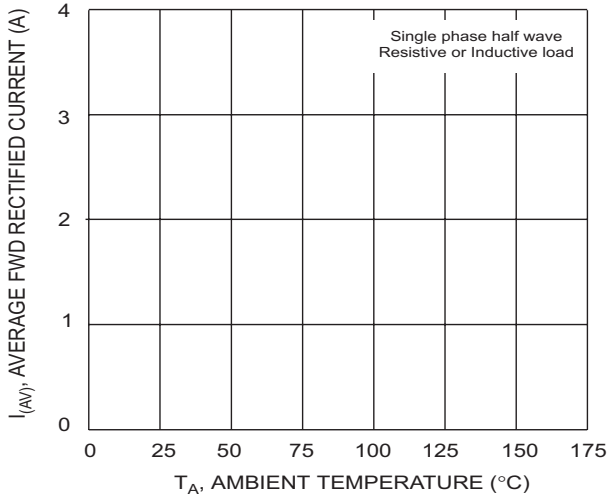


Fig. 1 Forward Current Derating Curve

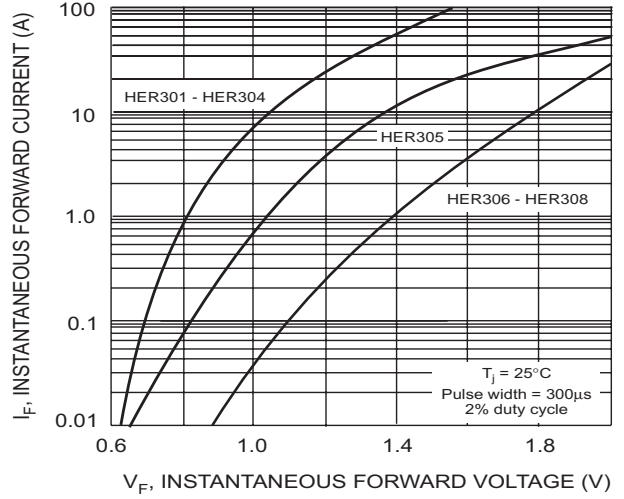


Fig. 2 Typical Forward Characteristics

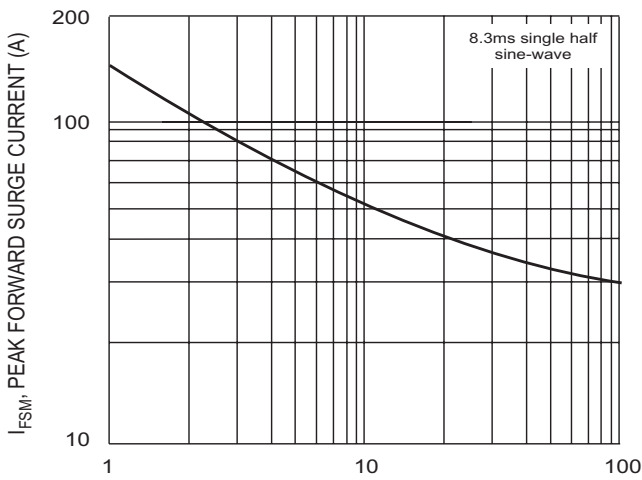


Fig. 3 Peak Forward Surge Current

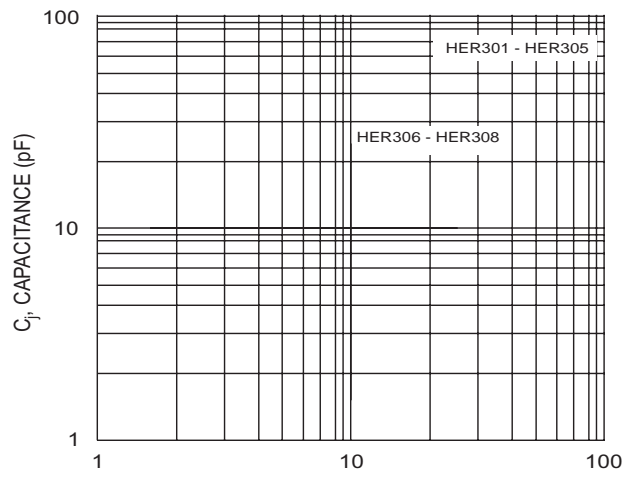
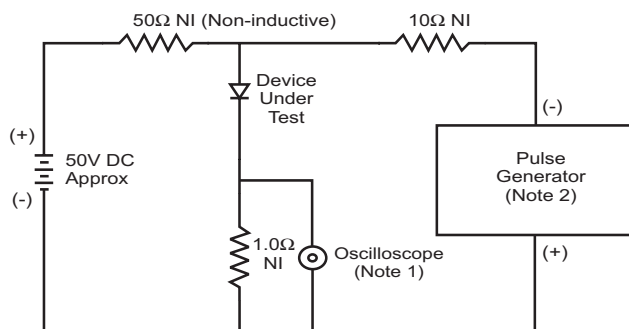


Fig. 4 Typical Junction Capacitance



- Notes:
 1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.

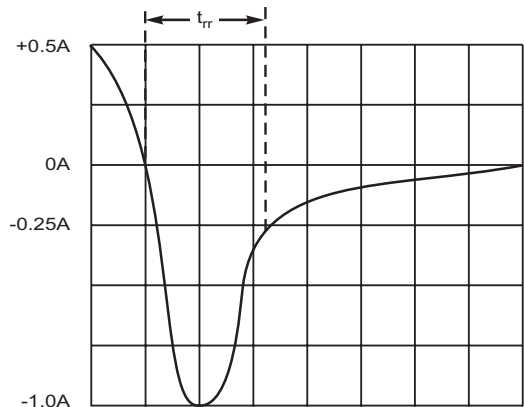


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit