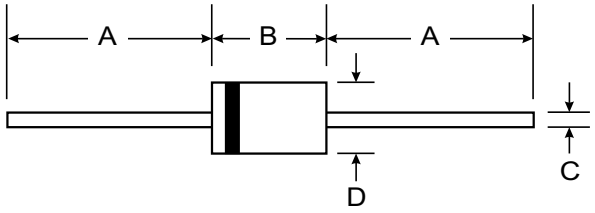
# HER301 - HER305

## 3.0A HIGH EFFICIENCY RECTIFIER

## Features

- Low Power Loss, High Efficiency
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- High Speed Switching
- High Surge Current Rating
- High Reliability
- Plastic Material - UL Flammability Classification 94V-0




| DO-201AD | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 25.4 | — |
| **B** | — | 9.5 |
| **C** | 1.2 | 1.3 |
| **D** | 4.8 | 5.2 |
| **All Dimensions in mm** | | |

## Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denotes Cathode
- Approx. Weight: 1.2 grams

## Maximum Ratings and Electrical Characteristics

Ratings at 25° C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.

| Characteristic | Symbol | HER301 | HER302 | HER303 | HER304 | HER305 | Unit |
|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 300 | 400 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 210 | 280 | V |
| Maximum DC Blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 300 | 400 | V |
| Maximum Average Forward Rectified Current 9.5mm Lead Length @ $T_A$=50°C | $I_{(AV)}$ | 3.0 | | | | | A |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FM}$ | 125 | | | | | A |
| Maximum Instantaneous Forward Voltage at 3.0 A DC | $V_F$ | 1.1 | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A$=25°C | $I_R$ | 10 | | | | | μA |
| Maximum Full Load Reverse Current Full Cycle Average 9.5mm Lead Length @ $T_C$=55°C | $I_R$ | 150 | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | $T_{RR}$ | 50 | | | | | nS |
| Typical Junction Capacitance (Note 2) | $C_J$ | 70 | | | | | pF |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | -65 to +150 | | | | | °C |

Notes: 1. Reverse Recovery Test Conditions: $I_F$ =0.5 A, $I_R$ =1.0 A, $I_{RR}$=0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

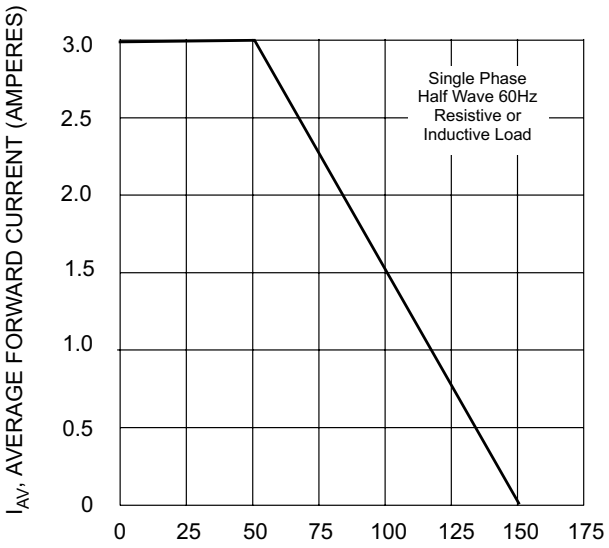



Fig. 1, Typical Forward Current Derating Curve

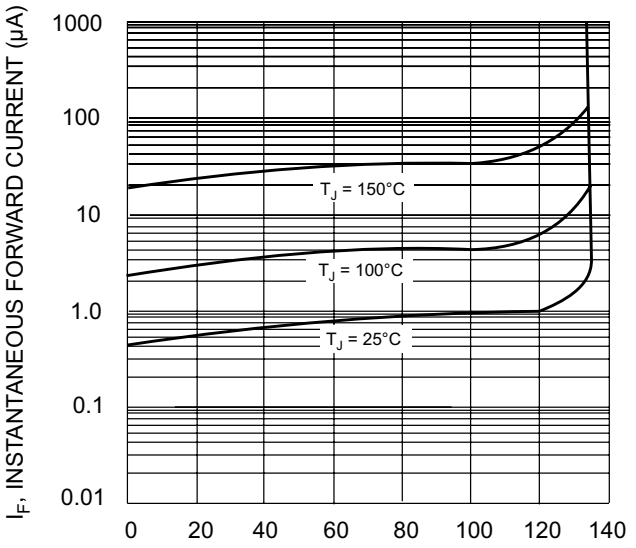



Fig. 2, Typical Reverse Characteristics

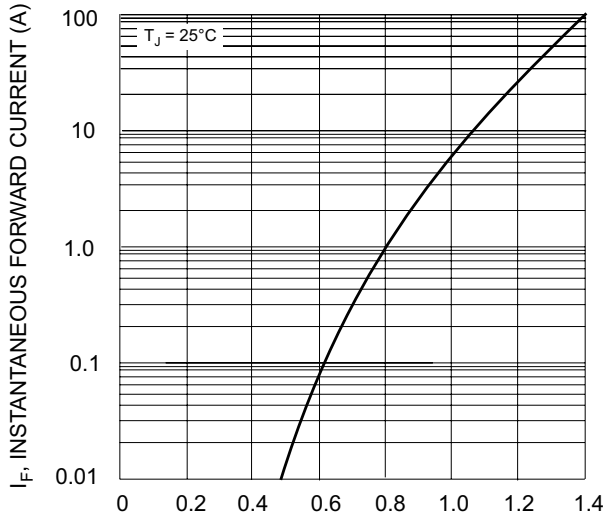



Fig. 3, Typ. Instantaneous Forward Characteristics

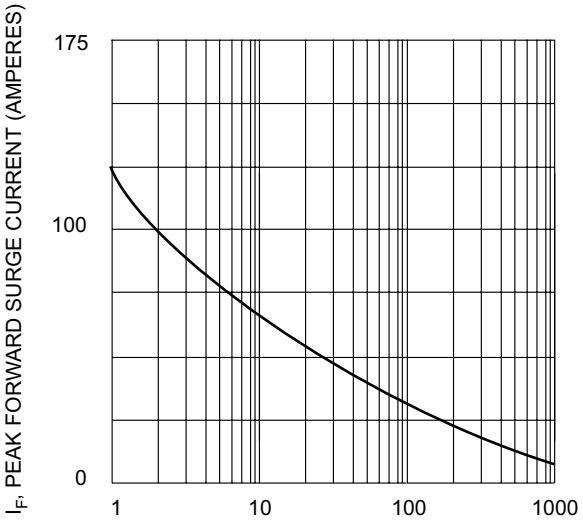



Fig. 4, Max. Non-Repetitive Peak Forward Surge Current

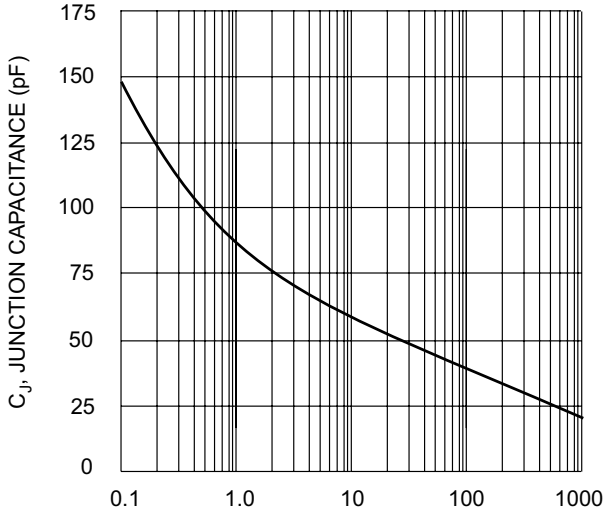



Fig. 5, Typical Junction Capacitance