

Diode Fast



RoHS
Compliant



Features:

- Glass passivated chip junction
- High efficiency, low V_F
- High current capability
- High reliability
- High surge current capability
- For use in low voltage, high frequency inverter, free wheeling, and polarity protection application

Specifications:

Mechanical Data:

| | |
|---------------------------------------|---|
| Cases | : Moulded plastic |
| Lead | : Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed |
| Polarity | : Colour band denotes cathode end |
| High temperature soldering guaranteed | : 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension |
| Mounting position | : Any |
| Weight | : 1.1g |

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Type Number | Symbol | HER305G | HER306G | Units |
|--|------------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 280 | 420 | |
| Maximum DC Blocking Voltage | V_{DC} | 400 | 600 | |
| Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$ | $I_{(AV)}$ | 3 | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 125 | | |
| Maximum Instantaneous Forward Voltage at 3A | V_F | 1.3 | 1.7 | V |



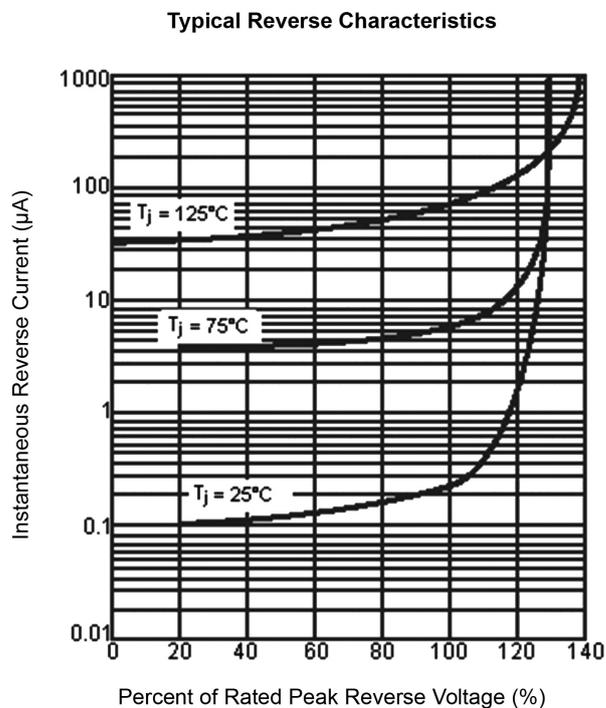
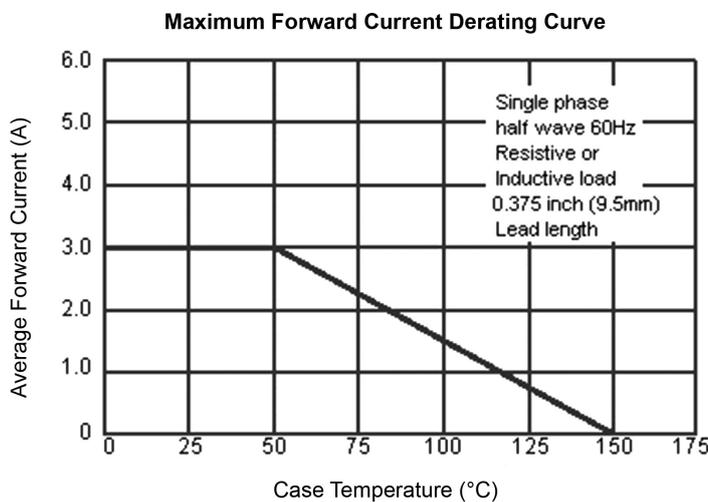
| Type Number | Symbol | HER305G | HER306G | Units |
|---|------------------------------------|-------------|---------|--------------------------------|
| Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$ | I_R | 10 200 | | μA μA |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 50 | 75 | nS |
| Typical Junction Capacitance (Note 2) | C_j | 60 | 35 | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 35 10 | | $^\circ\text{C/W}$ |
| Operating Temperature Range | T_J / T_{STG} | -65 to +150 | | $^\circ\text{C}$ |

Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.

Note: 2. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

Note: 3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

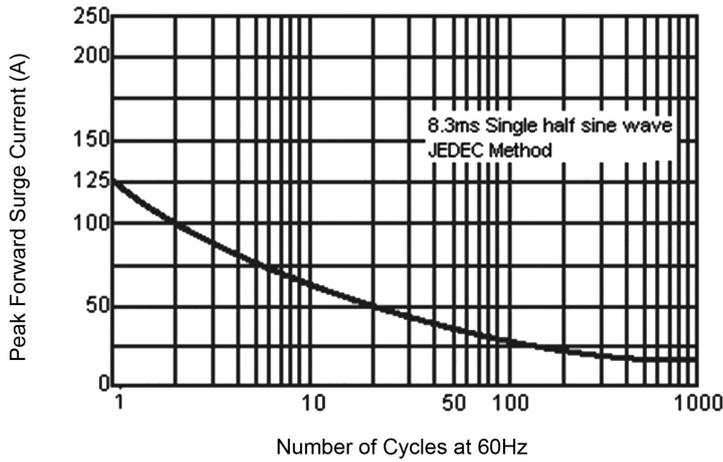
Ratings and Characteristic Curves (HER305G, HER306G)



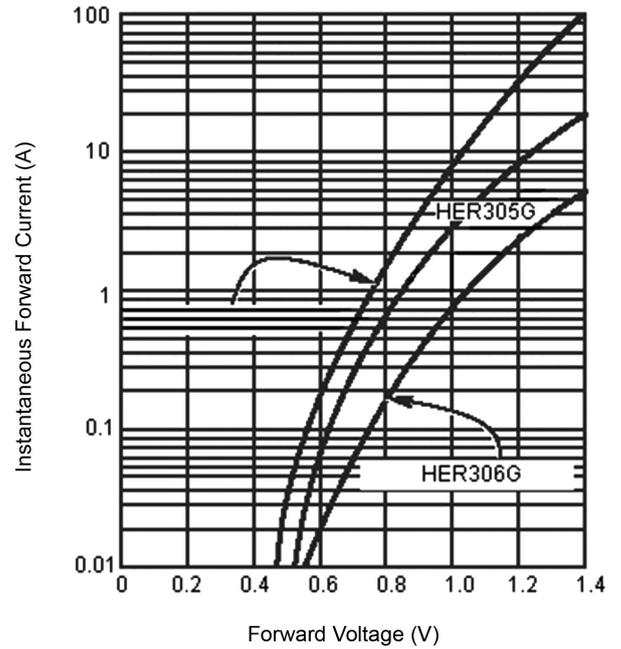
Diode Fast



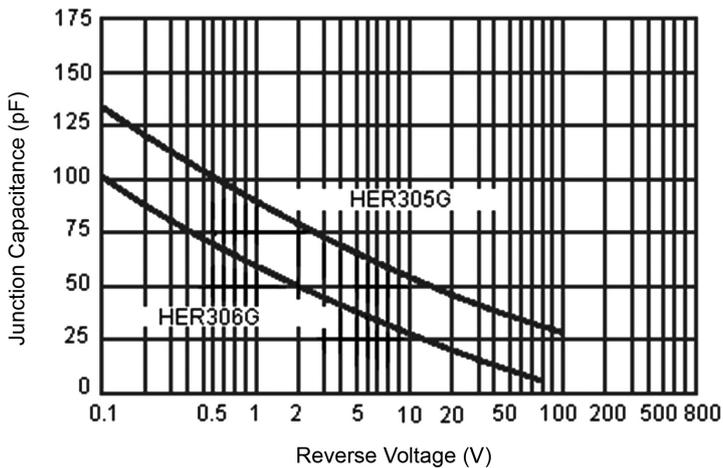
Maximum Non-Repetitive Forward Surge Current



Typical Instantaneous Forward Characteristics



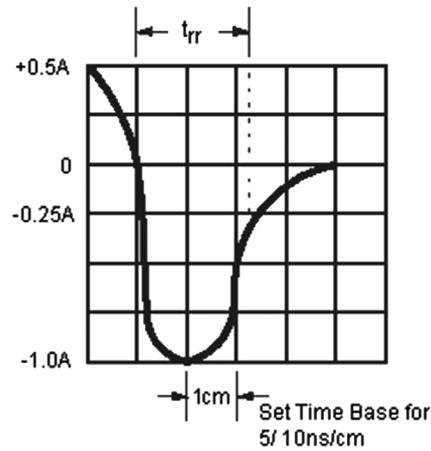
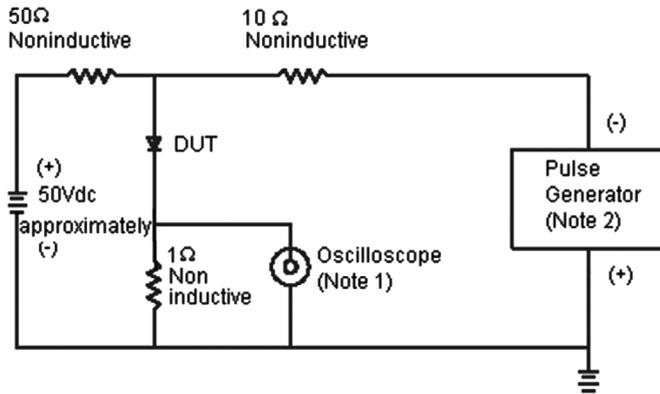
Typical Junction Capacitance



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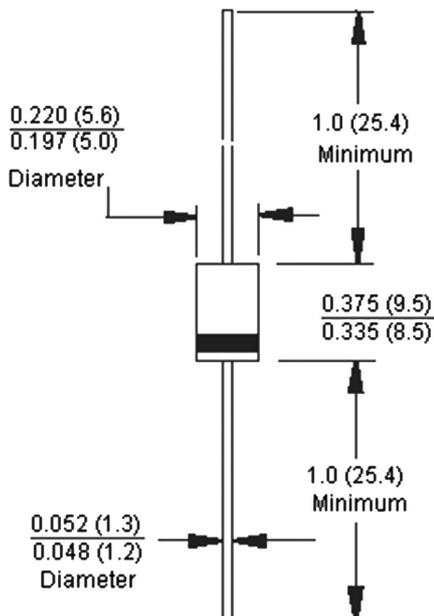
Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1MΩ 22pf

Note: 2. Rise Time = 10ns Maximum Source Impedance = 50Ω

DO-201AD



Dimensions : Inches (Millimetres)

Part Number Table

| Description | Part Number |
|-----------------------|-------------|
| Diode, Fast, 3A, 400V | HER305G |
| Diode, Fast, 3A, 600V | HER306G |

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