

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 DO-15 |
| 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 | : 0.4g |

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 | HER202G | HER204G | HER207G | HER208G | Units |
|--|------------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 100 | 300 | 800 | 1,000 | V |
| Maximum RMS Voltage | V_{RMS} | 70 | 210 | 560 | 700 | |
| Maximum DC Blocking Voltage | V_{DC} | 100 | 300 | 800 | 1,000 | |
| Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$ | $I_{(AV)}$ | 2 | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 60 | | | | |
| Maximum Instantaneous Forward Voltage at 2A | V_F | 1 | | 1.7 | | V |

| Type Number | Symbol | HER202G | HER204G | HER207G | HER208G | 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 | 5 150 | | | | μA μA |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 50 | | 75 | | nS |
| Typical Junction Capacitance (Note 2) | C_j | 35 | | 20 | | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 60 | | | | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Range | T_J | -65 to +150 | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | | | | | |

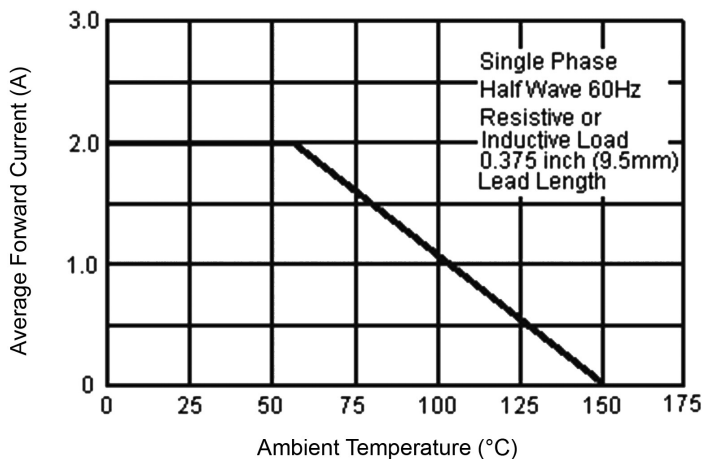
Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.

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

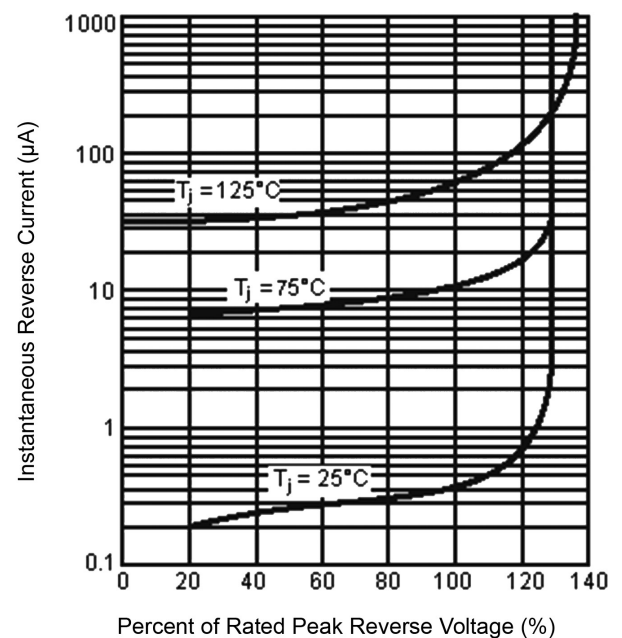
Note: 3. Mount on Cu-Pad Size 10mm x 10mm on PCB.

Ratings and Characteristic Curves (HER202G, HER204G, HER207G and HER208G)

Maximum Forward Current Derating Curve



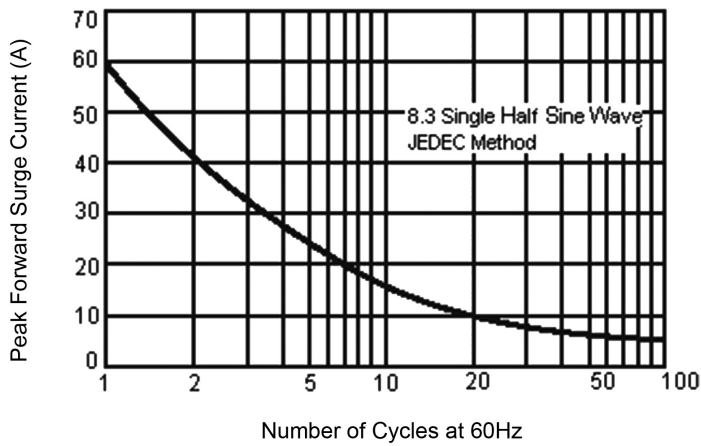
Typical Reverse Characteristics



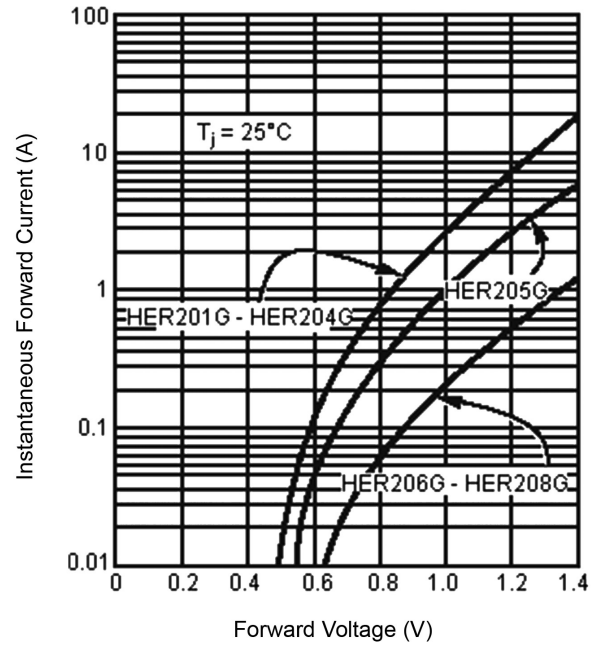
Diode Fast



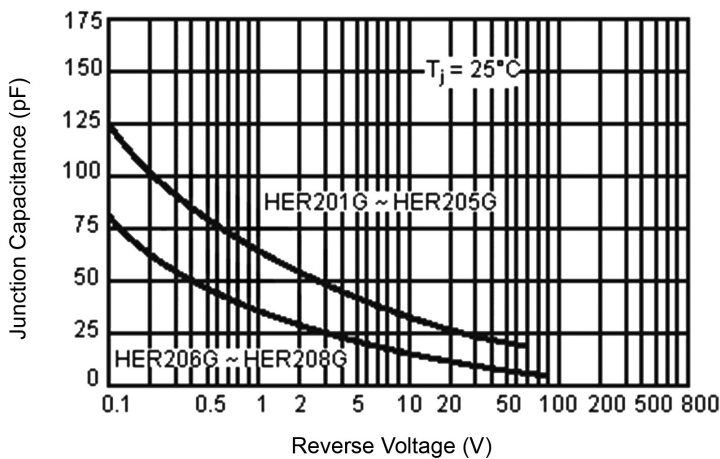
Maximum Non-Repetitive Forward Surge Current



Typical Instantaneous Forward Characteristics



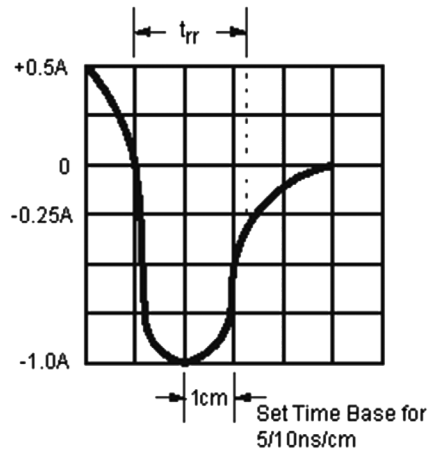
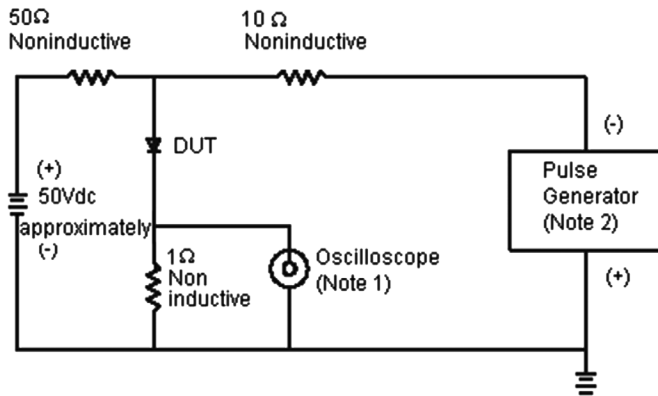
Typical Junction Capacitance



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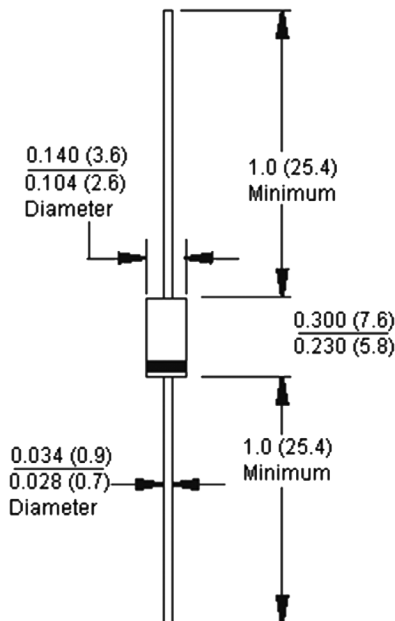
Reverse Recovery Time Characteristic and Test Circuit Diagram



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

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

DO-15



Dimensions : Inches (Millimetres)

Part Number Table

| Description | Part Number |
|-------------------------|-------------|
| Diode, Fast, 2A, 100V | HER202G |
| Diode, Fast, 2A, 300V | HER204G |
| Diode, Fast, 2A, 800V | HER207G |
| Diode, Fast, 2A, 1,000V | HER208G |

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