

**HIGH EFFICIENCY
GLASS PASSIVATED RECTIFIER**

VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere

FEATURES

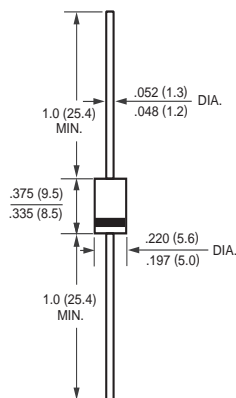
- * Glass passivated junction
- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High speed switching
- * High reliability
- * High current surge

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 1.20 grams



DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | HER301G | HER302G | HER303G | HER304G | HER305G | HER305PG | HER306G | HER307G | HER308G | UNITS |
|---|----------|-------------|---------|---------|---------|---------|----------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 300 | 400 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 210 | 280 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | Vdc | 50 | 100 | 200 | 300 | 400 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at TA= 50°C | Io | 3.0 | | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 200 | | | | 150 | | | | Amps | |
| Typical Junction Capacitance (Note 2) | CJ | 70 | | | | 50 | | | | pF | |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to +175 | | | | | | | | | °C |

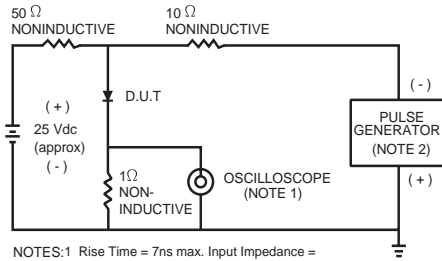
ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | HER301G | HER302G | HER303G | HER304G | HER305G | HER305PG | HER306G | HER307G | HER308G | UNITS |
|--|--------|---------|---------|---------|---------|---------|----------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 3.0A DC | VF | 1.0 | | 1.3 | | 1.0 | | 1.70 | | Volts | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C | IR | 10 | | | | | 150 | | | | uAmps |
| Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55°C | | 150 | | | | | 75 | | | | uAmps |
| Maximum Reverse Recovery Time (Note 1) | trr | 50 | | | | | 75 | | | | nSec |

NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

RATING AND CHARACTERISTIC CURVES (HER301G THRU HER308G)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

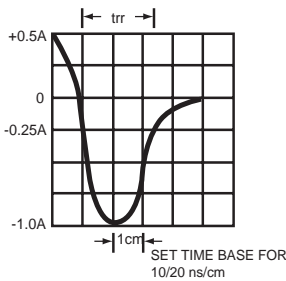


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

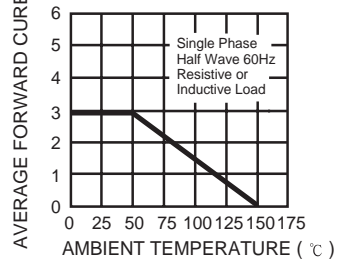


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

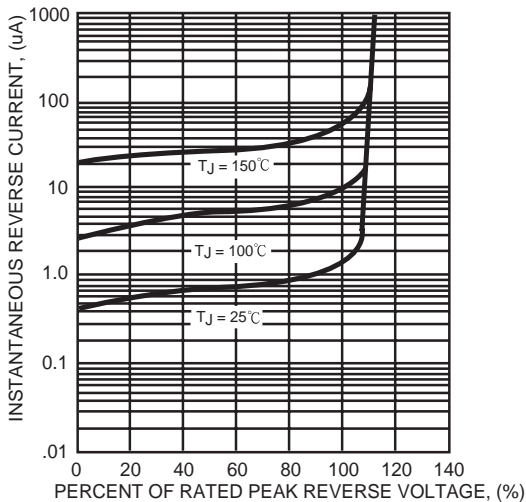


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

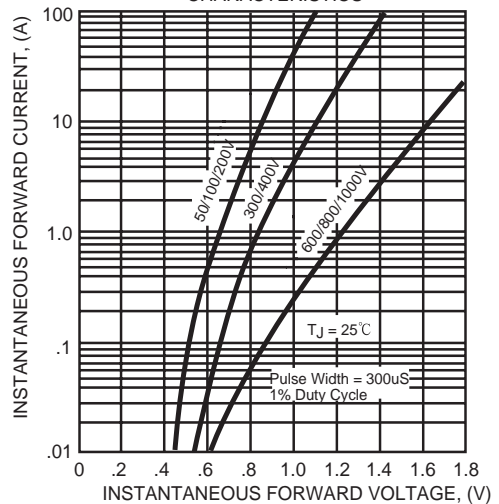


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

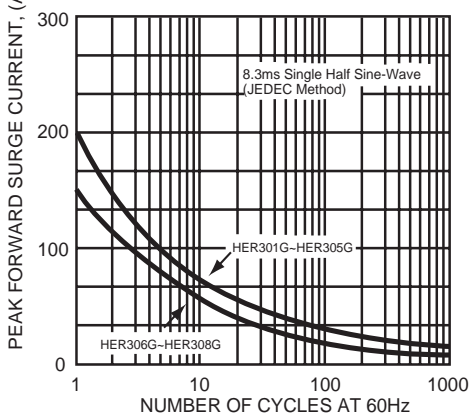


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

