



## HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

### HER601G THRU HER607G

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

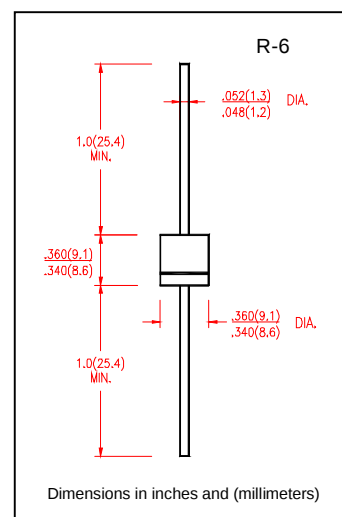
6.0 Ampere

### FEATURES

- Glass passivated chip junction
- Low power loss, high efficiency
- Low leakage
- High speed switching
- High surge capacity
- High temperature soldering guaranteed  
260°C/10 seconds, 0.375" (9.5mm) lead length

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.07ounce, 2.0 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

|                                                                                                                      | SYMBOLS               | HER 601G       | HER 602G | HER 603G | HER 604G | HER 605G | HER 606G | HER 607G | UNIT  |    |
|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------|----------|----------|----------|----------|----------|-------|----|
| Maximum Repetitive Peak Reverse Voltage                                                                              | V <sub>RRM</sub>      | 50             | 100      | 200      | 300      | 400      | 600      | 800      | Volts |    |
| Maximum RMS Voltage                                                                                                  | V <sub>RMS</sub>      | 35             | 70       | 140      | 210      | 280      | 420      | 560      | Volts |    |
| Maximum DC Blocking Voltage                                                                                          | V <sub>DC</sub>       | 50             | 100      | 200      | 300      | 400      | 600      | 800      | Volts |    |
| Maximum Average Forward Rectified Current<br>0.375" (9.5mm) lead length at T <sub>A</sub> =50℃                       | I <sub>(AV)</sub>     | 6.0            |          |          |          |          |          |          | Amps  |    |
| Peak Forward Surge Current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC method)               | I <sub>FSM</sub>      | 200            |          |          |          |          | 150      |          | Amps  |    |
| Maximum Instantaneous Forward Voltage at 6.0A                                                                        | V <sub>F</sub>        | 1.0            |          |          | 1.3      |          | 1.5      | 1.7      | Volts |    |
| Maximum DC Reverse Current at rated<br>DC Blocking Voltage at                                                        | T <sub>A</sub> = 25℃  | I <sub>R</sub> | 10       |          |          |          |          |          |       | μA |
|                                                                                                                      | T <sub>A</sub> = 125℃ |                | 500      |          |          |          |          |          |       |    |
| Maximum Full Load Reverse Current, full cycle<br>average 0.375" (9.5mm) lead length at T <sub>L</sub> =55℃           | I <sub>R(AV)</sub>    | 150            |          |          |          |          |          |          | μA    |    |
| Maximum Reverse Recovery Time<br>Test conditions I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A, | t <sub>rr</sub>       | 70             |          |          |          | 100      |          |          | nS    |    |
| Typical Junction Capacitance (NOTE 2)                                                                                | C <sub>J</sub>        | 40             |          |          |          |          |          |          | pF    |    |
| Typical Thermal Resistance (NOTE 1)                                                                                  | R <sub>θJA</sub>      | 20             |          |          |          |          |          |          | ℃/W   |    |
| Operating Junction Temperature Range                                                                                 | T <sub>J</sub>        | (-55 to +150)  |          |          |          |          |          |          | ℃     |    |
| Storage Temperature Range                                                                                            | T <sub>STG</sub>      | (-55 to +150)  |          |          |          |          |          |          | ℃     |    |

#### Notes:

1. Thermal Resistance from Junction to ambient with 0.375" (9.5mm) lead length, PCB mounted.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V



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## RATING AND CHARACTERISTIC CURVES HER601G THRU HER607G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

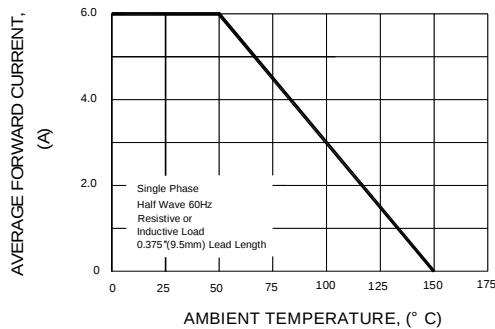


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

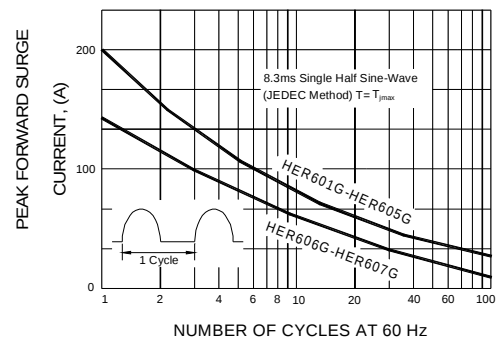


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

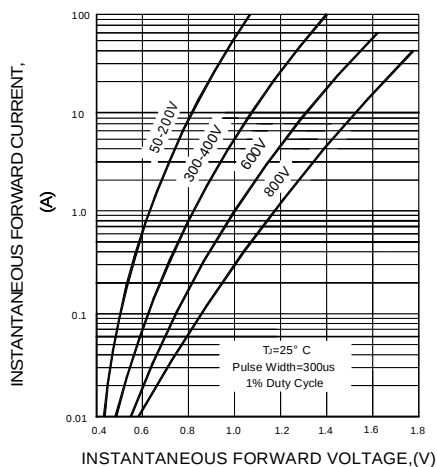


FIG.4-TYPICAL REVERSE CHARACTERISTICS

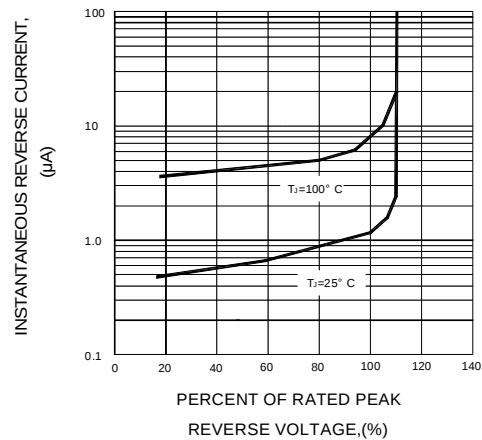


FIG.5-TYPICAL JUNCTION CAPACITANCE

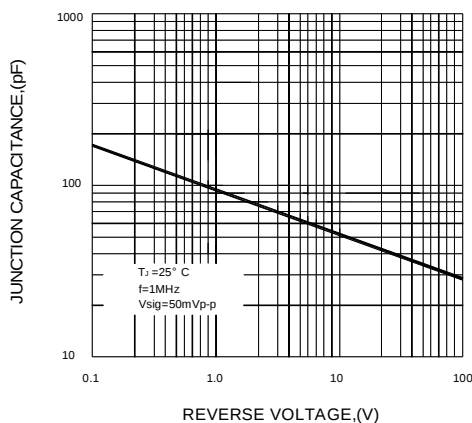
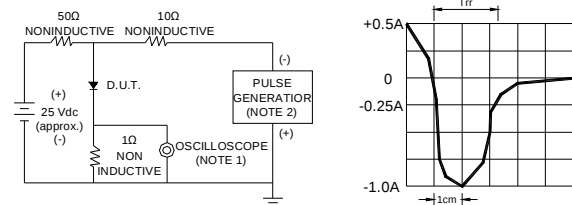


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR 50/100ns/cm