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| <p><b>HIGH EFFICIENCY RECTIFIERS</b></p>  | <p>REVERSE VOLTAGE - <b>50</b> to <b>1000</b> Volts<br/>FORWARD CURRENT - <b>5.0</b> Amperes</p> |
| <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>● Low cost</li> <li>● Diffused junction</li> <li>● Ultra fast switching for high efficiency</li> <li>● Low reverse leakage current</li> <li>● Low forward voltage drop</li> <li>● High current capability</li> <li>● The plastic material carries UL recognition 94V-0</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>● Case: JEDEC DO-27 molded plastic</li> <li>● Polarity: Color band denotes cathode</li> <li>● Weight: 0.04 ounces , 1.1 grams</li> <li>● Mounting position: Any</li> </ul> | <p><b>DO-27</b></p> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>    |

**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%

| CHARACTERISTICS  | SYMBOL            | HER501      | HER502 | HER503 | HER504 | HER505 | HER506 | HER507 | HER508 | UNIT |
|--|-------------------|-------------|--------|--------|--------|--------|--------|--------|--------|------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>  | 50          | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | V    |
| Maximum RMS Voltage  | V <sub>RMS</sub>  | 35          | 70     | 140    | 210    | 280    | 420    | 560    | 700    | V    |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>   | 50          | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | V    |
| Maximum Average Forward Rectified Current @T <sub>A</sub> =55 °C                                     | I <sub>(AV)</sub> | 5.0         |        |        |        |        |        |        |        | A    |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)     | I <sub>FSM</sub>  | 200         |        |        |        |        |        |        |        | A    |
| Peak Forward Voltage at 5.0A DC  | V <sub>F</sub>    | 1.0         |        | 1.3    |        | 1.7    |        |        |        | V    |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =100°C | I <sub>R</sub>    | 5.0         |        |        |        |        |        |        |        | μA   |
| Maximum Reverse Recovery Time (Note1)  | T <sub>RR</sub>   | 50          |        |        |        | 75     |        |        |        | nS   |
| Typical Junction Capacitance (Note2)   | C <sub>J</sub>    | 75          |        |        |        | 50     |        |        |        | pF   |
| Typical Thermal Resistance (Note3)   | R <sub>θJA</sub>  | 20          |        |        |        |        |        |        |        | °C/W |
| Operating Temperature Range  | T <sub>J</sub>    | -55 to +125 |        |        |        |        |        |        |        | °C   |
| Storage Temperature Range  | T <sub>STG</sub>  | -55 to +150 |        |        |        |        |        |        |        | °C   |

NOTES: 1.Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A , I<sub>RR</sub>=0.25A

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3.Thermal resistance junction to ambient

**RATING AND CHARACTERISTIC CURVES**  
**HER501 thru HER508**



FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

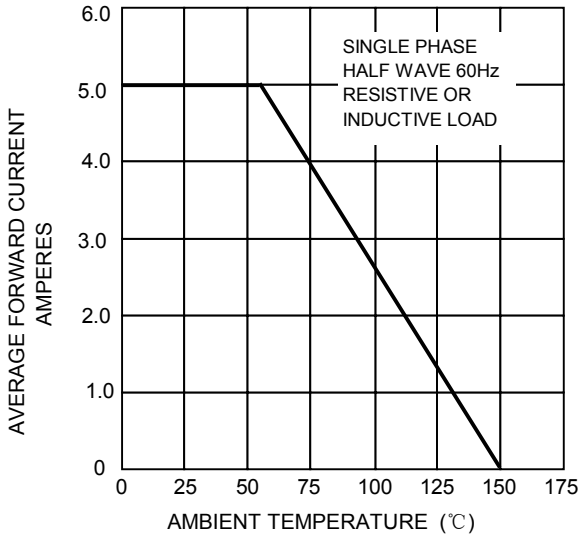


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

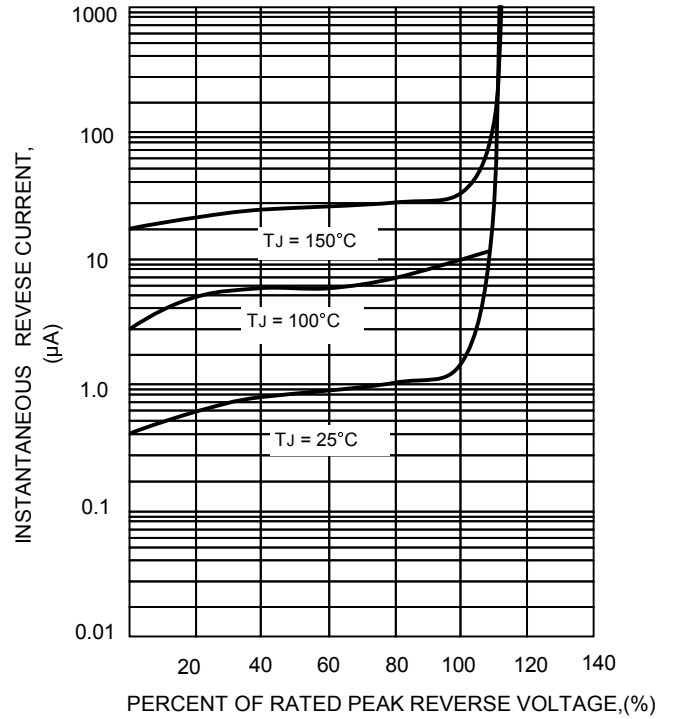


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

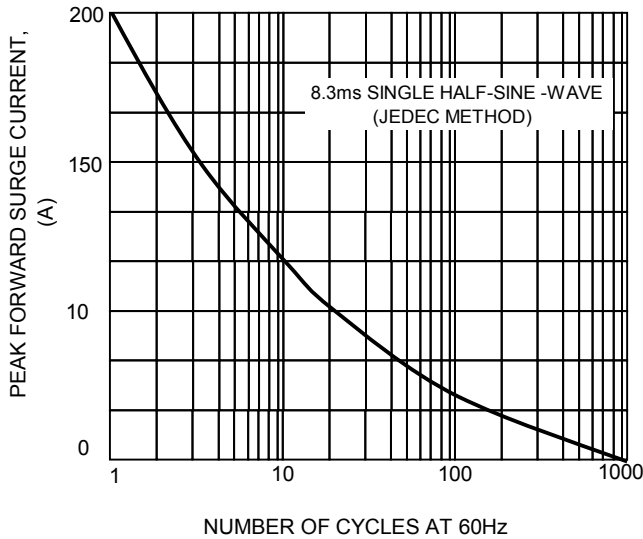


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

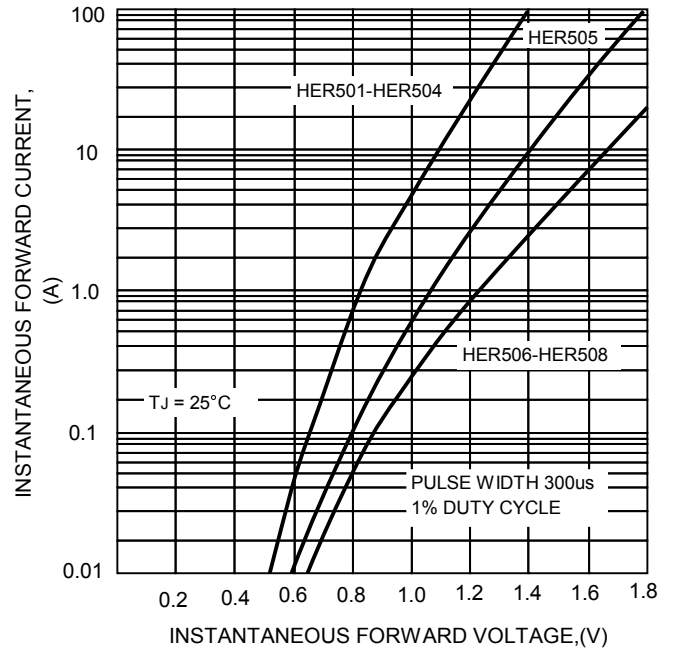


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

