### FEATURES
- Low power loss, high efficiency
- Low leakage
- Low forward voltage drop
- High current capability
- High speed switching
- High reliability
- High current surge

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

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### RATINGS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>HER501</th>
<th>HER502</th>
<th>HER503</th>
<th>HER504</th>
<th>HER505</th>
<th>HER506</th>
<th>HER507</th>
<th>HER508</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRRM</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
</tr>
<tr>
<td>VDC</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>210</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>Volts</td>
</tr>
<tr>
<td>I2T</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
</tr>
<tr>
<td>I0</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
</tr>
<tr>
<td>IFSM</td>
<td>200</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
</tr>
<tr>
<td>PT2</td>
<td>165.9</td>
<td>93.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C/W</td>
</tr>
<tr>
<td>RθJA</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cj</td>
<td>70</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Tjmax</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Tjmin</td>
<td>55 to +150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

#### ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>HER501</th>
<th>HER502</th>
<th>HER503</th>
<th>HER504</th>
<th>HER505</th>
<th>HER506</th>
<th>HER507</th>
<th>HER508</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VR</td>
<td>1.0</td>
<td></td>
<td>1.3</td>
<td></td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td>Volts</td>
</tr>
<tr>
<td>IR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td>μA</td>
</tr>
<tr>
<td>VI2T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td>nsec</td>
</tr>
</tbody>
</table>

### NOTES
1. Thermal Resistance: At 9.5mm lead length, PCB mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. “Fully ROHS compliant”, “100% Sn plating (Pb-free).”
4. Test Conditions: \( Ic = 0.5A, Ic = -1.5A, \) \( Ic = -0.25A \).
RATING AND CHARACTERISTICS CURVES (HER501 THRU HER508)

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 REVERSE CHARACTERISTICS

TA = 25°C
TA = 75°C
TA = 100°C

FIG. 3 MAXIMUM REVERSE CHARACTERISTICS

RECTRON
RATING AND CHARACTERISTICS CURVES (HER501 THRU HER508)

**FIG. 4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

- **INSTANTANEOUS FORWARD VOLTAGE, (V)**
- **INSTANTANEOUS FORWARD CURRENT, (A)**
- **Pulse Width=300μS, 1% Duty Cycle**

**FIG. 5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

- **NUMBER OF CYCLES AT 60Hz**
- **PEAK FORWARD SURGE CURRENT, (A)**

**FIG. 6 TYPICAL JUNCTION CAPACITANCE**

- **REVERSE VOLTAGE, (V)**
- **JUNCTION CAPACITANCE, (nF)**
- **T<sub>J</sub> = 25 °C**

---

HER501~HER505

HER506~HER508
**Marking Description**

- **Rectron Logo**
- **Part No.** 
- **Cathode Band**
- **Year – code** 
  (Y: Last digit of year)
- **Month – code** 
  (M: 0~9, O, N, D)
- **Voltage-code**
  - 1------50V
  - 2------100V
  - 3------200V
  - 4------300V
  - 5------400V
  - 6------600V
  - 7------800V
  - 8------1000V

**HER 50X**
## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>PACKING CODE</th>
<th>EA PER BOX</th>
<th>INNER BOX SIZE (mm)</th>
<th>CARTON SIZE (mm)</th>
<th>EA PER CARTON</th>
<th>GROSS WEIGHT (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-201</td>
<td>-B</td>
<td>500</td>
<td>300<em>73</em>40</td>
<td>347<em>320</em>271</td>
<td>12,000</td>
<td>15.9</td>
</tr>
</tbody>
</table>

eg(TYPE): HER508-B

### REEL PACK

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>PACKING CODE</th>
<th>EA PER REEL</th>
<th>EA PER INNER BOX</th>
<th>COMPONENT SPACE (mm)</th>
<th>TAPE SPACE (mm)</th>
<th>REEL DIA (mm)</th>
<th>CARTON SIZE (mm)</th>
<th>EA PER CARTON</th>
<th>GROSS WEIGHT (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-201</td>
<td>-T</td>
<td>1,200</td>
<td>1,200</td>
<td>5.0</td>
<td>52</td>
<td>330</td>
<td>355<em>350</em>335</td>
<td>4,800</td>
<td>9.10</td>
</tr>
</tbody>
</table>

eg(TYPE): HER508-T

### AMMO PACK

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>PACKING CODE</th>
<th>REEL (EA)</th>
<th>COMPONENT SPACE (mm)</th>
<th>TAPE SPACE (mm)</th>
<th>BOX SIZE (mm)</th>
<th>CARTON SIZE(mm)</th>
<th>CARTON (EA)</th>
<th>GROSS WEIGHT (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-201</td>
<td>-F</td>
<td>600</td>
<td>9.5</td>
<td>52</td>
<td>255<em>73</em>100</td>
<td>400<em>268</em>225</td>
<td>6,000</td>
<td>9.9</td>
</tr>
</tbody>
</table>

eg(TYPE): HER508-F
DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.