

# HER301G-HER308G

High-reliability discrete products and engineering services since 1977

## HIGH EFFICIENCY RECTIFIERS

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19300, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°c unless otherwise noted)

|  | C                |      |      |      | н      | ER       |      |      |      |       |
|--|------------------|------|------|------|--------|----------|------|------|------|-------|
| Characteristics  | Symbol           | 301G | 302G | 303G | 304G   | 305G     | 306G | 307G | 308G | Units |
| Maximum Forward Rectified Current<br>T <sub>A</sub> = 30°C   | Io               |      |      |      | 3      | .0       |      |      |      | A     |
| Maximum Forward Surge Current  | I <sub>FSM</sub> |      |      |      | 15     | 50       |      |      |      | А     |
| Maximum Reverse Current<br>$V_R = V_{RRM}, T_J = 25^{\circ}C$<br>$V_R = V_{RRM}, T_J = 125^{\circ}C$ | I <sub>R</sub>   |      |      |      |        | .0<br>00 |      |      |      | μΑ    |
| Typical Junction Capacitance<br>f = 1MHz and applied 4V DC Reverse Voltage                           | CJ               |      |      |      | 7      | 5        |      |      |      | pF    |
| Storage Temperature Range  | T <sub>STG</sub> |      |      |      | -65 to | +175     |      |      |      | °C    |
| Operating Temperature Range  | ٦J               |      |      |      | -55 to | +150     |      |      |      | °C    |
| Repetitive Peak Reverse Voltage  | V <sub>RRM</sub> | 50   | 100  | 200  | 300    | 400      | 600  | 800  | 1000 | V     |
| RMS Voltage  | V <sub>RMS</sub> | 35   | 70   | 140  | 210    | 280      | 420  | 560  | 700  | V     |
| Continuous Reverse Voltage   | V <sub>R</sub>   | 50   | 100  | 200  | 300    | 400      | 600  | 800  | 1000 | V     |
| Maximum Forward Voltage @ IF = 1.5A  | VF               | 1.0  | 1.0  | 1.0  | 1.3    | 1.3      | 1.85 | 1.85 | 1.85 | V     |
| Maximum Reverse Recovery Time (1)  | t <sub>rr</sub>  | 50   | 50   | 50   | 50     | 50       | 75   | 75   | 75   | ns    |

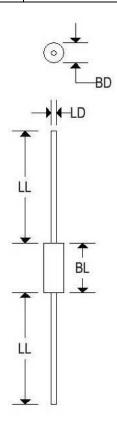
Note 1: Reverse recovery time test condition,  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ 



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### **MECHANICAL CHARACTERISTICS**

| Case:     | DO-201AD      |
|-----------|---------------|
| Marking:  | Alpha-numeric |
| Polarity: | Cathode band  |



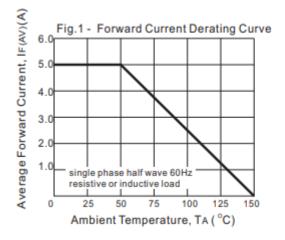
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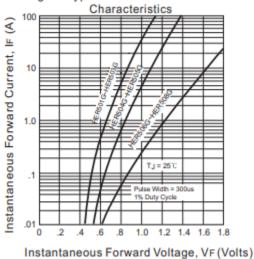
|    |       | DO-2  | 201AD       |       |  |  |
|----|-------|-------|-------------|-------|--|--|
|    | Inc   | hes   | Millimeters |       |  |  |
|    | Min   | Max   | Min         | Max   |  |  |
| BD | 0.190 | 0.209 | 4.826       | 5.309 |  |  |
| BL | 0.285 | 0.375 | 7.240       | 9.530 |  |  |
| LD | 0.048 | 0.052 | 1.219       | 1.321 |  |  |
| LL | 1.000 | (7)   | 25.400      | 19    |  |  |



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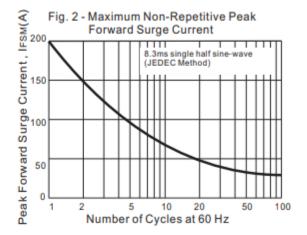


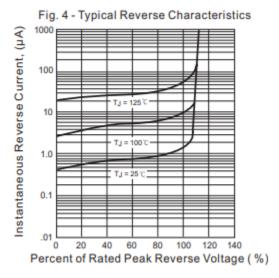




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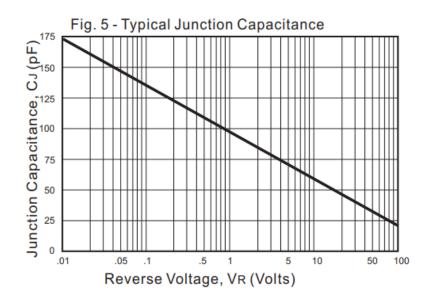
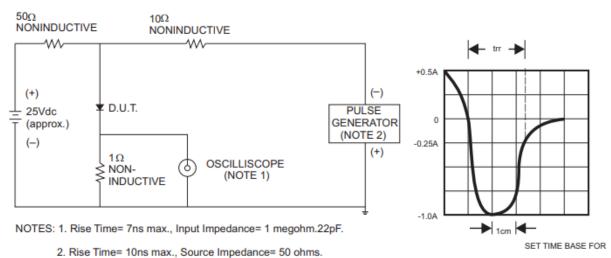


Fig. 6 - Test Circuit Diagram and Reverse Recovery Time Characteristic



50 / 10ns / cm