



# 3.0A High Efficient Rectifier

## Features

- 1. High surge current capability
- 2. High reliability
- 3. Low forward voltage drop
- 4. High current capability



## Absolute Maximum Ratings

T<sub>j</sub>=25°C

| Parameter  | Test Conditions      | Type   | Symbol            | Value    | Unit |
|--|----------------------|--------|-------------------|----------|------|
| Repetitive peak reverse voltage<br>= Working peak reverse voltage<br>= DC blocking voltage |                      | HER301 | V <sub>RRM</sub>  | 50       | V    |
|  |                      | HER302 | =V <sub>RWM</sub> | 100      | V    |
|  |                      | HER303 | =V <sub>R</sub>   | 200      | V    |
|  |                      | HER304 |                   | 300      | V    |
|  |                      | HER305 |                   | 400      | V    |
|  |                      | HER306 |                   | 600      | V    |
|  |                      | HER307 |                   | 800      | V    |
|  |                      | HER308 |                   | 1000     | V    |
| Peak forward surge current   |                      |        | I <sub>FSM</sub>  | 150      | A    |
| Average forward current  | T <sub>A</sub> =50°C |        | I <sub>FAV</sub>  | 3.0      | A    |
| Storage temperature range  |                      |        | T <sub>stg</sub>  | -65~+175 | °C   |

## Electrical Characteristics

T<sub>j</sub>=25°C

| Parameter                     | Test Conditions  | Type          | Symbol          | Min | Typ | Max  | Unit |
|-------------------------------|--|---------------|-----------------|-----|-----|------|------|
| Forward voltage               | I <sub>F</sub> =3.0A   | HER301-HER304 | V <sub>F</sub>  |     |     | 1.0  | V    |
|                               |  | HER305        | V <sub>F</sub>  |     |     | 1.3  | V    |
|                               |  | HER306-HER308 | V <sub>F</sub>  |     |     | 1.85 | V    |
| Reverse current               | T <sub>A</sub> =25°C   |               | I <sub>R</sub>  |     |     | 10   | µA   |
|                               | T <sub>A</sub> =100°C  |               | I <sub>R</sub>  |     |     | 200  | µA   |
| Maximum reverse recovery time | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A | HER301~HER305 | T <sub>rr</sub> |     |     | 50   | ns   |
|                               |  | HER306~HER308 | T <sub>rr</sub> |     |     | 70   | ns   |
| Diode capacitance             | V <sub>R</sub> =4V, f=1MHz   |               | C <sub>D</sub>  |     | 75  |      | pF   |

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Characteristics ( $T_j=25^\circ\text{C}$  unless otherwise specified)

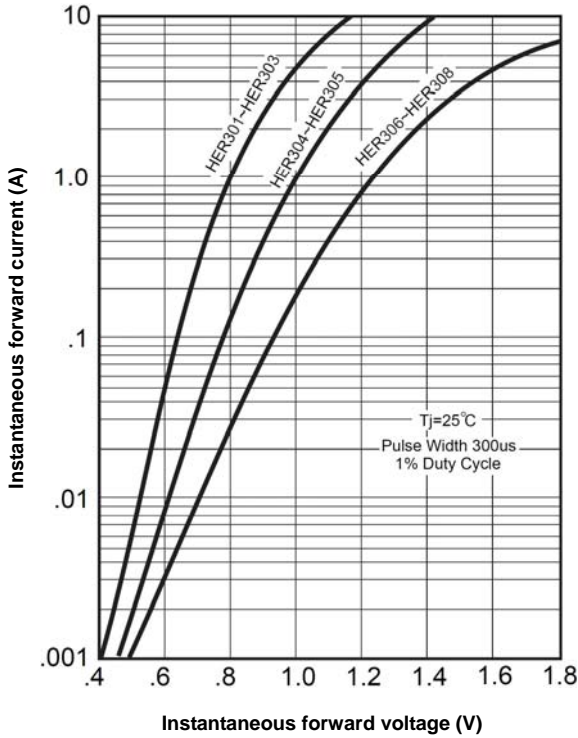


Figure 1. Typical forward characteristics

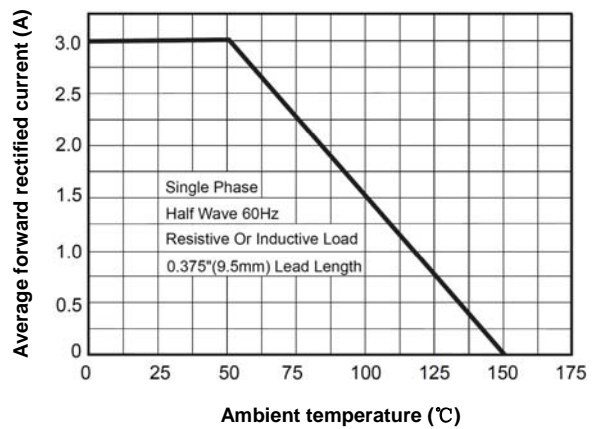


Figure 2. Forward derating curve

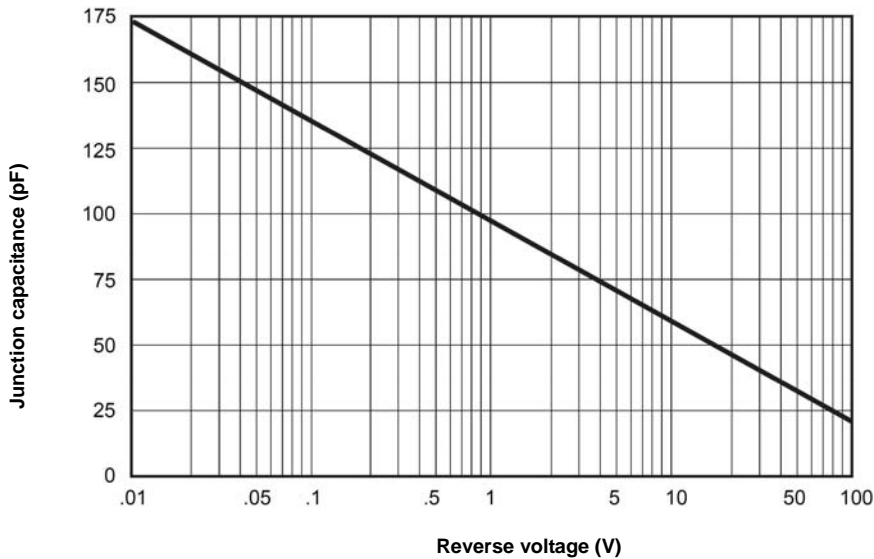
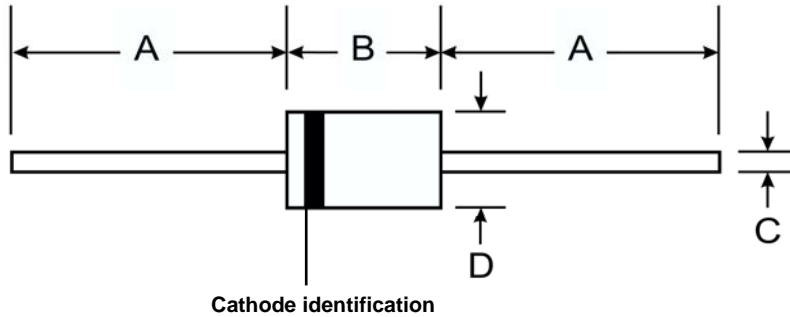


Figure 3. Junction capacitance

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**Dimensions in mm**



| DIMENSIONS |        |       |       |      |
|------------|--------|-------|-------|------|
| DIM        | INCHES |       | MM    |      |
|            | MIN    | MAX   | MIN   | MAX  |
| A          | 1.000  | ---   | 25.40 | ---  |
| B          | 0.280  | 0.370 | 7.20  | 9.50 |
| C          | 0.048  | 0.052 | 1.20  | 1.30 |
| D          | 0.188  | 0.250 | 4.80  | 6.40 |

Case: molded plastic DO-201AD

Polarity: cathode band

Marking: type number

**Marking**

