

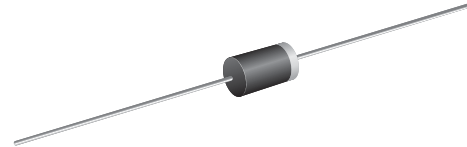


## Glass Passivated Junction Rectifier

### Major Ratings and Characteristics

|             |                |
|-------------|----------------|
| $I_{F(AV)}$ | 2.0 A          |
| $V_{RRM}$   | 50 V to 1000 V |
| $I_{FSM}$   | 70 A           |
| $I_R$       | 5.0 $\mu$ A    |
| $V_F$       | 1.1 V          |
| $T_j$ max.  | 150 °C         |

DO-204AC (DO-15)



### Features

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current, typical  $I_R$  less than 0.1  $\mu$ A
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder Dip 260 °C, 40 seconds



### Mechanical Data

**Case:** DO-204AC, molded epoxy over passivated chip

Epoxy meets UL-94V-0 Flammability rating

**Terminals:** Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

**Polarity:** Color band denotes cathode end

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application

### Maximum Ratings

( $T_A = 25$  °C unless otherwise noted)

| Parameter  | Symbol         | GPP20A        | GPP20B | GPP20D | GPP20G | GPP20J | GPP20K | GPP20M | Unit |
|--|----------------|---------------|--------|--------|--------|--------|--------|--------|------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 50            | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum RMS voltage  | $V_{RMS}$      | 35            | 70     | 140    | 280    | 420    | 560    | 700    | V    |
| Maximum DC blocking voltage  | $V_{DC}$       | 50            | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55$ °C | $I_{F(AV)}$    | 2.0           |        |        |        |        |        |        | A    |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load     | $I_{FSM}$      | 70            |        |        |        |        |        |        | A    |
| Operating junction and storage temperature range                                       | $T_J, T_{STG}$ | - 55 to + 150 |        |        |        |        |        |        | °C   |

### Electrical Characteristics

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

| Parameter  | Test condition  | Symbol | GPP20A    | GPP20B | GPP20D | GPP20G | GPP20J | GPP20K | GPP20M | Unit          |
|--|---|--------|-----------|--------|--------|--------|--------|--------|--------|---------------|
| Maximum instantaneous forward voltage                | at 2.0 A  | $V_F$  | 1.1       |        |        |        |        |        |        | V             |
| Maximum reverse current at rated DC blocking voltage | $T_A = 25\text{ }^\circ\text{C}$<br>$T_A = 100\text{ }^\circ\text{C}$ | $I_R$  | 5.0<br>50 |        |        |        |        |        |        | $\mu\text{A}$ |
| Maximum junction capacitance                         | at 4.0 V, 1 MHz   | $C_J$  | 12        |        |        |        |        |        |        | pF            |

### Thermal Characteristics

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

| Parameter                                 | Symbol                             | GPP20A | GPP20B | GPP20D | GPP20G | GPP20J | GPP20K | GPP20M | Unit |                    |
|---|------------------------------------|--------|--------|--------|--------|--------|--------|--------|------|--------------------|
| Typical thermal resistance <sup>(1)</sup> | $R_{\theta JA}$<br>$R_{\theta JL}$ |        |        |        |        | 25     |        |        |      | $^\circ\text{C/W}$ |
|   |                                    |        |        |        |        | 20     |        |        |      |                    |

Notes:

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, P.C.B. mounted

### Ratings and Characteristics Curves

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

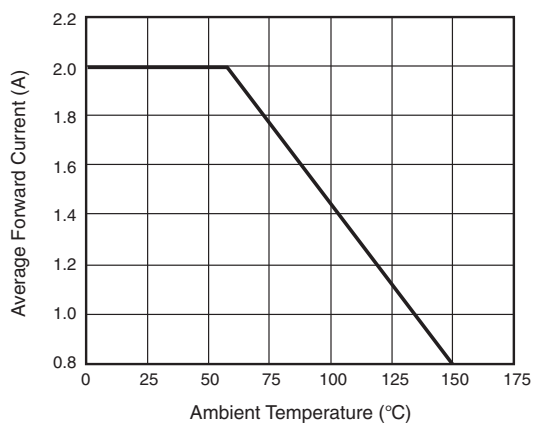


Figure 1. Forward Current Derating Curve

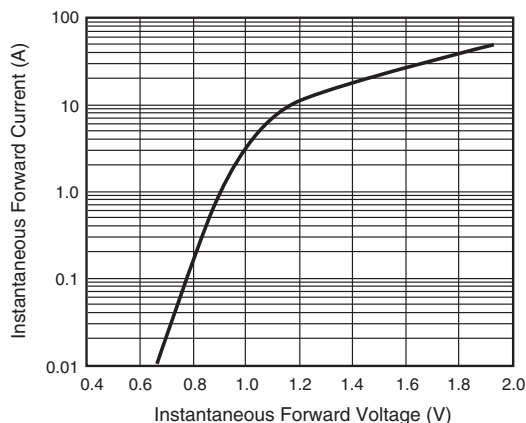


Figure 2. Typical Instantaneous Forward Characteristics

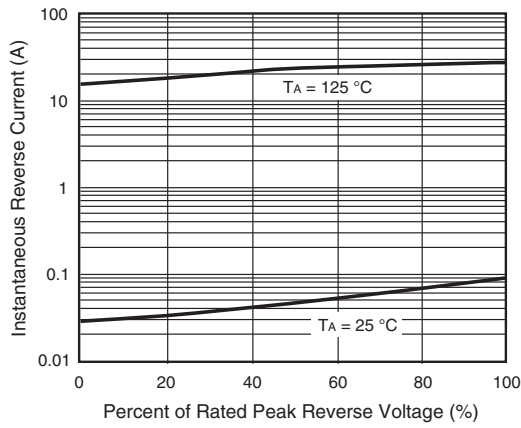


Figure 3. Typical Reverse Characteristics

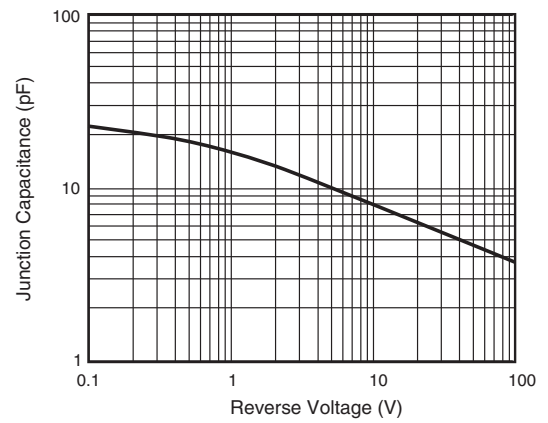
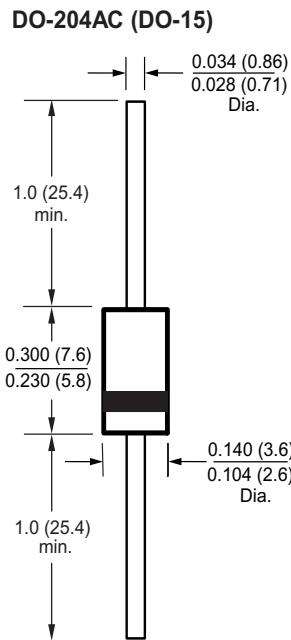


Figure 4. Typical Junction Capacitance

## Package outline dimensions in inches (millimeters)





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