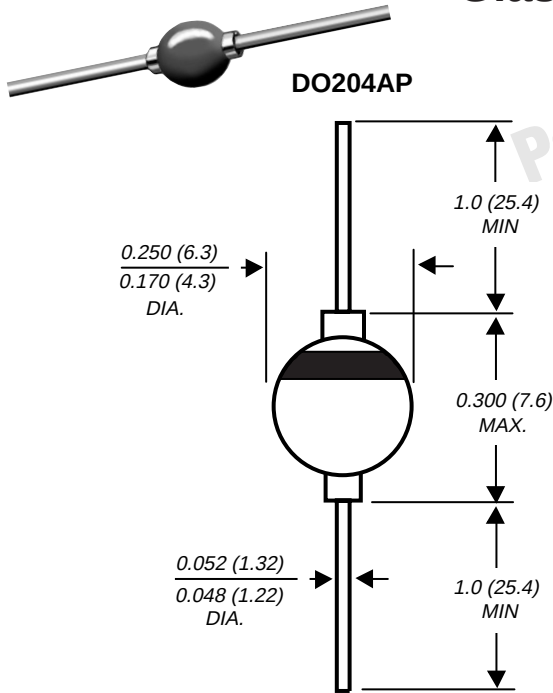


## Glass Passivated Fast Switching Rectifier

Reverse Voltage 50 to 1000 V

Forward Current 3.0 A



Dimensions in inches and (millimeters)

\*Braze-lead assembly is covered by Patent No. 3,930,306

### Features

- High temperature metallurgically bonded construction
- Hermetically sealed package
- Cavity-free glass passivated junction
- 3.0 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- High temperature soldering guaranteed:  
350°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### Mechanical Data

**Case:** Solid glass body

**Terminals:** Solder plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.04 ounce, 1.1 grams

## Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                        | SYMBOLS         | RG3A        | RG3B | RG3D | RG3G | RG3J | RG3K | RG3M | UNITS              |
|--------------------------------------------------------------------------------------------------------|-----------------|-------------|------|------|------|------|------|------|--------------------|
| 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<br>0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$      | $I_{F(AV)}$     | 3.0         |      |      |      |      |      |      | A                  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 100         |      |      |      |      |      |      | A                  |
| Maximum average reverse current,<br>at rated peak reverse voltage                                      | $I_{R(AV)}$     | 2.0<br>100  |      |      |      |      |      |      | $\mu\text{A}$      |
| Typical thermal resistance (NOTE 1)                                                                    | $R_{\theta JA}$ | 55          |      |      |      |      |      |      | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range                                                       | $T_J, T_{STG}$  | -65 to +175 |      |      |      |      |      |      | $^\circ\text{C}$   |

## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                      | SYMBOLS  | RG3A | RG3B | RG3D | RG3G | RG3J | RG3K | RG3M | UNITS         |
|------------------------------------------------------------------------------------------------------|----------|------|------|------|------|------|------|------|---------------|
| Maximum instantaneous forward voltage at 3.0A                                                        | $V_F$    | 1.3  |      |      |      |      |      |      | V             |
| Maximum DC reverse current<br>at rated DC blocking voltage                                           | $I_R$    | 5.0  |      |      |      |      |      |      | $\mu\text{A}$ |
| Maximum reverse recovery time at<br>at $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $t_{rr}=0.25\text{A}$ | $t_{rr}$ | 150  |      |      |      | 250  | 400  | 500  | ns            |
| Typical junction capacitance at 4.0V, 1MHz                                                           | $C_J$    | 40   |      |      |      |      |      |      | pF            |

### NOTES:

(1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, with both leads attached to heat sink

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

