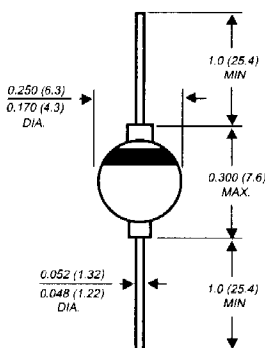


# RG3A THRU RG3M

## GLASS PASSIVATED FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

Case Style G3



Dimensions in inches and (millimeters)

### FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Hermetically sealed package
- ◆ 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:  $350^\circ\text{C}/10$  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 AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

|                                                                                                                       | SYMBOLS         | RG3A         | RG3B | RG3D | RG3G | RG3J | RG3K | RG3M | UNITS                     |
|-----------------------------------------------------------------------------------------------------------------------|-----------------|--------------|------|------|------|------|------|------|---------------------------|
| Maximum repetitive peak reverse voltage                                                                               | $V_{RRM}$       | 50           | 100  | 220  | 400  | 600  | 800  | 1000 | Volts                     |
| Maximum RMS voltage                                                                                                   | $V_{RMS}$       | 35           | 70   | 140  | 280  | 420  | 560  | 700  | Volts                     |
| Maximum DC blocking voltage                                                                                           | $V_{DC}$        | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | Volts                     |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$                     | $I_{(AV)}$      | 3.0          |      |      |      |      |      |      | Amps                      |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method)                | $I_{FSM}$       | 100.0        |      |      |      |      |      |      | Amps                      |
| Maximum instantaneous forward voltage at 3.0A                                                                         | $V_F$           | 1.3          |      |      |      |      |      |      | Volts                     |
| Maximum average reverse current<br>at rated peak reverse voltage<br>$T_A=25^\circ\text{C}$<br>$T_A=100^\circ\text{C}$ | $I_{R(AV)}$     | 2.0<br>100.0 |      |      |      |      |      |      | $\mu\text{A}$             |
| Maximum DC reverse current<br>at rated DC blocking voltage                                                            | $I_R$           | 5.0          |      |      |      |      |      |      | $\mu\text{A}$             |
| Maximum reverse recovery time (NOTE 1)                                                                                | $t_{rr}$        | .150         |      |      |      | 250  | 400  | 500  | ns                        |
| Typical junction capacitance (NOTE 2)                                                                                 | $C_J$           | 40.0         |      |      |      |      |      |      | pF                        |
| Typical thermal resistance (NOTE 3)                                                                                   | $R_{\theta JA}$ | 22.0         |      |      |      |      |      |      | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range                                                                      | $T_J, T_{STG}$  | -65 to +175  |      |      |      |      |      |      | $^\circ\text{C}$          |

#### NOTES:

- (1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_F=0.25\text{A}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, with both leads attached to heat sink