

RG3A THRU RG3M

GLASS PASSIVATED FAST SWITCHING RECTIFIER

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

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

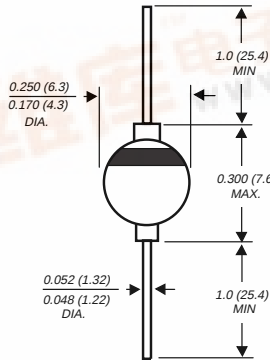
Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.1 grams

PATENTED *

Case Style G3



Dimensions in inches and (millimeters)

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

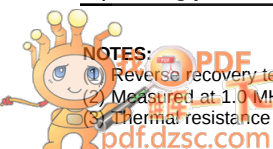
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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	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 0.375" (9.5mm) lead length at $T_A=55^{\circ}\text{C}$	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed 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 $T_A=25^{\circ}\text{C}$ at rated peak reverse voltage $T_A=100^{\circ}\text{C}$	$I_{R(AV)}$	2.0 100.0							μA
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0							μA
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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $t_r=0.25\text{A}$
- (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



RATINGS AND CHARACTERISTIC CURVES RG3A AND RG3M

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1 - FORWARD CURRENT DERATING CURVE

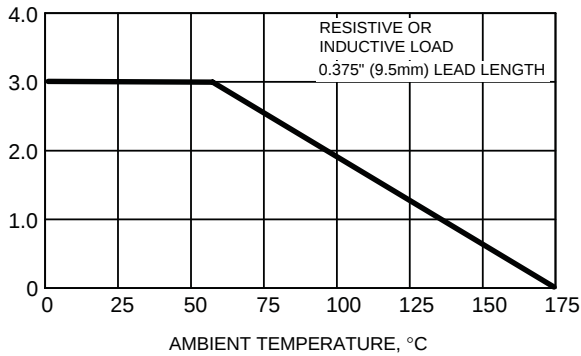


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

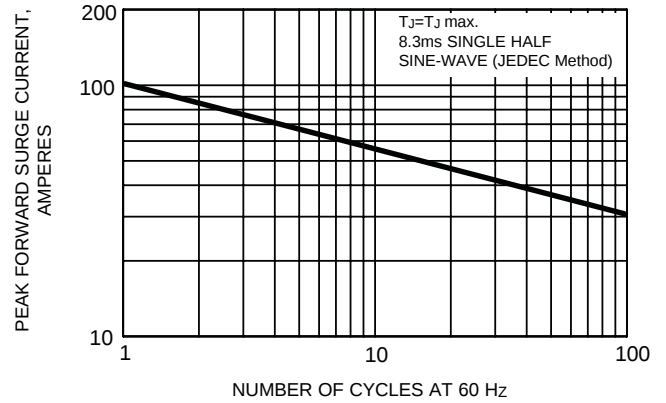


FIG. 3 - TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

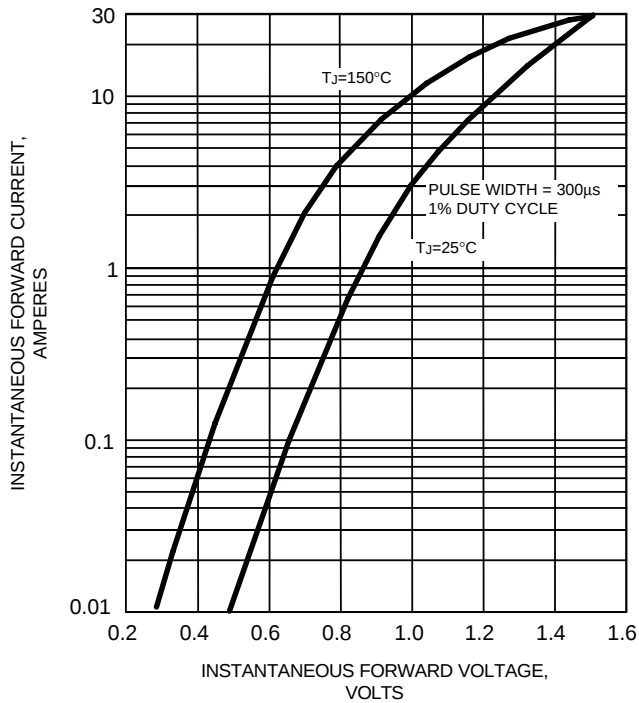


FIG. 4 - TYPICAL REVERSE
CHARACTERISTICS

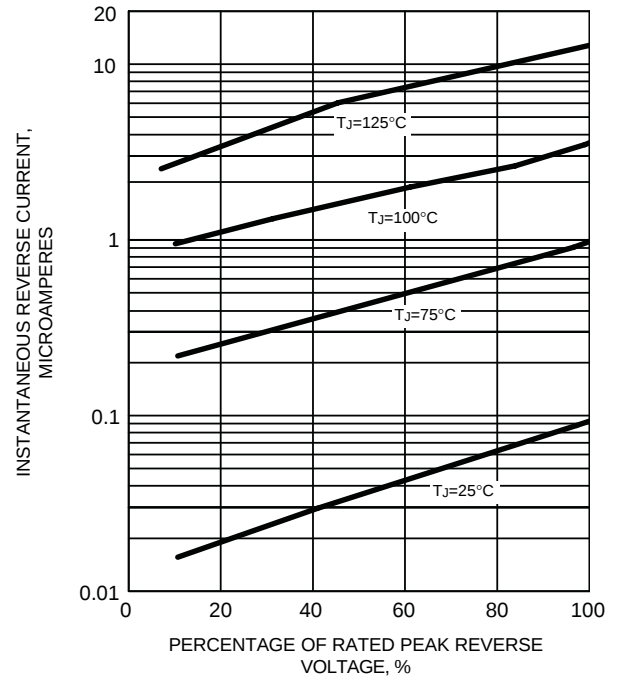


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

