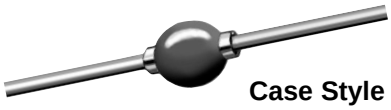
GENERAL SEMICONDUCTOR®

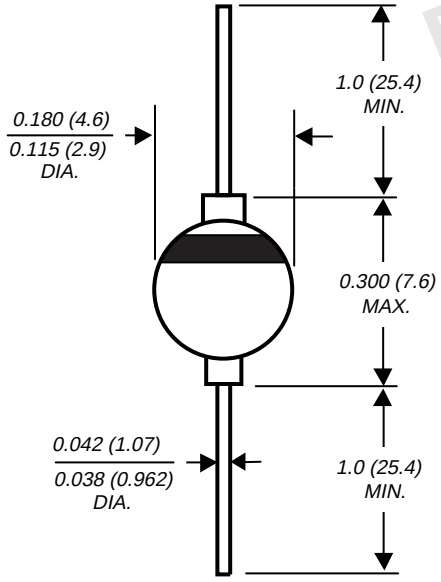
RG4A THRU RG4J

Glass Passivated Fast Switching Rectifier

Reverse Voltage 50 to 600 V
Forward Current 3.0 A



Case Style G4



Dimensions in inches and (millimeters)

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

Patented*

Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- 3.0 ampere operation at T_A=50°C with no thermal runaway
- Typical I_R less than 0.1μA
- Hermetically sealed package
- 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: 0.037 ounce, 1.04 grams

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	RG4A	RG4B	RG4D	RG4G	RG4J	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead lengths at T_A=55°C	$I_{F(AV)}$	3.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100					A
Maximum average reverse current at peak reverse voltage T_A=25°C / T_A=100°C	$I_{R(AV)}$	2.0 / 100					μA
Typical thermal resistance (NOTE 1)	$R_{\Theta JA}$	22					°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	RG4A	RG4B	RG4D	RG4G	RG4J	UNITS
Maximum instantaneous forward voltage at 3.0A	V_F	1.3					V
Maximum reverse current at rated DC blocking voltage	I_R	5.0					μA
Maximum reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	150				250	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	50					pF

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

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Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

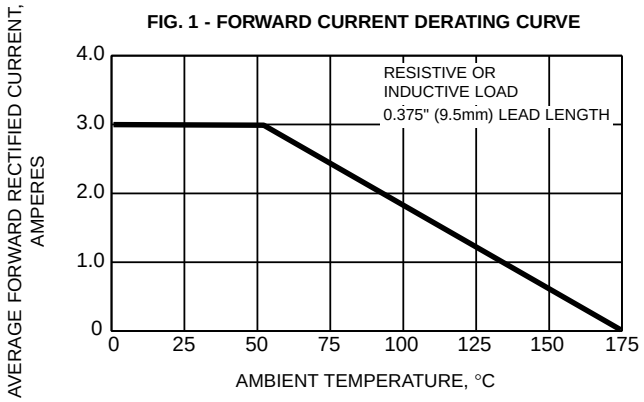

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

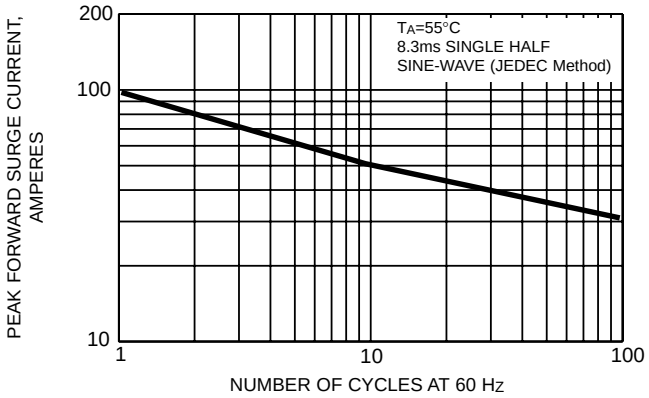

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

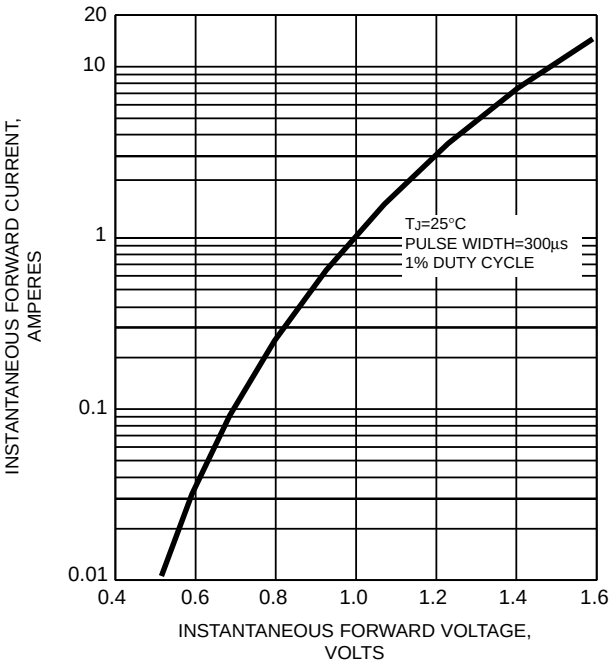

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

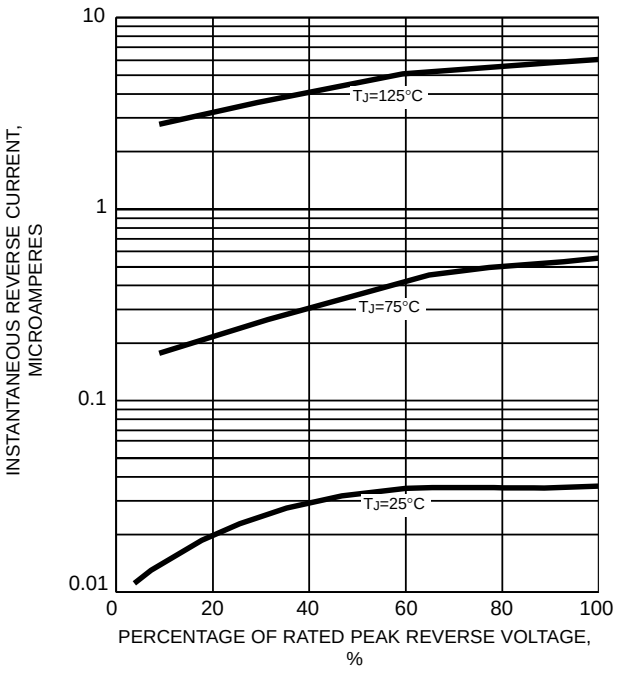

FIG. 5 - TYPICAL JUNCTION CAPACITANCE