

Silicon Diode

G4A

50V / 3A

DATASHEET

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Source: General Semiconductor Databook 1998

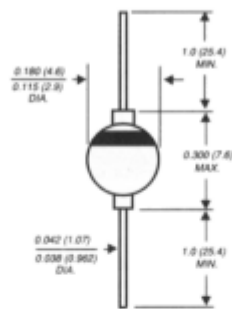
G4A THRU G4J

GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 3.0 Amperes

PATENTED *

Case Style G4



Dimensions in inches and (millimeters)

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

FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Hermetically sealed package
- ◆ 3.0 Ampere operation at $T_A=75^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ 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: 0.037 ounce, 1.04 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	G4A	G4B	G4D	G4G	G4J	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	Volts
Maximum average forward rectified current, $0.375"$ (9.5mm) lead length at $T_A=70^\circ\text{C}$	$I_{(AV)}$	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	1.1					Volts
Maximum full load reverse current full cycle average, $0.375"$ (9.5mm) lead length at $T_A=70^\circ\text{C}$	$I_{R(AV)}$	200.0					μA
Maximum DC reverse current at rated DC blocking voltage	I_R	1.0 100.0					μA
Typical reverse recovery time (NOTE 1)	t_{rr}	3.0					μs
Typical junction capacitance (NOTE 2)	C_J	40.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	22.0 12.0					$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_T=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient and from junction to lead at $0.375"$ (9.5mm) lead length with both leads mounted between heatsinks

RATINGS AND CHARACTERISTIC CURVES G4A AND G4J

