

Silicon Diode

G3J

600V / 3A

DATASHEET

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Source: General Semiconductor Databook 1998

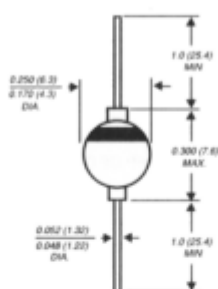
G3A THRU G3M

GLASS PASSIVATED JUNCTION RECTIFIER

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

PATENTED*

Case Style G3



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 $T_A=70^\circ\text{C}$ 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: 0.04 ounce, 1.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	G3A	G3B	G3D	G3G	G3J	G3K	G3M	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	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 =70°C	I _(AV)	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125.0							Amps
Maximum instantaneous forward voltage at 3.0A	V _F	1.2		1.1					Volts
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead length at T _A =70°C	I _{R(AV)}	200.0							μA
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0 100.0							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 _{θJA} R _{θJL}	20.0 10.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175							°C

NOTES:

(1) Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_T=0.25\text{A}$

(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 G3A AND G3M

