

Silicon Diode

G3A

50V / 3A

DATASHEET

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OEM – General Semiconductor

Source: General Semiconductor Databook 1998

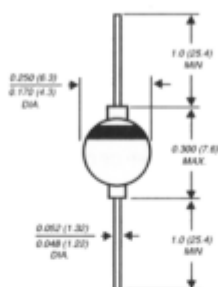
G3A THRU G3M

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	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at TA=70°C	IAV	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	125.0							Amps
Maximum instantaneous forward voltage at 3.0A	VF	1.2		1.1					Volts
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead length at TA=70°C	IR(AV)	200.0							μA
Maximum DC reverse current at rated DC blocking voltage TA=25°C TA=150°C	IR	5.0 100.0							μA
Typical reverse recovery time (NOTE 1)	trr	3.0							μs
Typical junction capacitance (NOTE 2)	CJ	40.0							pF
Typical thermal resistance (NOTE 3)	REJA REJL	20.0 10.0							°C/W
Operating junction and storage temperature range	TJ, TSTG	-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

