

Silicon Diode

G3K

800V / 3A

DATASHEET

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Source: General Semiconductor Databook 1998

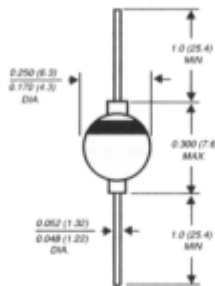
G3A THRU G3M

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 $T_A=70^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	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 $T_A=70^\circ\text{C}$	$I_{R(AV)}$	200.0							μA
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$		$T_A=150^\circ\text{C}$					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)	$R_{\theta JA}$ $R_{\theta JL}$	20.0 10.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							$^\circ\text{C}$

NOTES:

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

