

Silicon Diode

G1B

100V / 1A

DATASHEET

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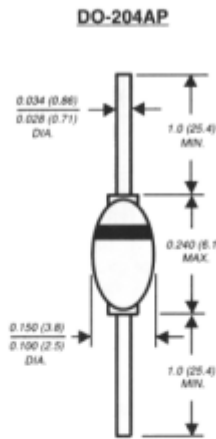
Source: General Semiconductor Databook 1998

G1A THRU G1M

GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

PATENTED *



Dimensions in inches and (millimeters)

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

FEATURES

- ◆ High temperature metallurgically bonded constructed rectifiers
- ◆ Glass passivated cavity-free junction in DO-204AP package
- ◆ Hermetically sealed package
- ◆ 1.0 ampere operation at $T_A=100^\circ\text{C}$ 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: JEDEC DO-204AP 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: 0.02 ounce, 0.56 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	G1A	G1B	G1D	G1G	G1J	G1K	G1M	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	70	200	400	600	800	1000	Volts
Maximum average forward rectified current $0.375"$ (9.5mm) lead length at $T_A=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.2		1.1				Volts	
Maximum full load reverse current, full cycle average $0.375"$ (9.5mm) lead length at $T_A=100^\circ\text{C}$	$I_{R(AV)}$	200.0							μA
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$		2.0				μA	
		$T_A=150^\circ\text{C}$		100.0				μA	
Typical reverse recovery time (NOTE 1)	t_{rr}	1.5							μs
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JL}$	55.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	65 to +175							$^\circ\text{C}$

NOTES:

- (1) Measured with $I_F=0.5\text{A}$, $I_n=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient at $0.375"$ (9.5mm) lead length P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES G1A AND G1M

