

Silicon Diode

RG1A

50V / 1A

DATASHEET

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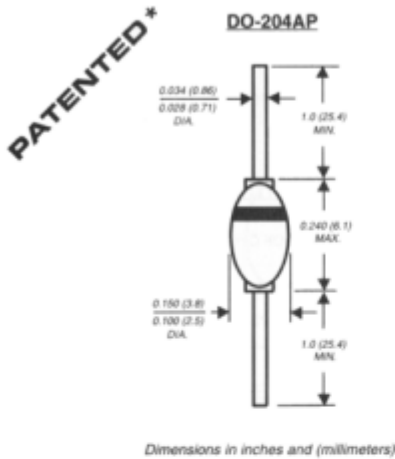
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

RG1A THRU RG1M

GLASS PASSIVATED FAST SWITCHING RECTIFIER

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



Dimensions in inches and (millimeters)

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

FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Hermetically sealed package
- ◆ Glass passivated cavity-free junction
- ◆ 1.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ Fast switching for high efficiency
- ◆ 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 DO204AP 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	RG1A	RG1B	RG1D	RG1G	RG1J	RG1K	RG1M	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 $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.3							Volts
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_{R(AV)}$	1.0 100.0							μA
Maximum DC reverse current at rated DC blocking voltage	I_R	2.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	150			200	250	500		ns
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	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) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- (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 RG1A AND RG1M

