

Silicon Diode

GI812

200V / 1A

DATASHEET

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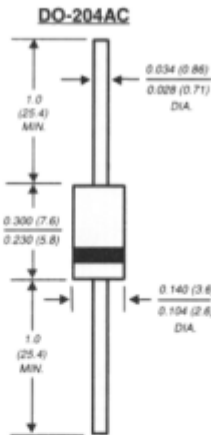
Source: General Semiconductor Databook 1998

GI810 THRU GI818

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

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

PATENTED *



Dimensions in inches and (millimeters)

* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ Fast switching for high efficiency
- ◆ 1.0 Ampere operation at $T_A=75^{\circ}\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ 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-204AC molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.015 ounce, 0.4 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GI 810	GI 811	GI 812	GI 814	GI 816	GI 817	GI 818	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 $T_A=75^{\circ}\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=75^{\circ}\text{C}$	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.2							Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^{\circ}\text{C}$: 10.0 $T_A=100^{\circ}\text{C}$: 100.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	750.0							ns
Typical junction capacitance (NOTE 2)	C_J	25.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	45.0							$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							$^{\circ}\text{C}$

NOTES:

- (1) Reverse recovery test conditions: $I_F=1.0\text{A}$, $V_R=30\text{V}$, $dI/dt=50\text{A}/\mu\text{s}$
- (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 GI810 THRU GI818

