

Silicon Diode

GI1-1600

1600V / 1A

DATASHEET

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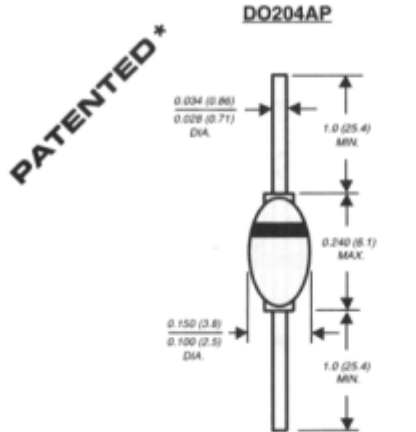
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

GI1-1200 THRU GI1-1600

MINIATURE HIGH VOLTAGE GLASS PASSIVATED RECTIFIER

Reverse Voltage - 1200 to 1600 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
- ◆ Glass passivated cavity-free junction package
- ◆ 1.0 Ampere operation at $T_A=75^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ Hermetically sealed package
- ◆ 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 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GI1-1200	GI1-1400	GI1-1600	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	1200	1400	1600	Volts
Maximum RMS voltage	V_{RMS}	840	980	1120	Volts
Maximum DC blocking voltage	V_{DC}	1200	1400	1600	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)	I_{FSM}	30.0			Amps
Maximum instantaneous forward voltage at 1.0A 3.14A	V_F	1.1 1.3			Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	10.0 100.0			μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	25.0			μs
Maximum forward recovery time (NOTE 2)	t_{fr}	1.0			μs
Typical junction capacitance (NOTE 3)	C_J	15.0			pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$	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) Measured on Tektronix Type "S" recovery plug-in, Tektronix 545 scope or equivalent $I_{RM}=20\text{mA}$, $I_{RM}=2\text{mA}$
- (2) Measured on Tektronix Type "S" recovery plug-in, Tektronix 545 or equivalent, $I_{RM}=20\text{mA}$
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (4) Thermal resistance from junction to ambient at $0.375"$ (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES GI1-1200 AND GI1-1600

