

Silicon Diode

GI502

200V / 3A

DATASHEET

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OEM – General Semiconductor

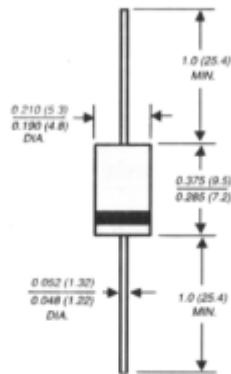
Source: General Semiconductor Databook 1998

GI500 THRU GI510

GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Typical I_R less than $0.1\mu A$
- ◆ Construction utilizes void-free molded plastic technique
- ◆ High current operation of 3.0 Amperes at $T_A=95^\circ C$ with no thermal runaway
- ◆ High temperature soldering guaranteed: $250^\circ C/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body
Terminals: 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 | GI 500 | GI 501 | GI 502 | GI 504 | GI 505 | GI 508 | GI 510 | 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 $T_A=95^\circ C$ | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 100.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage $T_J=25^\circ C$ at 9.4A $T_J=175^\circ C$ | V_F | 1.1 1.0 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ C$ $T_A=100^\circ C$ | I_R | 5.0 50.0 | | | | | | | μA |
| Typical junction capacitance (NOTE 1) | C_J | 28.0 | | | | | | | pF |
| Typical reverse recovery time (NOTE 2) | t_{rr} | 2.0 | | | | | | | μs |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 20.0 5.0 | | | | | | | $^\circ C/W$ |
| Operating junction temperature range | T_J | -50 to +150 | | | | | | | $^\circ C$ |
| Storage temperature range | T_{STG} | -50 to +175 | | | | | | | $^\circ C$ |

NOTES:

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (2) Reverse recovery test conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{r0}=0.25A$
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 0.8 x 0.8" (20 x 20mm) copper heatsinks

RATINGS AND CHARACTERISTIC CURVES GI500 THRU GI510

