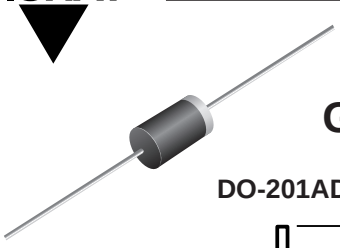
GI500 THRU GI510

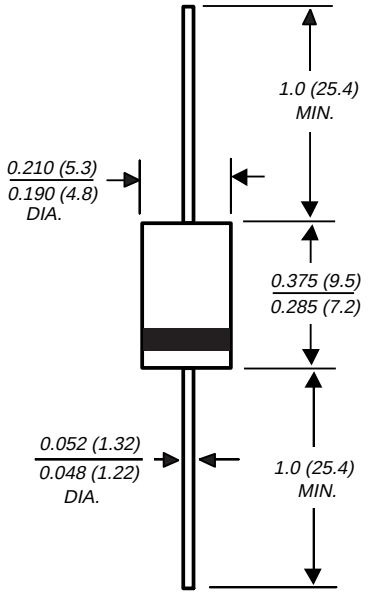
Vishay Semiconductors
formerly General Semiconductor

General Purpose Plastic Rectifier

Reverse Voltage 50 to 1000 V
Forward Current 3.0 A



DO-201AD



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Typical I_R less than 0.1μA
- Construction utilizes void-free molded plastic technique
- High current operation of 3.0 Amperes at T_A=95°C with no thermal runaway
- High temperature soldering guaranteed: 250°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 oz., 1.1 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	GI 500	GI 501	GI 502	GI 504	GI 506	GI 508	GI 510	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=95°C	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Typical thermal resistance (1)	$R_{\Theta JA}$ $R_{\Theta JL}$	20 5.0							°C/W
Operating junction temperature range	T_J	-50 to +150							°C
Storage temperature range	T_{STG}	-50 to +175							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 9.4A	T_J= 25°C T_J=175°C	V_F	1.1 1.0	V
Maximum DC reverse current at rated DC blocking voltage	T_A=25°C T_A=100°C	I_R	5.0 50	μA
Typical reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A		t_{rr}	2.0	μs
Typical junction capacitance at 4.0V, 1MHz		C_J	28	pF

Notes:
(1) 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 (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

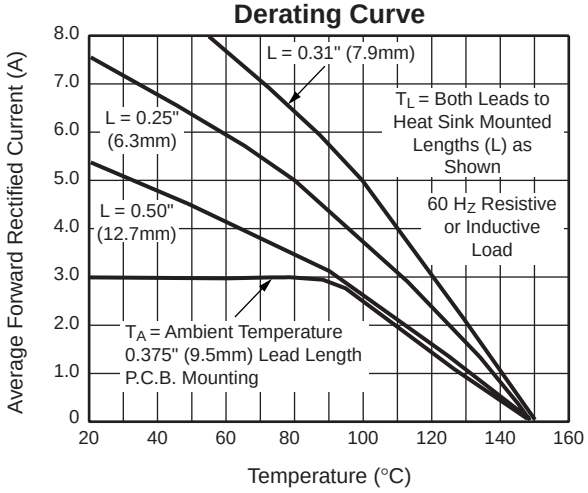


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

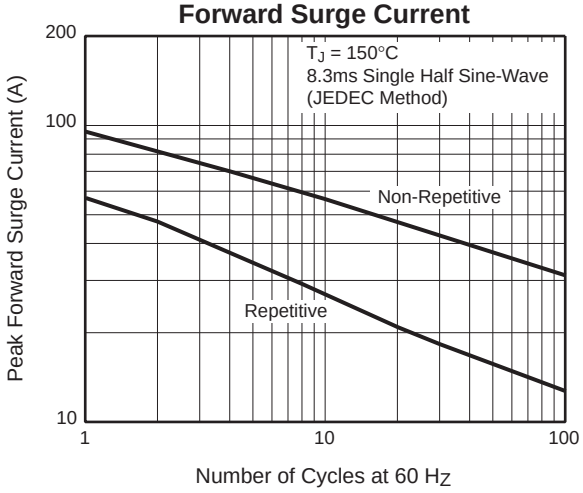


Fig. 3 – Typical Instantaneous Forward Characteristics

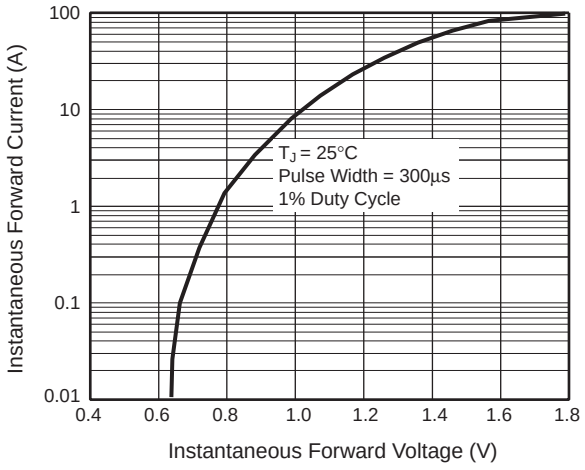


Fig. 4 – Typical Reverse Characteristics

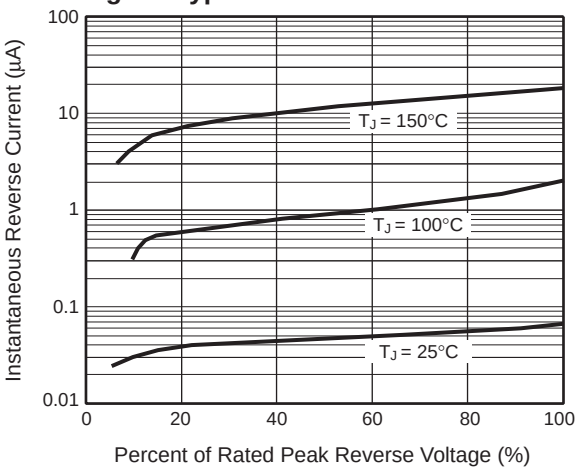


Fig. 5 – Typical Junction Capacitance

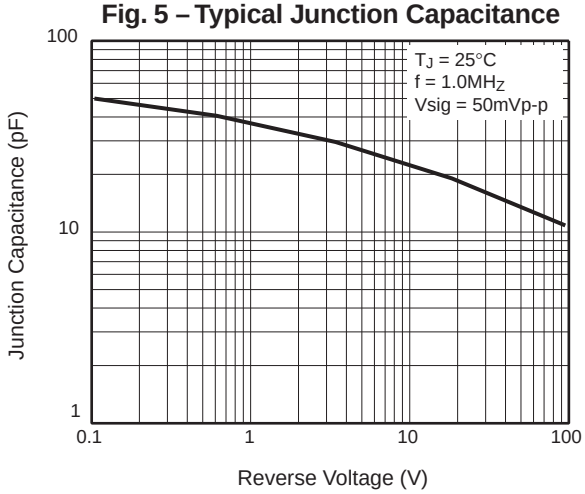


Fig. 6 – Typical Transient Thermal Impedance