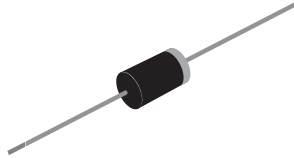


Medium-Switching Plastic Rectifier



DO-201AD

FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC


RoHS
COMPLIANT

TYPICAL APPLICATIONS

For use in fast switching rectification of power supply, inverters, converters and freewheeling diodes for consumer and telecommunication.

(Note: These devices are not Q101 qualified.)

MECHANICAL DATA

Case: DO-201AD, molded epoxy body

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

Polarity: Color band denotes cathode end

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	3.0 A
V_{RRM}	50 V to 800 V
I_{FSM}	100 A
t_{rr}	750 ns
I_R	10 μ A
V_F	1.25 V
$T_J \text{ max.}$	150 °C

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	GI910	GI911	GI912	GI914	GI916	GI917	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 90$ °C	$I_{F(AV)}$	3.0						A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100						A
Operating junction and storage temperature range	T_J, T_{STG}	- 50 to + 150						°C

ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	GI910	GI911	GI912	GI914	GI916	GI917	UNIT
Maximum instantaneous forward voltage	3.0 A 9.4 A	$T_J = 175$ °C	V_F			1.25 1.10				V
Maximum DC reverse current at rated DC blocking voltage		$T_A = 25$ °C $T_A = 100$ °C	I_R			10 300				μ A

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)									
PARAMETER	TEST CONDITIONS	SYMBOL	GI910	GI911	GI912	GI914	GI916	GI917	UNIT
Maximum reverse recovery time	$I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$, $di/dt = 50\text{ A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$	t_{rr}			750				ns
Maximum reverse recovery time	$I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$, $di/dt = 50\text{ A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$	$I_{RM(REC)}$			2.0				A
Typical junction capacitance	4.0 V, 1 MHz	C_J			28				pF

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	GI910	GI911	GI912	GI914	GI916	GI917	UNIT	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$			22				$^\circ\text{C}/\text{W}$	
				8.0					

Note:

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, with both leads equally heat sink

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GI916-E3/54	1.1	54	1400	13" diameter paper tape and reel
GI916-E3/73	1.1	73	1000	Ammo pack packaging

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

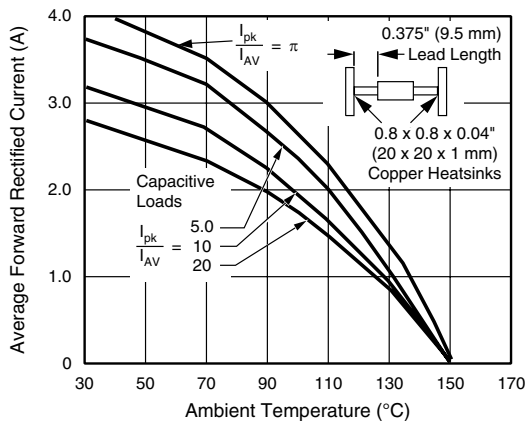


Figure 1. Forward Current Derating Curves

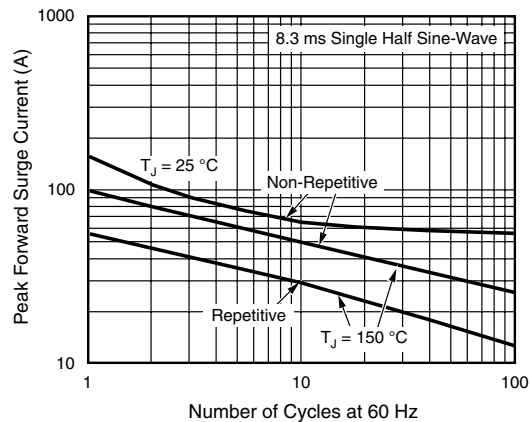


Figure 2. Maximum Peak Forward Surge Current

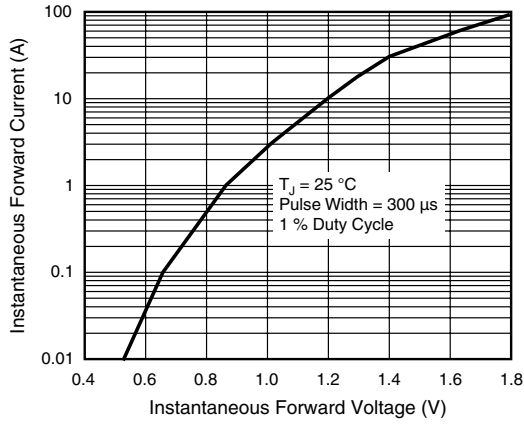


Figure 3. Typical Instantaneous Forward Characteristics

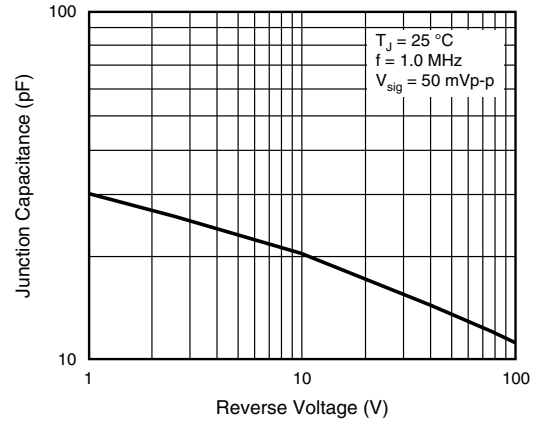


Figure 5. Typical Junction Capacitance

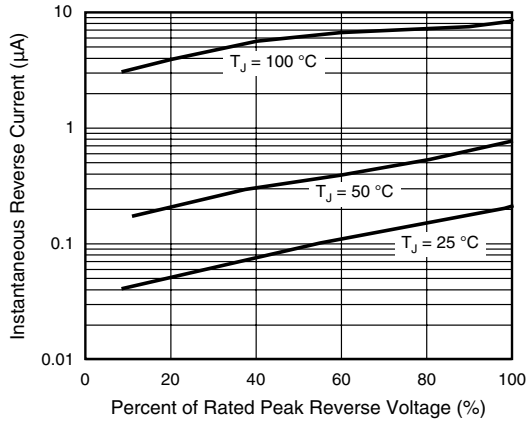
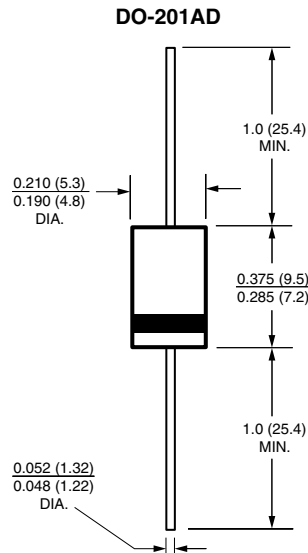


Figure 4. Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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