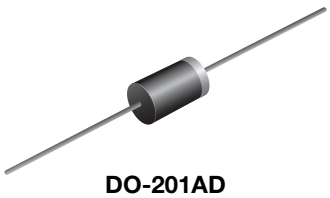
Medium Switching Plastic Rectifier



DO-201AD

FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb e3 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 AEC-Q101 qualified.

MECHANICAL DATA

Case: DO-201AD, molded epoxy body
Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS compliant, commercial grade

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
E3 suffix 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 µA
V_F	1.25 V
T_J 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	T_A = 25 °C	V_F	1.25						V
	9.4 A	T_J = 175 °C		1.10						
Maximum DC reverse current at rated DC blocking voltage		T_A = 25 °C	I_R	10						μA
		T_A = 100 °C		300						
Maximum reverse recovery time	I_F = 1.0 A, V_R = 30 V, dI/dt = 50 A/μs, I_{rr} = 10 % I_{RM}		t_{rr}	750						ns
Maximum reverse recovery current	I_F = 1.0 A, V_R = 30 V, dI/dt = 50 A/μs, 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 °C unless otherwise noted)									
PARAMETER	**SYMBOL**	**GI910**	**GI911**	**GI912**	**GI914**	**GI916**	**GI917**	**UNIT**
Typical thermal resistance	$R_{\theta JA}$ (1)	22						°C/W
	$R_{\theta JL}$ (1)	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 °C unless otherwise noted)

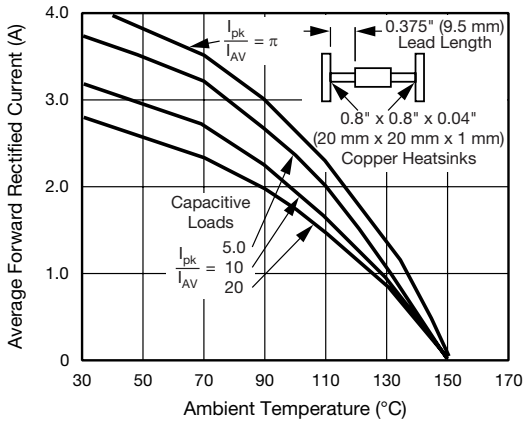


Fig. 1 - Forward Current Derating Curves

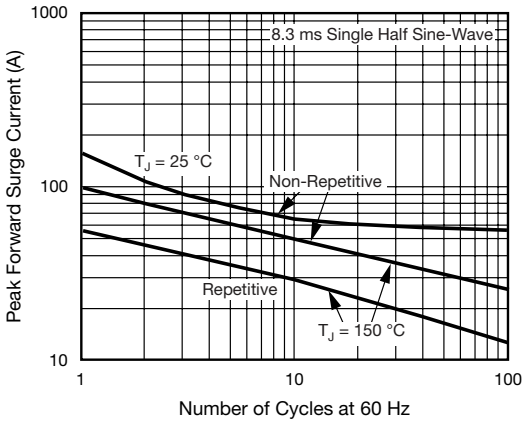


Fig. 2 - Maximum Peak Forward Surge Current

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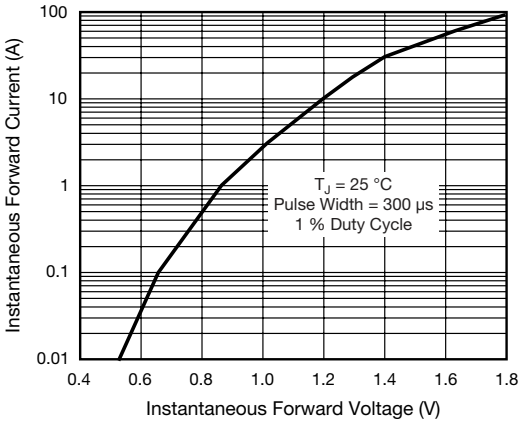


Fig. 3 - Typical Instantaneous Forward Characteristics

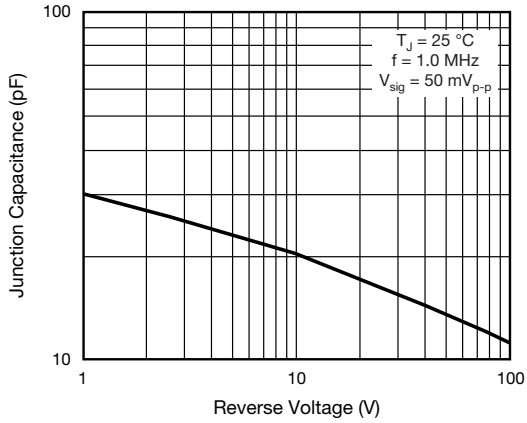


Fig. 5 - Typical Junction Capacitance

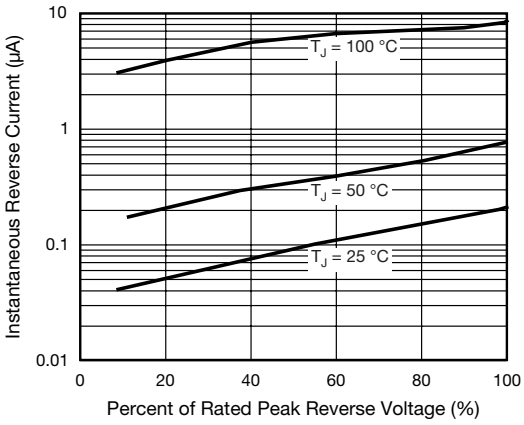
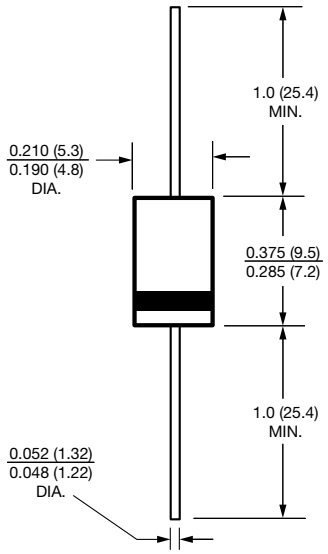


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-201AD



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