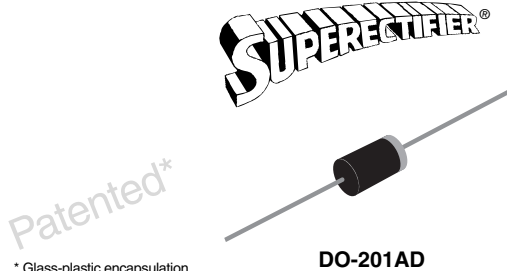



Glass Passivated Junction Fast Switching Rectifier



* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602, and brazed-lead assembly by Patent No. 3,930,306

DO-201AD
FEATURES

- Superrectifier structure for High Reliability condition 
- Cavity-free glass-passivated junction
- Fast switching for high efficiency
- Low leakage current, typical I_R less than $0.2 \mu A$
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder Dip $260^\circ C$, 40 seconds
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TYPICAL APPLICATIONS

For general purpose of medium frequency rectification.

MECHANICAL DATA

Case: DO-201AD, molded epoxy over glass body

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade, HE3 suffix for high reliability grade (AEC Q101 qualified)

Polarity: Color band denotes cathode end

MAJOR RATINGS AND CHARACTERISTICS

$I_{F(AV)}$	2.5 A
V_{RRM}	50 V to 1000 V
I_{FSM}	100 A
t_{rr}	150 ns, 250 ns, 500 ns
I_R	$5.0 \mu A$
V_F	1.3 V
$T_j \text{ max.}$	$175^\circ C$

MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise noted)

PARAMETER	SYMBOL	RGP25A	RGP25B	RGP25D	RGP25G	RGP25J	RGP25K	RGP25M	UNIT
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" (9.5 mm) lead length at $T_A = 55^\circ C$	$I_{F(AV)}$	2.5							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length at $T_A = 55^\circ C$	$I_{R(AV)}$	100							μA
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175							$^\circ C$



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	RGP25A	RGP25B	RGP25D	RGP25G	RGP25J	RGP25K	RGP25M	UNIT
Maximum instantaneous forward voltage	at 2.5 A	V_F	1.3							V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	I_R	5.0 200							μA
Maximum reverse recovery time	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $t_{rr} = 0.25\text{ A}$	t_{rr}	150					250	500	ns
Typical junction capacitance	at 4.0 V, 1 MHz	C_J	60							pF

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	SYMBOL	RGP25A	RGP25B	RGP25D	RGP25G	RGP25J	RGP25K	RGP25M	UNIT	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	20								$^\circ\text{C/W}$

Note:

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

ORDERING INFORMATION				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
RGP25J-E3/54	1.28	54	1400	13" Diameter Paper Tape & Reel
RGP25J-E3/73	1.28	73	1000	Ammo Pack Packaging

RATINGS AND CHARACTERISTICS CURVES

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

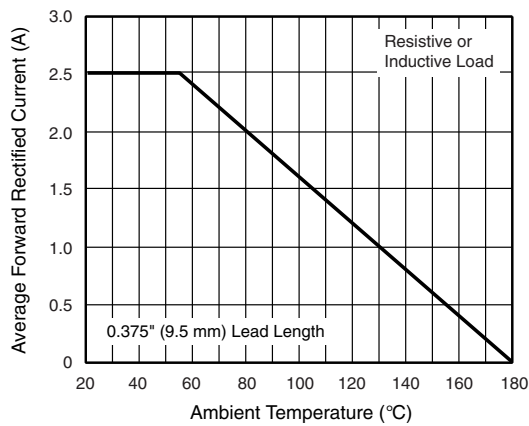


Figure 1. Forward Current Derating Curve

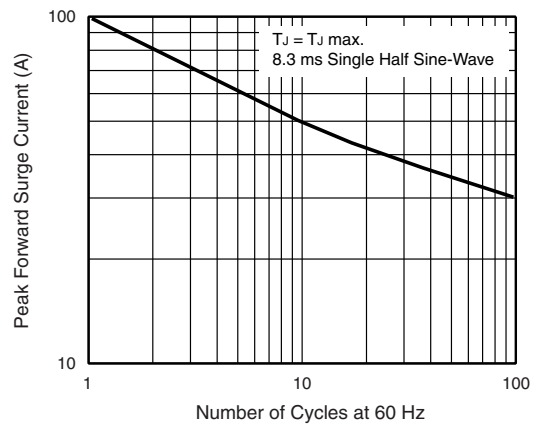


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

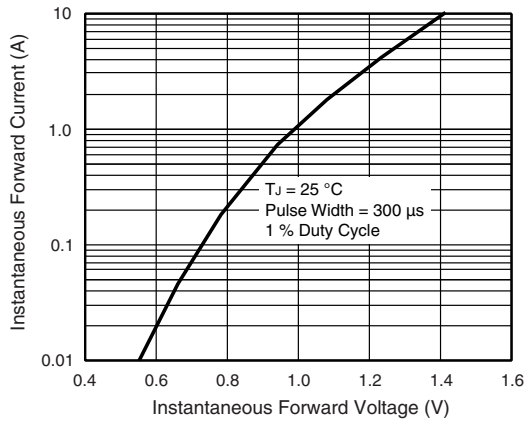


Figure 3. Typical Instantaneous Forward Characteristics

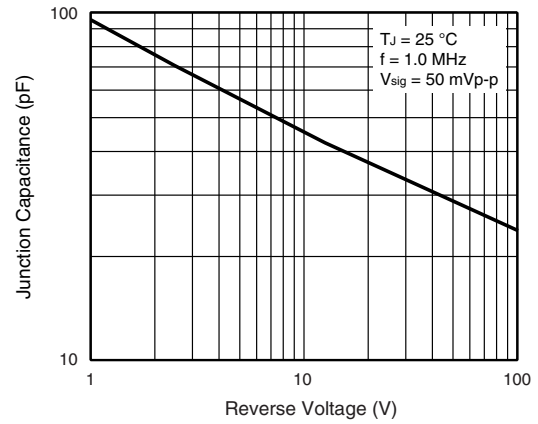


Figure 5. Typical Junction Capacitance

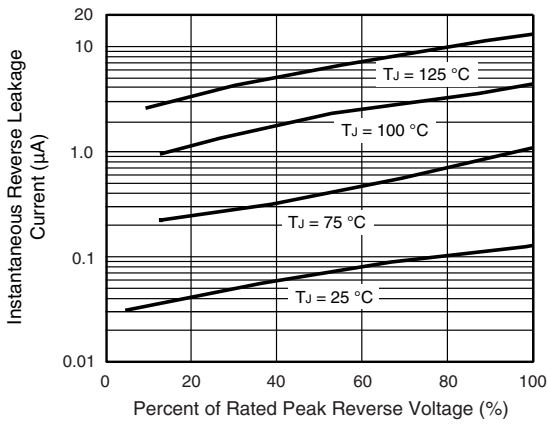
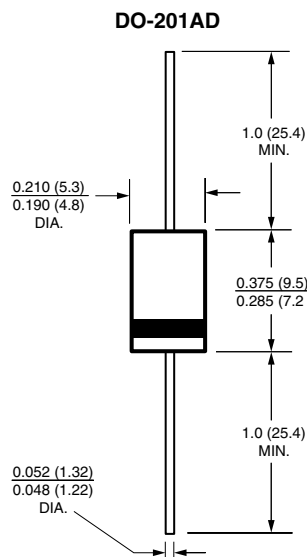


Figure 4. Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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