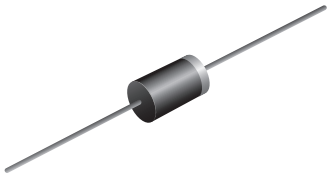
RGP25A, RGP25B, RGP25D, RGP25G, RGP25J, RGP25K,

Glass Passivated Junction Fast Switching Plastic Rectifier

SUPERECTIFIER®



DO-201AD

FEATURES

- Superectifier 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 µA
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	2.5 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V
I_{FSM}	100 A
t_{rr}	150 ns, 250 ns, 500 ns
I_R	5.0 µA
V_F	1.3 V
T_J max.	175 °C
Package	DO-201AD
Diode variation	Single die

TYPICAL APPLICATIONS

For general purpose of medium frequency rectification.

MECHANICAL DATA

Case: DO-201AD, molded epoxy over glass 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

MAXIMUM RATINGS (T_A = 25 °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 °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 °C	$I_{R(AV)}$	100							µA
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							°C

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

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

Note

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, PCB mounted

ORDERING INFORMATION (Example)				
PREFERRED P/N	**UNIT WEIGHT (g)**	**PREFERRED PACKAGE CODE**	**BASE QUANTITY**	**DELIVERY MODE**
RGP25J-E3/54	1.28	54	1400	13" diameter paper tape and reel
RGP25J-E3/73	1.28	73	1000	Ammo pack packaging

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

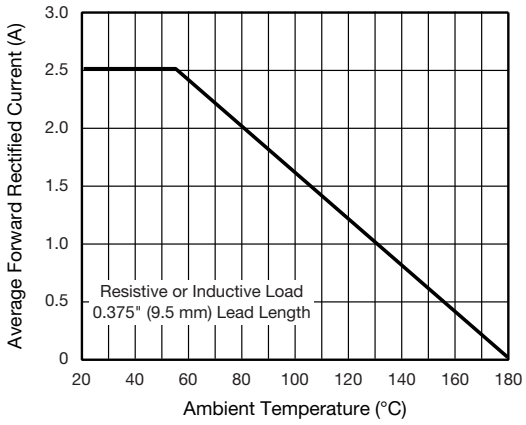


Fig. 1 - Forward Current Derating Curve

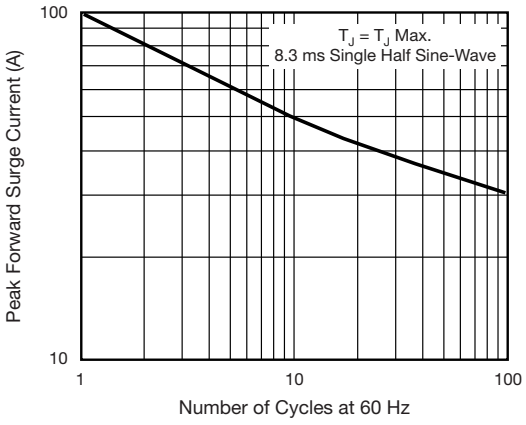


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

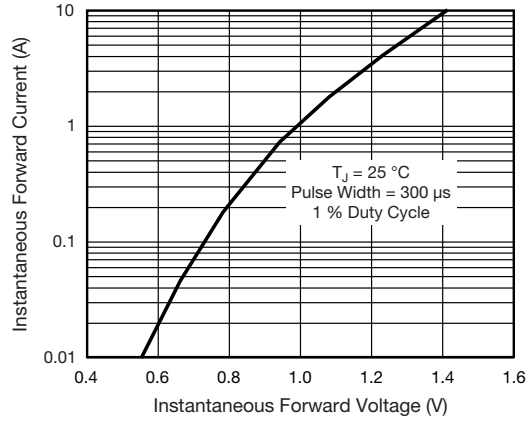


Fig. 3 - Typical Instantaneous Forward Characteristics

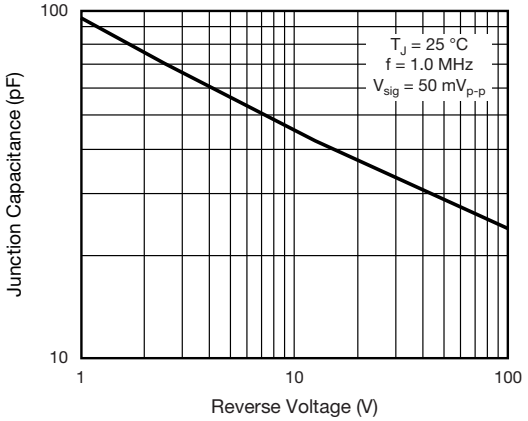


Fig. 5 - Typical Junction Capacitance

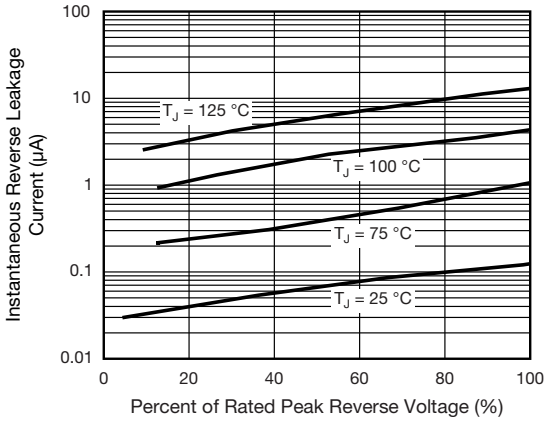
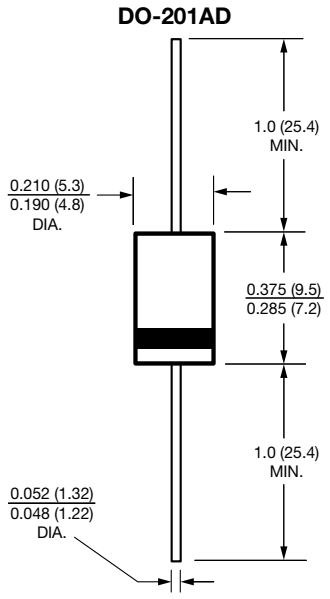


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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