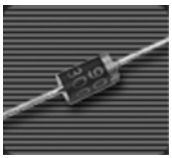
RGP30A thru RGP30M

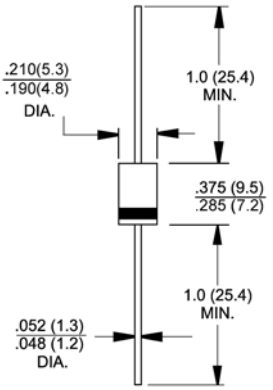
Glass Passivated Junction Fast Switching Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- High temperature metallurgically bonded construction
- 3.0 Ampere operation at T_A=55°C with no thermal runaway
- Typical I_R less < 0.2µA
- Fast switching for high efficiency
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



DO-201AD



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC DO-201AD, molded plastic over glass body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.042 ounce, 1.195 grams

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	RGP 30A	RGP 30B	RGP 30D	RGP 30G	RGP 30J	RGP 30K	RGP 30M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=55°C	$I_{F(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125.0							Amps
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at T_A=55°C	$I_{R(AV)}$	100							uA
Maximum instantaneous forward voltage at 3.0A	V_F	1.3							Volts
Maximum DC reverse current @T_A=25°C at rated DC blocking voltage @T_A=125°C	I_R	5.0 100							uA
Maximum reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	150				250	500		uS
Typical junction capacitance at 4.0V, 1MHz	C_J	60.0							pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	20.0							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

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

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

Fig. 1 — Forward Current Derating Curve

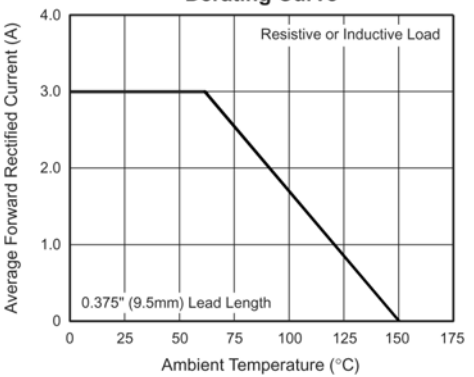


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

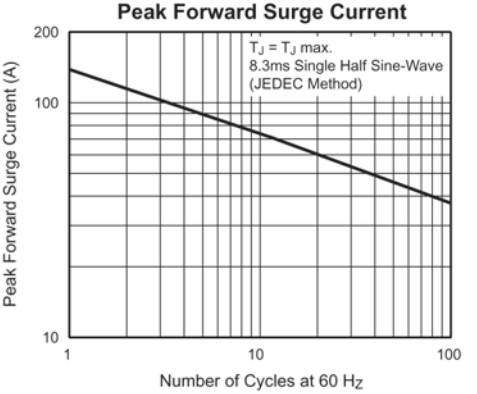


Fig. 3 — Typical Instantaneous Forward Characteristics

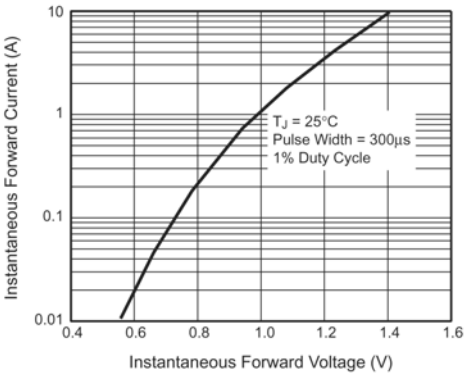


Fig. 4 — Typical Reverse Characteristics

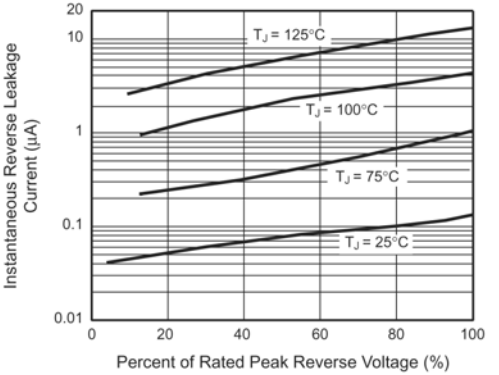


Fig. 5 — Typical Junction Capacitance