



# RGP30A THRU RGP30M

3.0 AMPS. Glass Passivated Junction Fast Recovery Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
3.0 Amperes

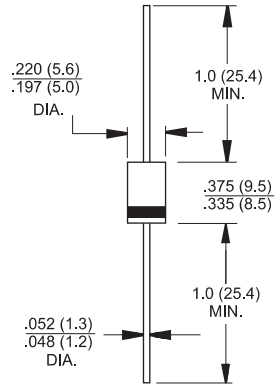
## Features

- ✦ High temperature metallurgically bonded constructed
- ✦ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✦ Glass passivated cavity-free junction
- ✦ Capable of meeting environmental standards of MIL-S-19500
- ✦ 3.0 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- ✦ Typical  $I_R$  less than 0.2 uA
- ✦ High temperature soldering guaranteed:  
350°C / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs., (2.3kg) tension
- ✦ Fast switching for high efficiency

## Mechanical Data

- ✦ Case: JEDEC DO-201AD molded plastic over glass body
- ✦ Lead: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- ✦ Polarity: Color band denotes cathode end
- ✦ Mounting position: Any
- ✦ Weight: 0.048 ounce, 1.28 grams

## DO-201AD



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	RGP 30A	RGP 30B	RGP 30D	RGP 30G	RGP 30J	RGP 30K	RGP 30M	Units
Maximum Recurrent 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 .375" (9.5mm) Lead Length @ $T_A = 55^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	125							A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	5.0 100							uA uA
Maximum Reverse Recovery Time ( Note 1 ) $T_J=25^\circ\text{C}$	$T_{rr}$	150				250	500		nS
Typical Junction Capacitance ( Note 2 )	$C_j$	40							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	30							$^\circ\text{C}/\text{W}$
Operating & Storage Temperature Range	$T_J, T_{STG}$	-65 to + 175							$^\circ\text{C}$

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$  Recover to 0.25A.

2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0 Volts.

3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (RGP30A THRU RGP30M)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

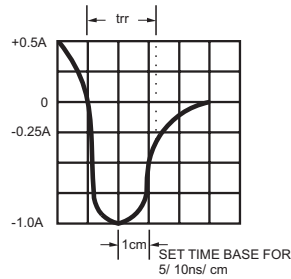
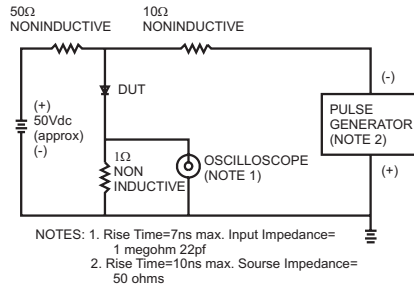


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

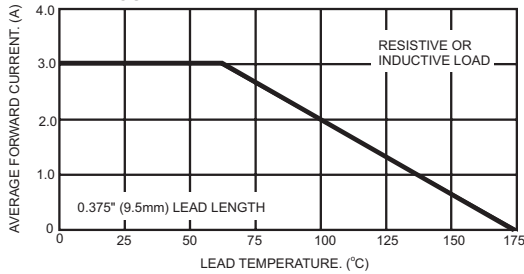


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

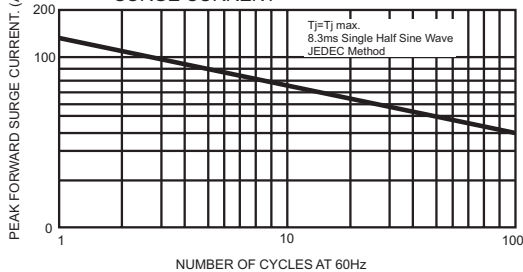


FIG.4- TYPICAL JUNCTION CAPACITANCE

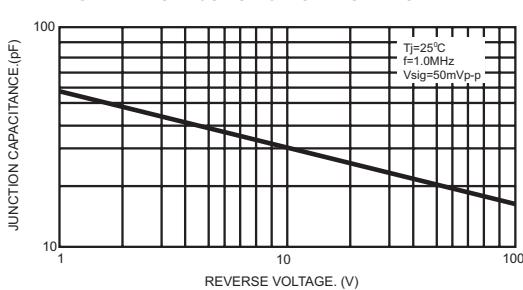


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

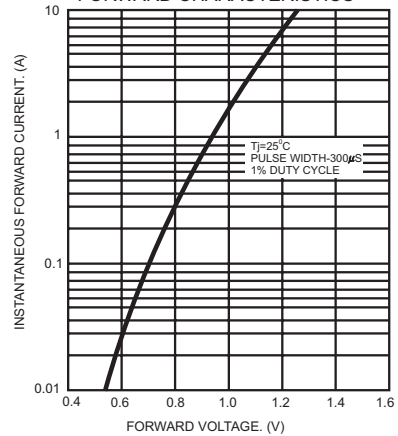


FIG.6- TYPICAL REVERSE CHARACTERISTICS

