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# RGP20A THRU RGP20M

**2.0 Amp Glass  
Passivated Junction  
Fast Recovery  
Rectifiers  
50 to 1000 Volts**

## Features

- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- 2.0 amperes operation at  $T_A=55^\circ\text{C}$  and with no thermal runaway.
- Typical  $I_R$  less than 0.2uA

## Maximum Ratings

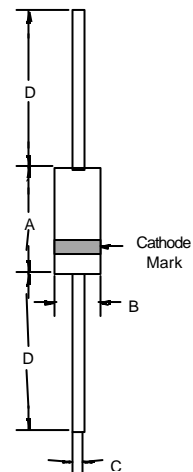
- Operating Temperature:  $-55^\circ\text{C}$  to  $+150^\circ\text{C}$
- Storage Temperature:  $-55^\circ\text{C}$  to  $+150^\circ\text{C}$
- Typical Thermal Resistance:  $22^\circ\text{C/W}$  Junction to Ambient

Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RGP20A	50V	35V	50V
RGP20B	100V	70V	100V
RGP20D	200V	140V	200V
RGP20G	400V	280V	400V
RGP20J	600V	420V	600V
RGP20K	800V	560V	800V
RGP20M	1000V	700V	1000V

## Electrical Characteristics @ $25^\circ\text{C}$ Unless Otherwise Specified

Maximum Average Forward Current	$I_{F(AV)}$	2.0 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	80A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.3V	$I_{FM} = 2.0\text{A};$ $T_A=25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0uA 200uA	$T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$
Maximum Reverse Recovery Time RGP20A-20G RGP20J RGP20K-20M	$T_{rr}$	150nS 250nS 500nS	$I_f=0.5\text{A}, I_R=1.0\text{A},$ $I_r=0.25\text{A}$
Typical Junction Capacitance	$C_J$	35pF	Measured at $f=1.0\text{MHz}$ $V_R=4.0\text{V}$

## DO-201AE

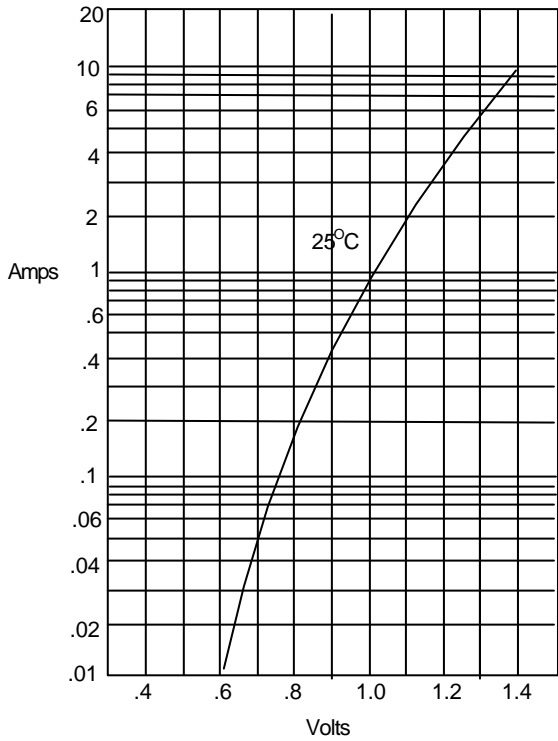


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.038	.042	0.96	1.06	
D	1.000	---	25.40	---	

# RGP20A thru RGP20M

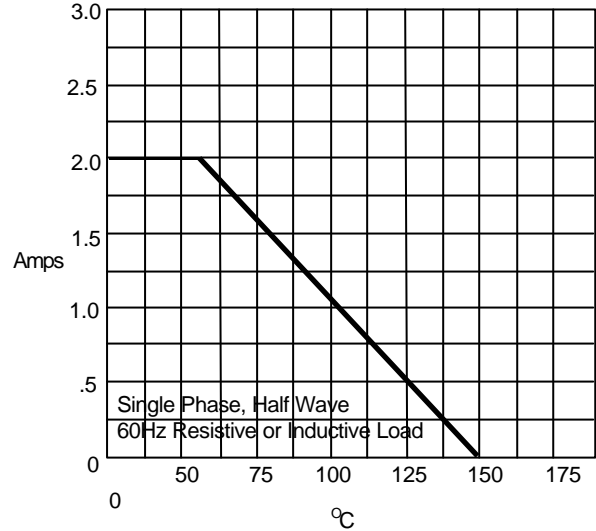


Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

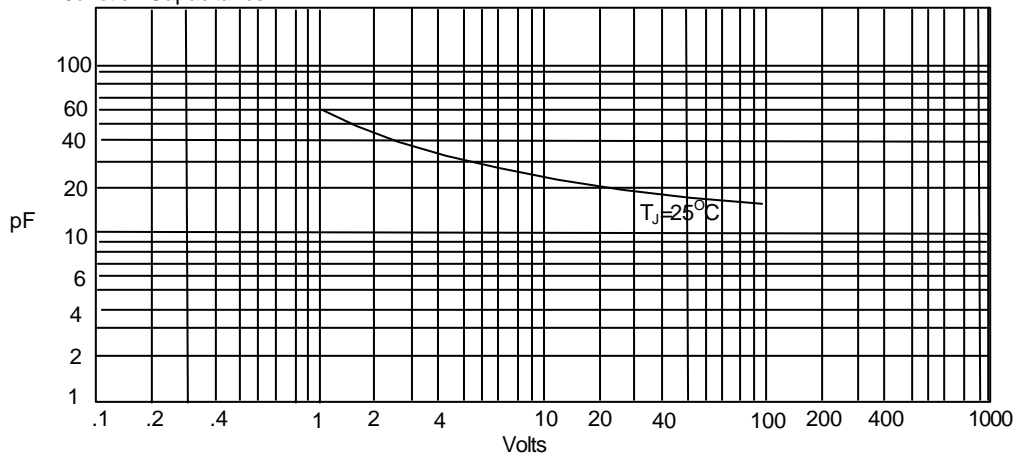
Figure 2  
Forward Derating Curve



Single Phase, Half Wave  
60 Hz Resistive or Inductive Load

Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance

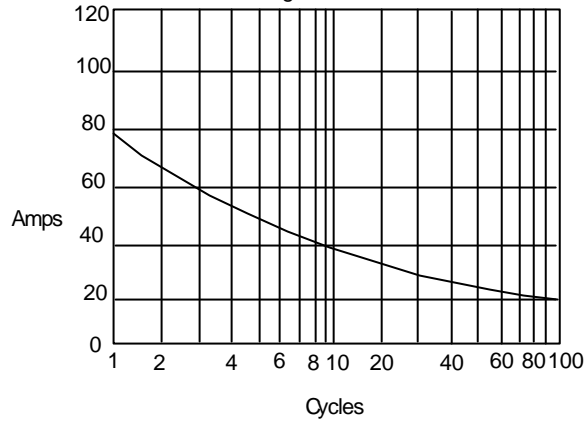


Junction Capacitance - pF versus  
Reverse Voltage - Volts

# RGP20A thru RGP20M

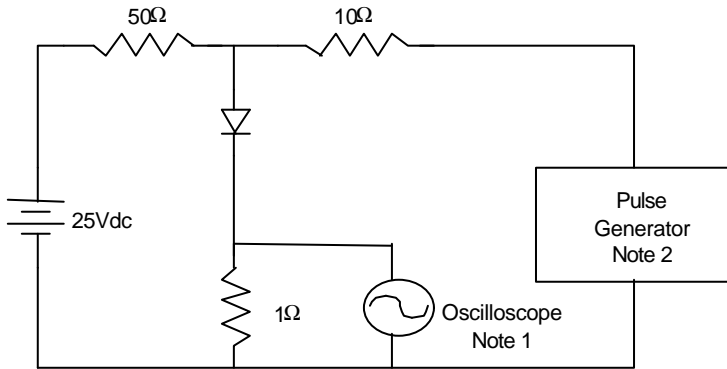


Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles

Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

1. Rise Time = 7ns max.  
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.  
Source impedance = 50 ohms
3. Resistors are non-inductive

