



Micro Commercial Components  
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# RGP30A THRU RGP30M

## Features

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

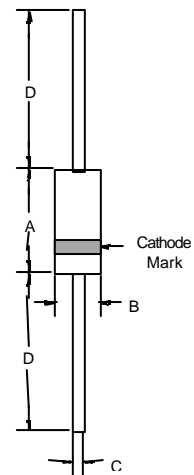
**3.0 Amp Glass  
 Passivated Junction  
 Fast Recovery  
 Rectifiers  
 50 to 1000 Volts**

## 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:  $25^\circ\text{C/W}$  Junction to Ambient

## DO-201AD

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RGP30A	50V	35V	50V
RGP30B	100V	70V	100V
RGP30D	200V	140V	200V
RGP30G	400V	280V	400V
RGP30J	600V	420V	600V
RGP30K	800V	560V	800V
RGP30M	1000V	700V	1000V



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

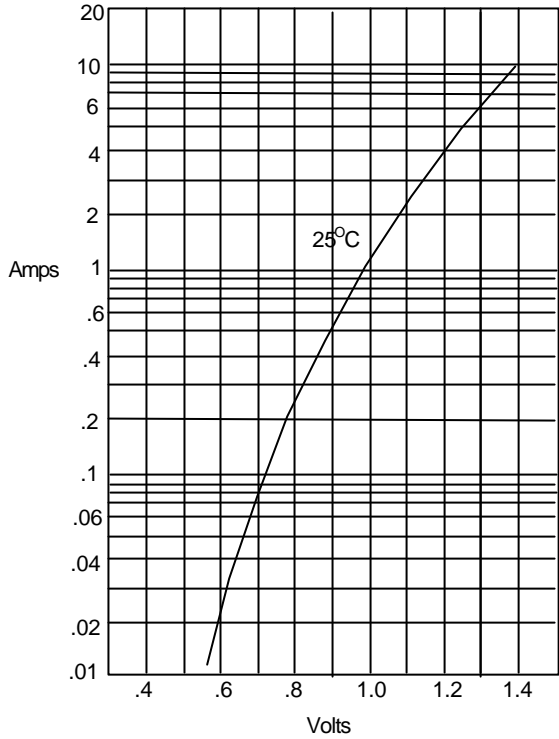
Maximum Average Forward Current	$I_{F(AV)}$	3.0 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	125A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.3V	$I_F = 3.0A$ ;
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0uA 100uA	$T_A=25^\circ\text{C}$ $T_A=150^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	150nS 250nS 500nS	$T_J = 25^\circ\text{C}$ $I_F=0.5A$ $I_R=1.0A$ $I_{RR}=0.25A$
Typical Junction Capacitance	$C_J$	60pF	Measured at 1.0MHz, $V_R=4.0V$

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.062	1.20	1.30	
D	1.000	---	25.40	---	

# RGP30A thru RGP30M

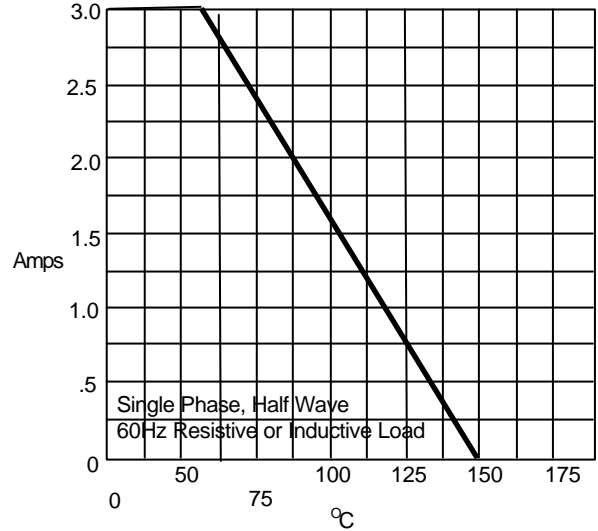


Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

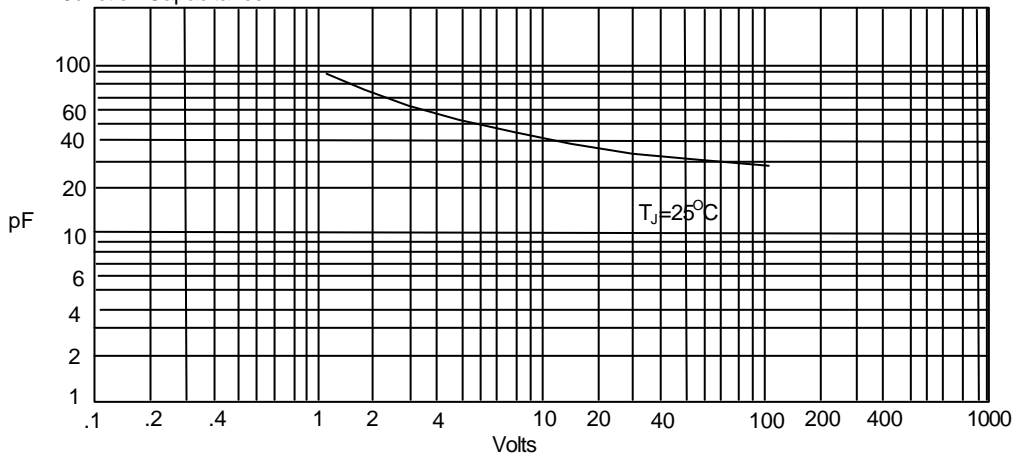
Figure 2  
Forward Derating Curve



Single Phase, Half Wave  
60Hz Resistive or Inductive Load

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

Figure 3  
Junction Capacitance

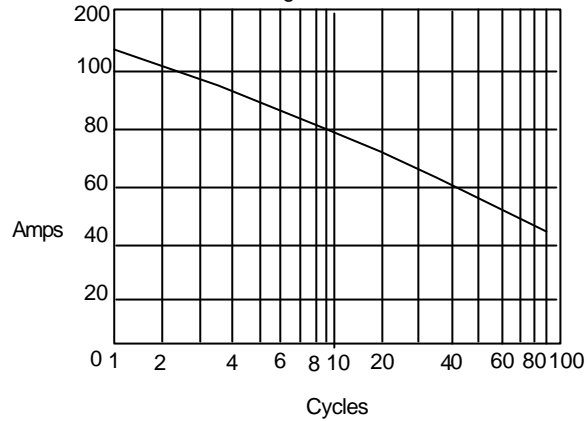


Junction Capacitance - pF versus  
Reverse Voltage - Volts

# RGP30A thru RGP30M

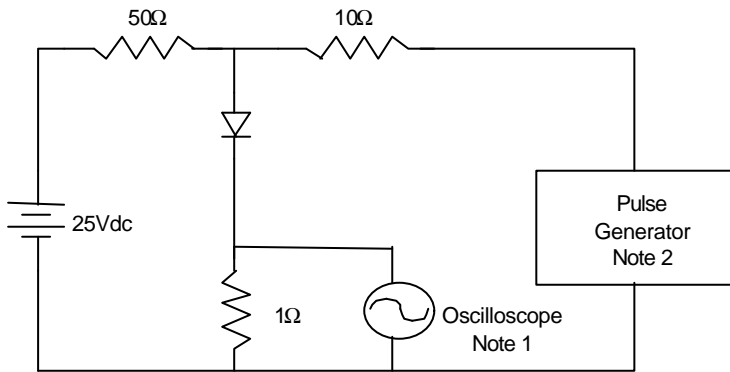


Figure 4  
Peak Forward Surge Current



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

