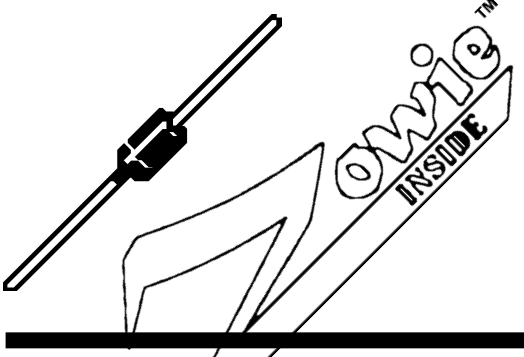
Semiconductor

Preliminary Data Sheet

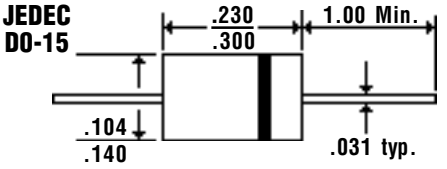
2.0 Amp Glass Passivated Sintered Fast Switching Rectifiers

RGPZ20A . . . 20M Series

Description



Mechanical Dimensions



Features

- **LOWEST COST FOR GLASS SINTERED FAST SWITCHING CONSTRUCTION**
- **LOWEST V_F FOR GLASS SINTERED FAST SWITCHING CONSTRUCTION**
- **TYPICAL I_R < 100 nAmps**
- **2.0 AMP OPERATION @ T_A = 55°C, WITH NO THERMAL RUNAWAY**
- **SINTERED GLASS CAVITY-FREE JUNCTION**

Electrical Characteristics @ 25°C.	***RGPZ20A . . . RGP20M Series***							**Units**
Maximum Ratings	**20A**	**20B**	**20D**	**20G**	**20J**	**20K**	**20M**	
Peak Repetitive Reverse Voltage...V_{RRM}	50	100	200	400	600	800	1000	Volts
RMS Reverse Voltage...$V_{R(rms)}$	35	70	140	280	420	560	700	Volts
DC Blocking Voltage...V_{DC}	50	100	200	400	600	800	1000	Volts
Average Forward Rectified Current...$I_{F(av)}$ Current 3/8" Lead Length @ T_A = 55°C	..... 2.0							Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} 8.3mS, ½ Sine Wave Superimposed on Rated Load	..... 80							Amps
Forward Voltage @ Rated Forward Current and 25°C...V_F	..... 1.2							Volts
Full Load Reverse Current...I_R(av) Full Cycle Average @ T_A = 55°C	..... 100							µAmps
DC Reverse Current...$I_{R(max)}$ @ Rated DC Blocking Voltage T_A = 25°C	..... 5.0							µAmps
T_A = 150°C	..... 200							µAmps
Typical Junction Capacitance...C_J *(Note 1)*	..... 35							pF
Maximum Thermal Resistance...$R_{\theta JA}$ *(Note 2)*	..... 22							°C/W
Maximum Reverse Recovery Time...t_{RR} *(Note 3)*	< ..... 150 ..... >				< ..... 250 ..... >			nS
Operating & Storage Temperature Range...T_J, T_{STRG}	..... -65 to 175							°C

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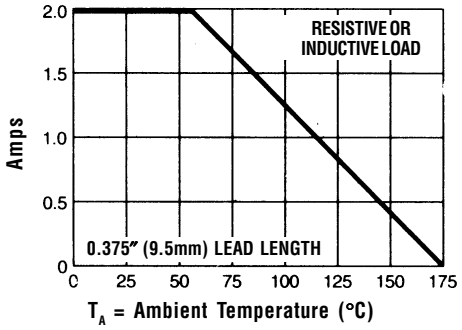
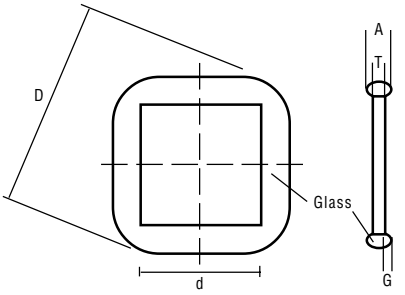
Forward Current Derating Curve



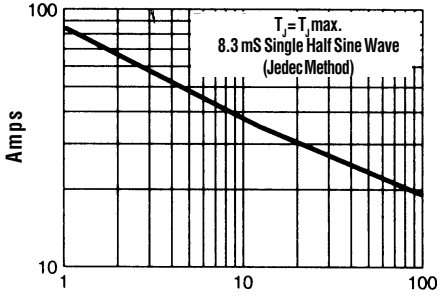
T_A = Ambient Temperature (°C)

Die Dimension (mils)



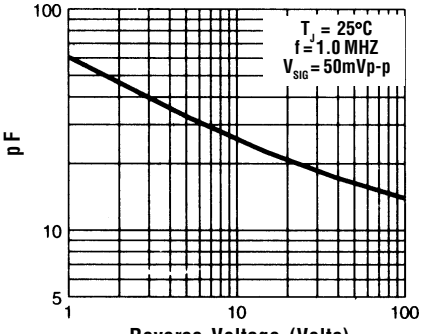
D	d	G	T	A
96	64	2±0.5	11	15±1

Non-Repetitive Peak Forward Surge Current



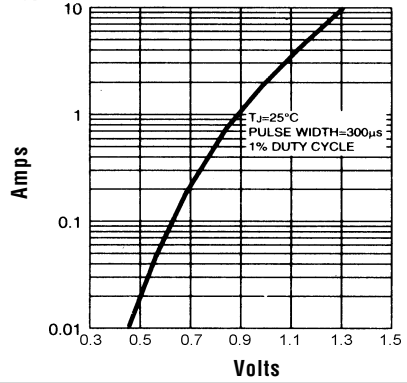
Number of Cycles @ 60 HZ

Typical Junction Capacitance



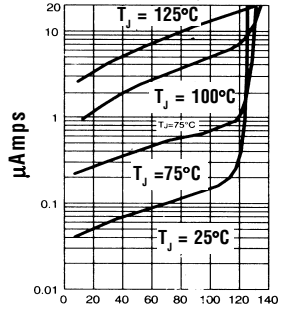
Reverse Voltage (Volts)

Typical Instantaneous Forward Characteristics



Volts

Typical Reverse Characteristics



Percent of Rated Peak Voltage

Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 HZ Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

NOTES: 1. Measured @ 1 MHZ and applied reverse voltage of 4.0V.
2. Thermal Resistance from Junction to Ambient at 3/8" Lead Length, P.C. Board Mounted.
3. Reverse Recovery Condition I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.