FCI Semiconductor

Preliminary Data Sheet

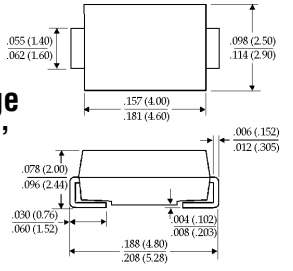
1.0 Amp Glass Passivated Sintered Rectifiers

GFZ10A . . . 10Q Series

Description

Mechanical Dimensions

Package "SMA"



Dimensions in inches and (millimeters)

Features

- **LOWEST COST FOR GLASS SINTERED CONSTRUCTION**
- **LOWEST V_F FOR GLASS SINTERED CONSTRUCTION**
- **TYPICAL I_R < 100 nAmps**
- **1.0 AMP OPERATION @ T_A = 135°C, WITH NO THERMAL RUNAWAY**
- **SINTERED GLASS CAVITY-FREE JUNCTION**

Electrical Characteristics @ 25°C.	***GFZ10A . . . 10Q Series***									**Units**
Maximum Ratings	**10A**	**10B**	**10D**	**10G**	**10J**	**10K**	**10M**	**10N**	**10Q**	
Peak Repetitive Reverse Voltage...V_{RRM}	50	100	200	400	600	800	1000	1100	1200	Volts
RMS Reverse Voltage...$V_{R(rms)}$	35	70	140	280	420	560	700	770	840	Volts
DC Blocking Voltage...V_{DC}	50	100	200	400	600	800	1000	1100	1200	Volts
Average Forward Rectified Current...$I_{F(av)}$ @ T_A = 135°C *(Note 2)*	1.0									Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} ½ Sine Wave Superimposed on Rated Load	30									Amps
Forward Voltage @ 1.0A...V_F	1.1					1.2				Volts
Full Load Reverse Current...I_R(av) Full Cycle Average @ T_A = 75°C	30									µAmps
DC Reverse Current...$I_{R(max)}$ @ Rated DC Blocking Voltage T_A = 25°C	5.0									µAmps
T_A = 150°C	100									µAmps
Typical Junction Capacitance...C_J *(Note 1)*	8.0					7.0				pF
Typical Thermal Resistance...$R_{\theta JA}$ *(Note 2)*	45									°C/W
Typical Reverse Recovery Time...t_{RR} *(Note 3)*	2.0									µS
Operating & Storage Temperature Range...T_J, T_{STRG}	-65 to 175									°C

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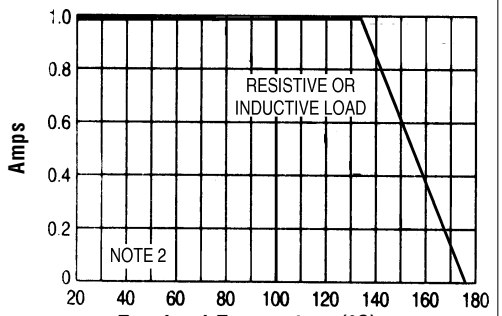
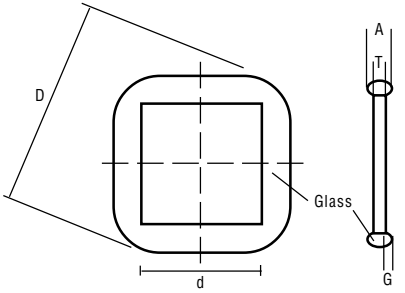
Forward Current Derating Curve

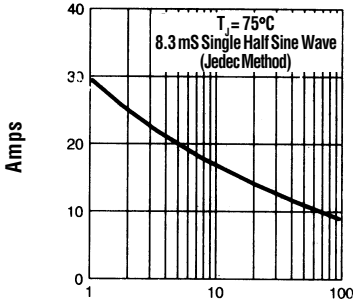


Die Dimension (mils)

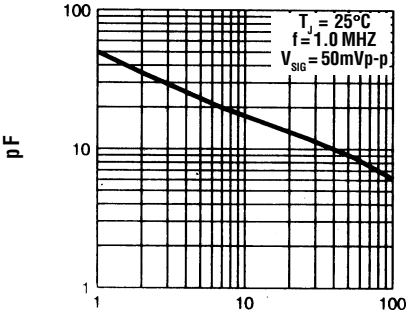


D	d	G	T	A
68	43	2±0.5	11	15±1

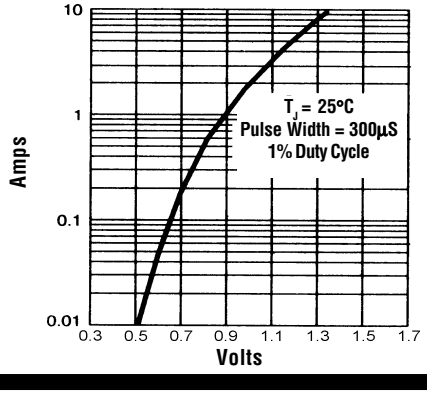
Non-Repetitive Peak Forward Surge Current



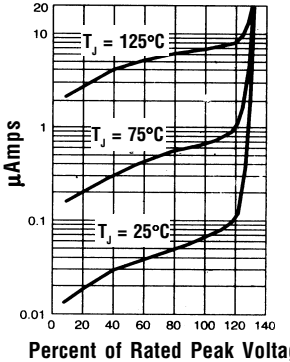
Typical Junction Capacitance



Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



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. 5.0mm² (.013mm thick) land areas.
3. Reverse Recovery Condition I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.