



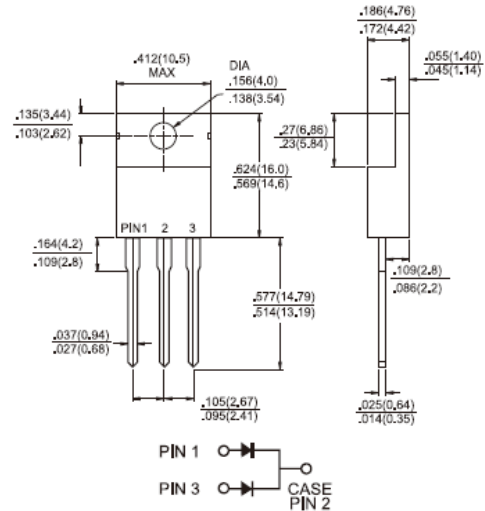
SF1001G- SF1008G
10.0AMPS. Glass Passivated Super Fast Rectifiers
TO-220AB

Features

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

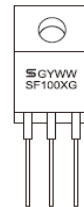
Mechanical Data

- ✧ Case: TO-220AB Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds 16" (4.06mm) from case.
- ✧ Weight: 1.82 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SF100XG = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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	SF 1001G	SF 1002G	SF 1003G	SF 1004G	SF 1005G	SF 1006G	SF 1007G	SF 1008G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10								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 (Note 1) @ 5 A	V_F	0.975			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	I_R	10				400				uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35								nS
Typical Junction Capacitance (Note 3)	C_j	70				50				pF
Typical Thermal Resistance	$R_{\theta JC}$	3.5								°C/W
Operating Temperature Range	T_J	- 65 to + 150								°C
Storage Temperature Range	T_{STG}	- 65 to + 150								°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle
 Note 2: Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$.
 Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES (SF1001G THRU SF1008G)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

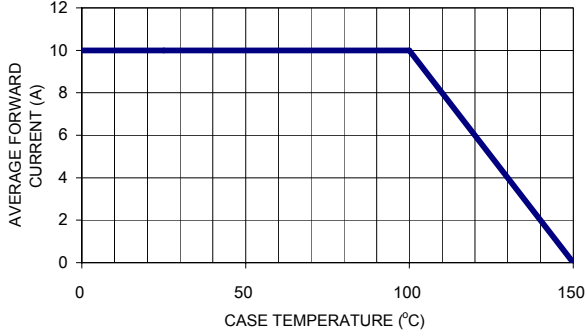


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

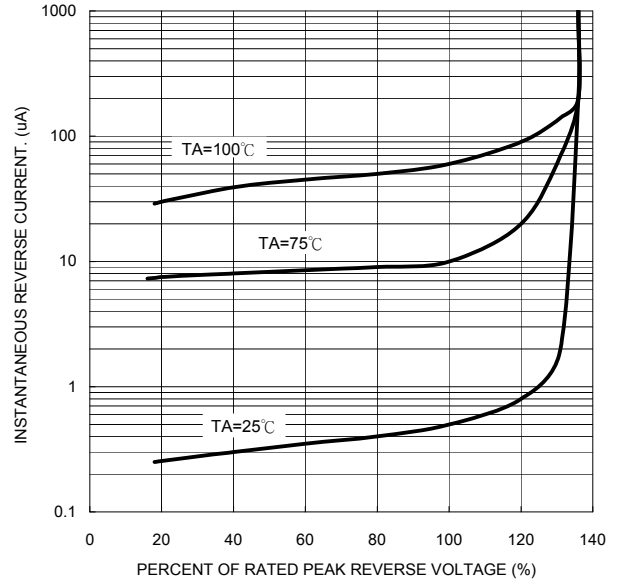


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

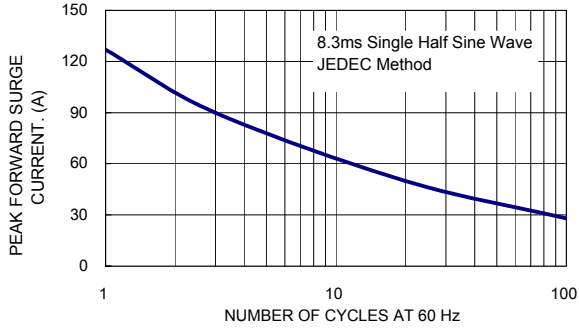


FIG. 5- TYPICAL FORWARD CHARACTERISTICS PER LEG

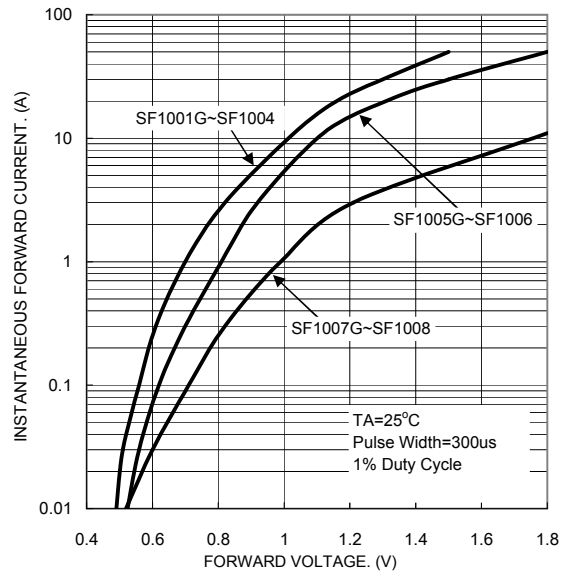


FIG. 4- TYPICAL JUNCTION CAPACITANCE PER LEG

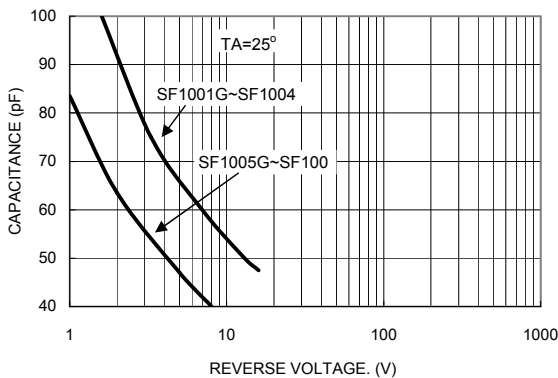
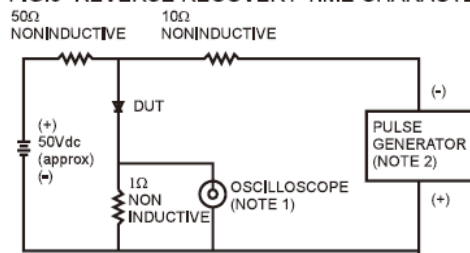


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf
 2. Rise Time=10ns max. Source Impedance=50 ohms

