



# SFAF2001G - SFAF2008G

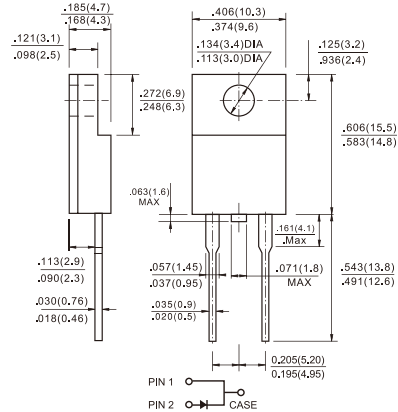
Isolated 20.0 AMPS.  
Glass Passivated Super Fast Rectifiers  
ITO-220AC

## Features

- ✧ UL Recognized File # E-326243
- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss.
- ✧ For use in low voltage, high frequency inventor, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

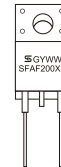
## Mechanical Data

- ✧ Cases: ITO-220AC 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: 1.70 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SFAF200XG = 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	SFAF 2001G	SFAF 2002G	SFAF 2003G	SFAF 2004G	SFAF 2005G	SFAF 2006G	SFAF 2007G	SFAF 2008G	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current @T <sub>C</sub> = 100 °C	I <sub>F(AV)</sub>	20								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	200								A
Maximum Instantaneous Forward Voltage @ 20.0A	V <sub>F</sub>	0.975		1.3		1.7				V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>A</sub> =25 °C (Note 1)	I <sub>R</sub>					10				uA
						400				uA
Maximum Reverse Recovery Time (Note 4)	T <sub>rr</sub>	35								nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	170				150				pF
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	3.0								°C/W
Operating Temperature Range	T <sub>J</sub>	-65 to +150								°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150								°C

- Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A  
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
 3. Mounted on Heatsink Size of 3" x 5" x 0.25" Al-Plate.  
 4. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

RATINGS AND CHARACTERISTIC CURVES (SFAF2001G THRU SFAF2008G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

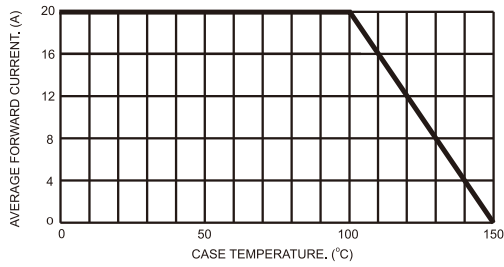


FIG.2- TYPICAL REVERSE CHARACTERISTICS

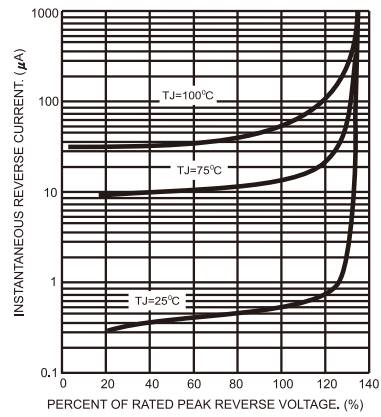


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

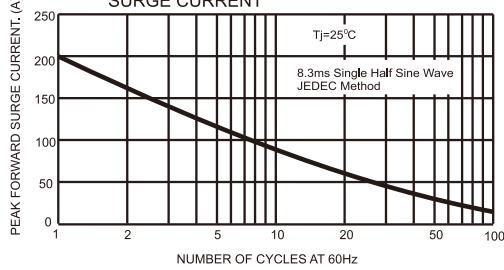


FIG.5- TYPICAL FORWARD CHARACTERISTICS

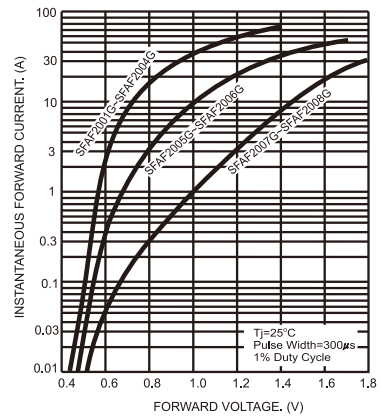


FIG.4- TYPICAL JUNCTION CAPACITANCE

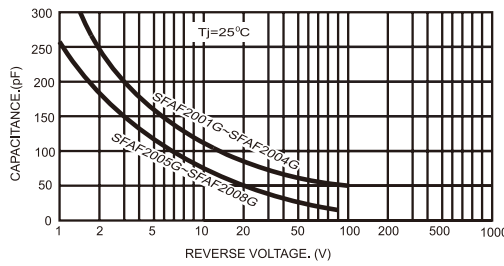


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

