



SFAF1001G - SFAF1008G

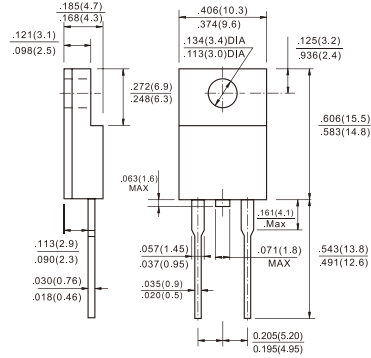
Isolated 10.0 AMPS.
Glass Passivated Super Fast Rectifiers
ITO-220AC

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 inverter, 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) lead lengths at 5 lbs., (2.3kg) tension
- ✦ Weight: 1.70 grams



Dimensions in inches and (millimeters)

Marking Diagram



SFAF100XG = 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 1001G	SFAF 1002G	SFAF 1003G	SFAF 1004G	SFAF 1005G	SFAF 1006G	SFAF 1007G	SFAF 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 @ $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	10									A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150									A
Maximum Instantaneous Forward Voltage @ 10.0A	V_F	0.975			1.3		1.7			V	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$ (Note 1)	I_R	10 400									μA μA
Maximum Reverse Recovery Time (Note 4)	T_{rr}	35									nS
Typical Junction Capacitance (Note 2)	C_j	170			140						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	4									$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-65 to +150									$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150									$^\circ\text{C}$

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
3. Mounted on Heatsink size (2" x 3" x 0.25") Al-Plate.
4. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVES (SFAF1001G THRU SFAF1008G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

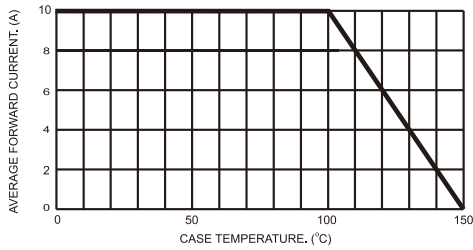


FIG.2- TYPICAL REVERSE CHARACTERISTICS

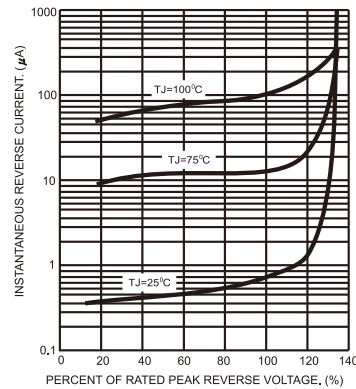


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

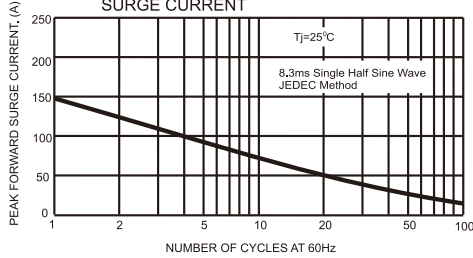


FIG.5- TYPICAL FORWARD CHARACTERISTICS

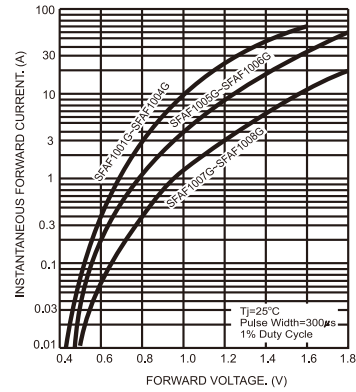


FIG.4- TYPICAL JUNCTION CAPACITANCE

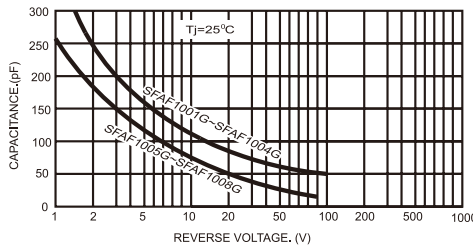
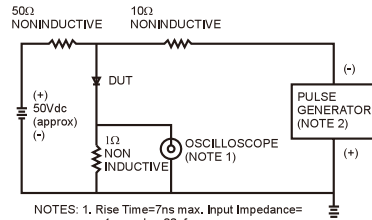


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

