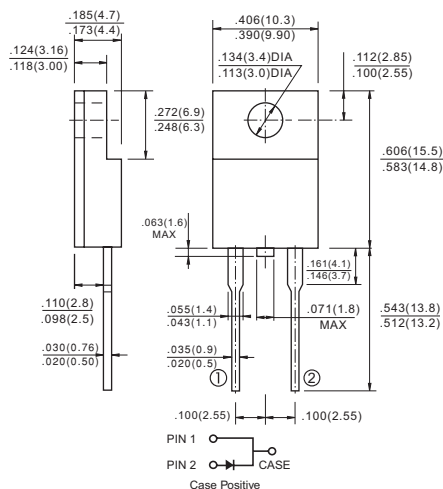


# SFAF501G - SFAF508G

Isolated 5.0 AMPS.  
Glass Passivated Super Fast Rectifiers

## ITO-220AC



Dimensions in inches and (millimeters)

## 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

## Mechanical Data

- ✦ Case: 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: 2.24 grams

## 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	SFAF	SFAF	SFAF	SFAF	SFAF	SFAF	SFAF	Units
		501G	502G	503G	504G	505G	506G	507G	508G	
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 .375 (9.5mm) Lead Length @ $T_C = 100^\circ C$	$I_{(AV)}$	5.0								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 @ 5.0A	$V_F$	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				uA
						400				uA
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$					35				nS
Typical Junction Capacitance (Note 2)	$C_j$					70				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$					5.0				$^\circ C/W$
Operating Temperature Range	$T_J$					-65 to +150				$^\circ C$
Storage Temperature Range	$T_{STG}$					-65 to +150				$^\circ C$

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
  3. Thermal Resistance from Junction to Case Mounted on Heatsink Size of 2" x 3" x 0.25" al-Plate.

## RATINGS AND CHARACTERISTIC CURVES ( SFAF501G THRU SFAF508G )

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

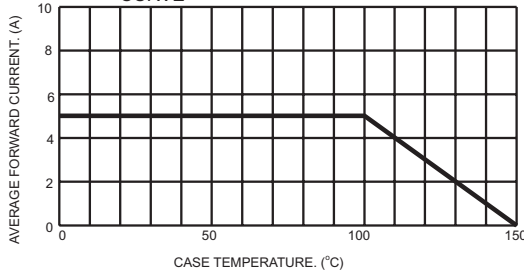


FIG.2- TYPICAL REVERSE CHARACTERISTICS

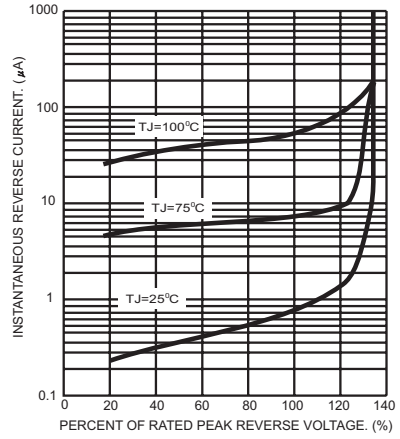


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

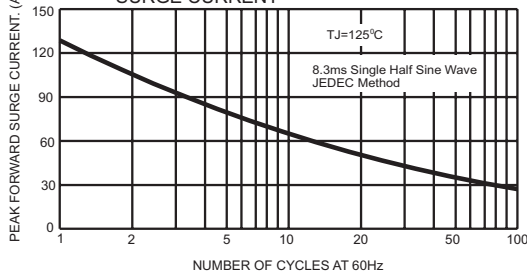


FIG.5- TYPICAL FORWARD CHARACTERISTICS

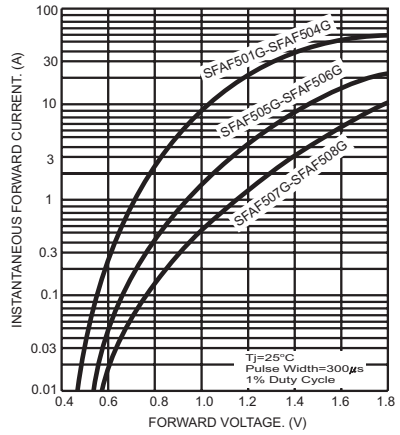


FIG.4- TYPICAL JUNCTION CAPACITANCE

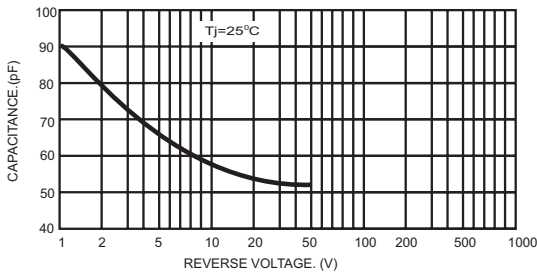


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

