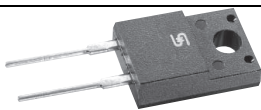




# SFAF1601G THRU SFAF1608G

Isolation 16.0 AMPS. Glass Passivated Super Fast Rectifiers



Voltage Range  
50 to 600 Volts  
Current  
16.0 Amperes

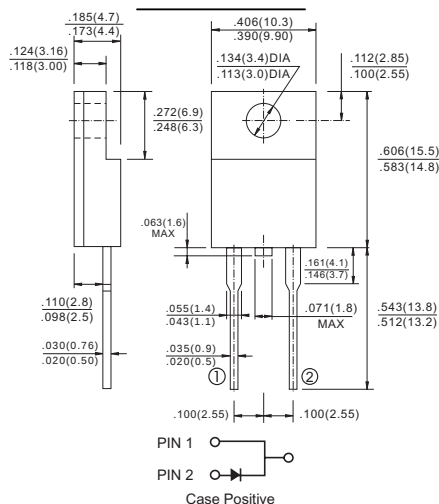
## Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

## Mechanical Data

- ✧ Cases: ITO-220AC molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Terminals: Leads 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

## ITO-220AC



## 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<br>1601G | SFAF<br>1602G | SFAF<br>1603G | SFAF<br>1604G | SFAF<br>1605G | SFAF<br>1606G | SFAF<br>1607G | SFAF<br>1608G | Units    |
|------------------------------------------------------------------------------------------------------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                               | V <sub>RRM</sub>  | 50            | 100           | 150           | 200           | 300           | 400           | 500           | 600           | V        |
| Maximum RMS Voltage                                                                                  | V <sub>RMS</sub>  | 35            | 70            | 105           | 140           | 210           | 280           | 350           | 420           | V        |
| Maximum DC Blocking Voltage                                                                          | V <sub>DC</sub>   | 50            | 100           | 150           | 200           | 300           | 400           | 500           | 600           | V        |
| Maximum Average Forward Rectified Current @T <sub>C</sub> = 100℃                                     | I <sub>(AV)</sub> | 16.0          |               |               |               |               |               |               |               | 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 @ 16.0A                                                        | V <sub>F</sub>    | 0.975         |               |               |               | 1.3           |               | 1.7           |               | V        |
| Maximum DC Reverse Current @ T <sub>A</sub> =25℃ at Rated DC Blocking Voltage @ T <sub>A</sub> =100℃ | I <sub>R</sub>    | 10<br>400     |               |               |               |               |               |               |               | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                               | T <sub>rr</sub>   | 35            |               |               |               |               |               |               |               | nS       |
| Typical Junction Capacitance (Note 2)                                                                | C <sub>j</sub>    | 170           |               |               |               | 140           |               |               |               | pF       |
| Typical Thermal Resistance C (Note 3)                                                                | R θ JC            | 3.0           |               |               |               |               |               |               |               | ℃/W      |
| Operating Temperature Range                                                                          | T <sub>J</sub>    | -65 to +150   |               |               |               |               |               |               |               | ℃        |
| Storage Temperature Range                                                                            | T <sub>STG</sub>  | -65 to +150   |               |               |               |               |               |               |               | ℃        |

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

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.

## RATINGS AND CHARACTERISTIC CURVES (SFAF1601G THRU SFAF1608G)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

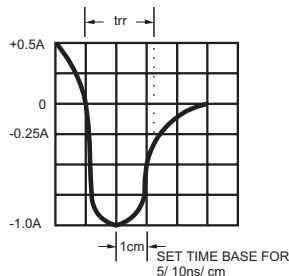
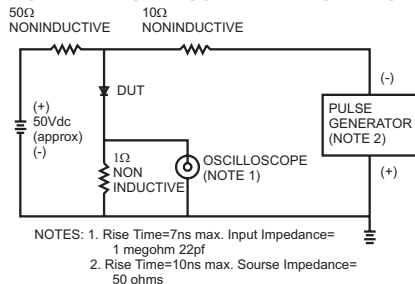


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

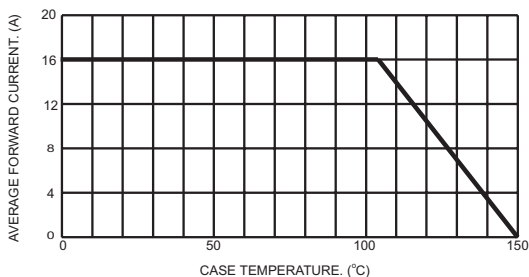


FIG.3- TYPICAL REVERSE CHARACTERISTICS

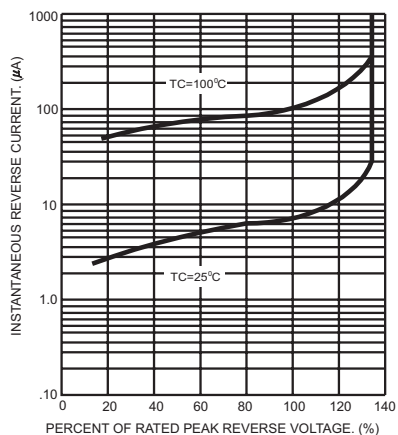


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

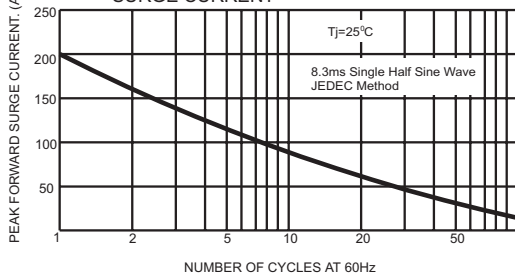


FIG.6- TYPICAL FORWARD CHARACTERISTICS

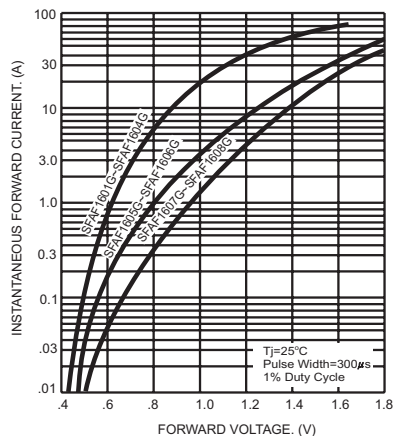


FIG.5- TYPICAL JUNCTION CAPACITANCE

