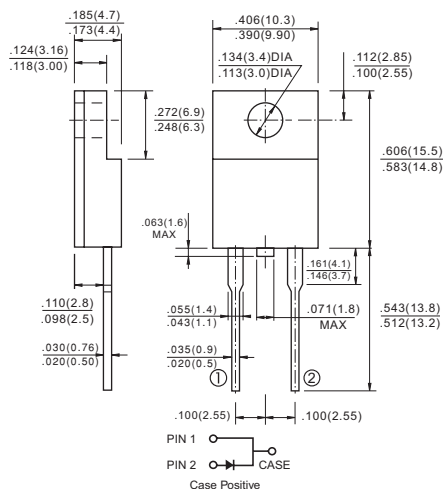


SFAF501G - SFAF508G

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

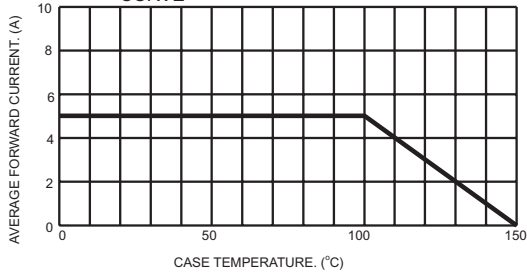


FIG.2- TYPICAL REVERSE CHARACTERISTICS

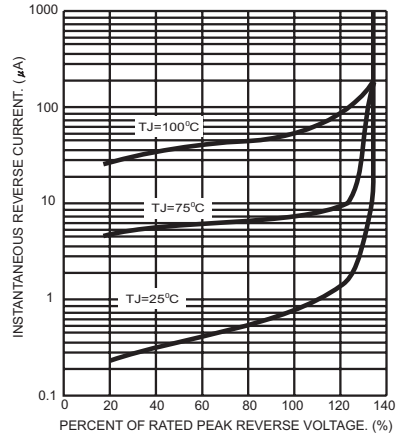


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

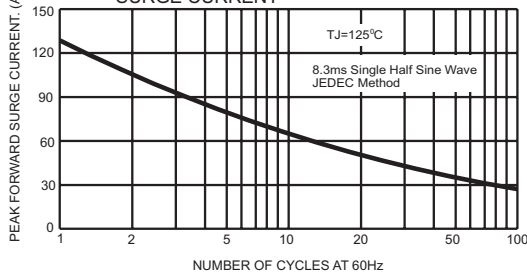


FIG.5- TYPICAL FORWARD CHARACTERISTICS

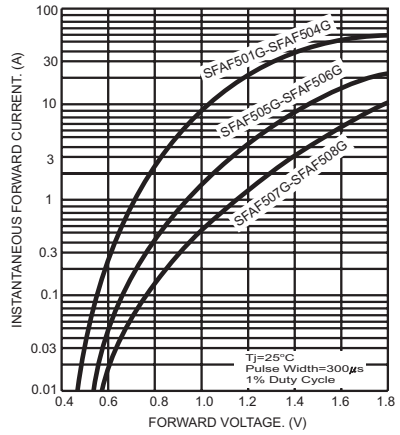


FIG.4- TYPICAL JUNCTION CAPACITANCE

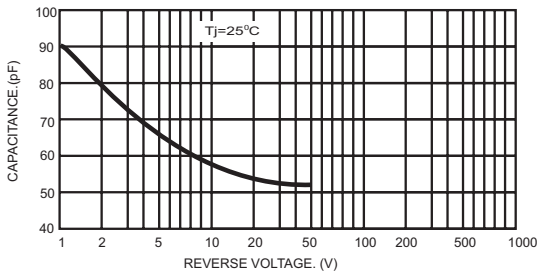


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

