

SRAF520 - SRAF5150

Isolated 5.0 AMPS. Schottky Barrier Rectifiers
ITO-220AC

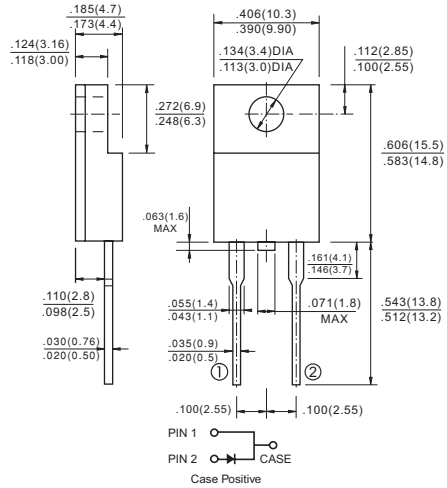


Features

- ✧ Isolated Plastic package.
- ✧ Low power loss, high efficiency.
- ✧ High current capability, Low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inventor, free wheeling, and polarity protection application

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/.25", (6.35mm) from case.
- ✧ Weight: 2.24 grams



Dimensions in inches and (millimeters)

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 | SRAF 520 | SRAF 530 | SRAF 540 | SRAF 550 | SRAF 560 | SRAF 590 | SRAF 5100 | SRAF 5150 | Units |
|---|-----------------|-------------|----------|----------|----------|----------|----------|-----------|-----------|-------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | V |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 63 | 70 | 105 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | V |
| Maximum Average Forward Rectified Current See Fig. 1 | $I_{(AV)}$ | 5.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 120 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 5.0A | V_F | 0.55 | | 0.70 | | 0.85 | | 0.95 | | V |
| Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=125^\circ\text{C}$ | I_R | 0.5 | | | | 0.2 | | | | mA |
| | | 15 | | 10 | | 5.0 | | 5.0 | | |
| Typical Junction Capacitance (Note 2) | C_j | 460 | | | | 112 | | | | pF |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 5.0 | | | | 10 | | | | °C/W |
| Operating Junction Temperature Range | T_J | -65 to +150 | | | | | | | | °C |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | | | | | | °C |

- Notes: 1. Thermal Resistance from Junction to Case Per Leg
2. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SRAF520 THRU SRAF5150)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

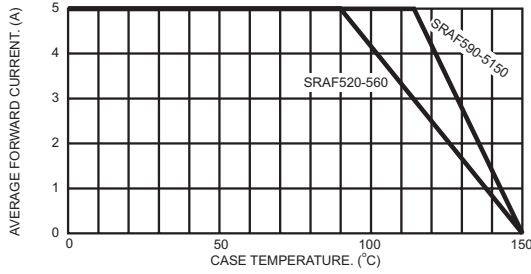


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

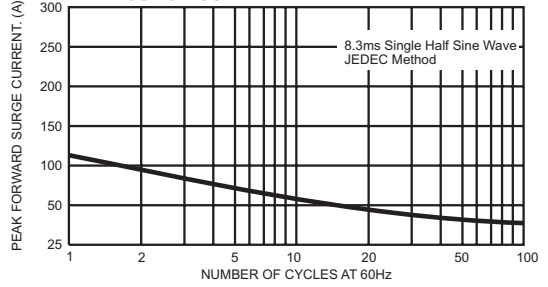


FIG.3- TYPICAL FORWARD CHARACTERISTICS

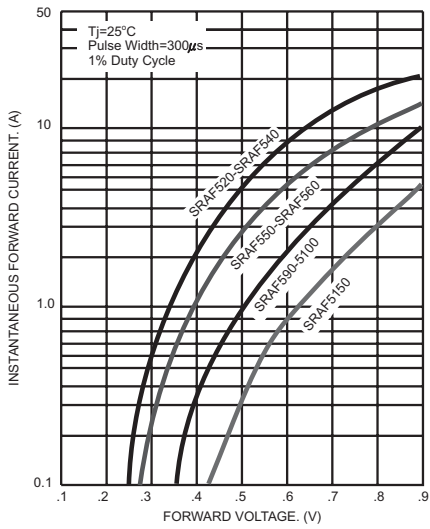


FIG.4- TYPICAL REVERSE CHARACTERISTICS

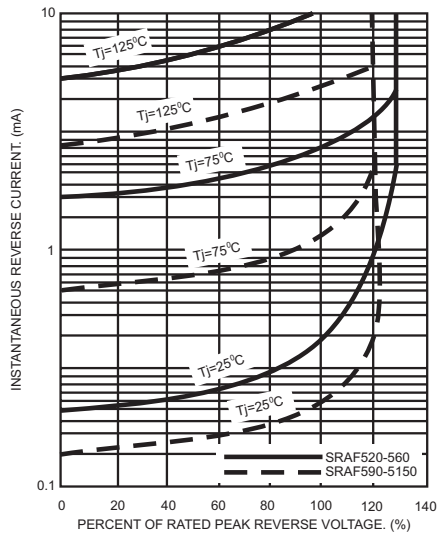


FIG.5- TYPICAL JUNCTION CAPACITANCE

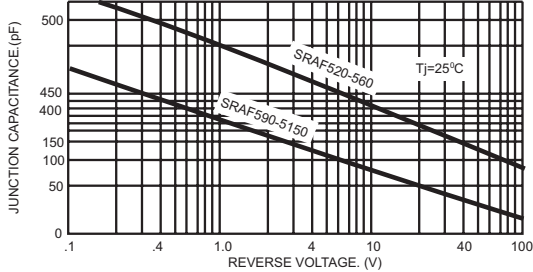


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

