

### Switchmode Full Plastic Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* 125°C Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory



\* In compliance with EU RoHS 2002/95/EC directives

#### SCHOTTKY BARRIER RECTIFIERS

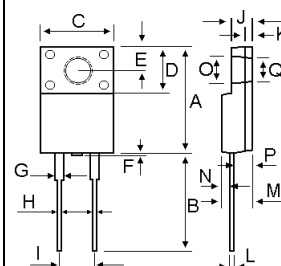
**8 AMPERES  
70-100 VOLTS**



ITO-220AC

### MAXIMUM RATINGS

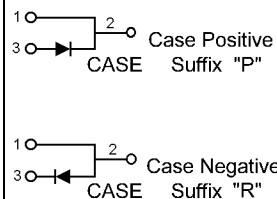
| Characteristic                                                                                               | Symbol                          | SRAF08      |    |    |     | Unit |
|--------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|----|----|-----|------|
|                                                                                                              |                                 | 70          | 80 | 90 | 100 |      |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                       | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 70          | 80 | 90 | 100 | V    |
| RMS Reverse Voltage                                                                                          | $V_{R(RMS)}$                    | 49          | 56 | 63 | 70  | V    |
| Average Rectifier Forward Current                                                                            | $I_{F(AV)}$                     | 8           |    |    |     | A    |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)                                         | $I_{FM}$                        | 16          |    |    |     | A    |
| Non-Repetitive Peak Surge Current<br>(Surge applied at rate load conditions<br>halfwave, single phase, 60Hz) | $I_{FSM}$                       | 150         |    |    |     | A    |
| Operating and Storage Junction<br>Temperature Range                                                          | $T_J, T_{STG}$                  | -65 to +150 |    |    |     | °C   |



| DIM | MILLIMETERS |       |
|-----|-------------|-------|
|     | MIN         | MAX   |
| A   | 15.05       | 15.15 |
| B   | 13.35       | 13.45 |
| C   | 10.00       | 10.10 |
| D   | 6.55        | 6.65  |
| E   | 2.65        | 2.75  |
| F   |             | 1.00  |
| G   | 1.15        | 1.25  |
| H   | 0.55        | 0.65  |
| I   | 4.80        | 5.20  |
| J   | 3.00        | 3.20  |
| K   | 1.10        | 1.20  |
| L   | 0.55        | 0.65  |
| M   | 4.40        | 4.60  |
| N   | 1.15        | 1.25  |
| P   | 2.65        | 2.75  |
| O   | 3.35        | 3.45  |
| Q   | 3.15        | 3.25  |

### ELECTRIAL CHARACTERISTICS

| Characteristic                                                                                                                           | Symbol | SRAF08       |           |              |     | Unit |
|------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------|-----------|--------------|-----|------|
|                                                                                                                                          |        | 70           | 80        | 90           | 100 |      |
| Maximum Instantaneous Forward Voltage<br>( $I_F = 8$ Amp $T_C = 25^\circ\text{C}$ )<br>( $I_F = 8$ Amp $T_C = 125^\circ\text{C}$ )       | $V_F$  | 0.75<br>0.68 |           | 0.85<br>0.72 |     | V    |
| Maximum Instantaneous Reverse Current<br>(Rated DC Voltage, $T_C = 25^\circ\text{C}$ )<br>(Rated DC Voltage, $T_C = 125^\circ\text{C}$ ) | $I_R$  |              | 1.0<br>30 |              |     | mA   |



# SRAF0870 thru SRAF08100

FIG-1 FORWARD CURRENT DERATING CURVE

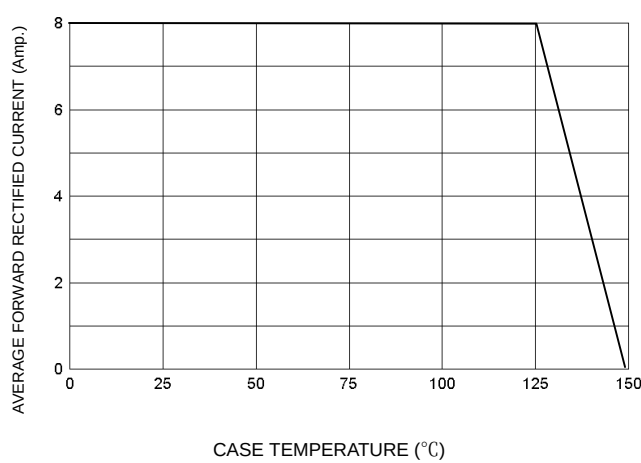


FIG-2 TYPICAL FORWARD CHARACTERISTICS

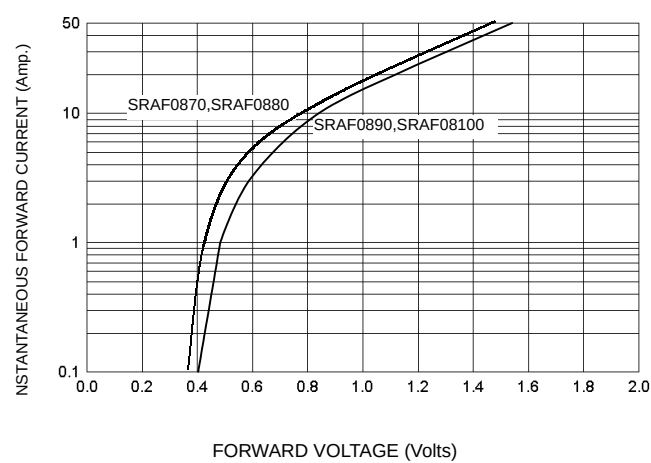


FIG-3 TYPICAL REVERSE CHARACTERISTICS

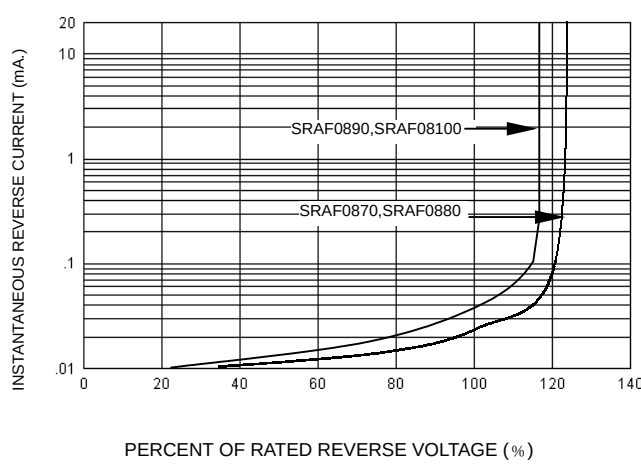


FIG-4 TYPICAL JUNCTION CAPACITANCE

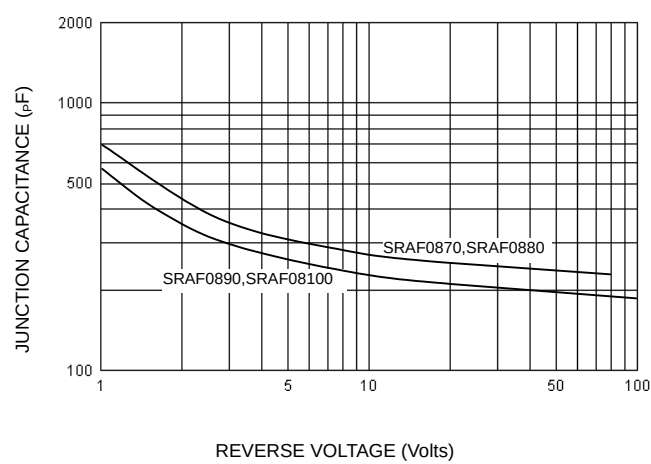
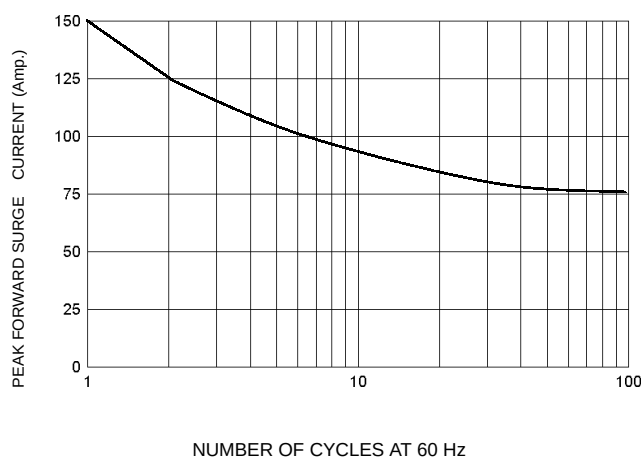


FIG-5 PEAK FORWARD SURGE CURRENT



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