

### 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.
- \* 150 $\mu$  Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory

#### SCHOTTKY BARRIER RECTIFIERS

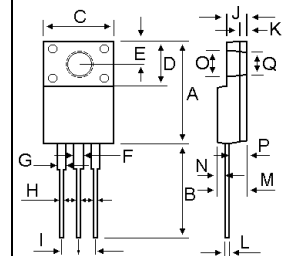
**30 AMPERES  
70-100 VOLTS**



**ITO-220AB**

#### MAXIMUM RATINGS

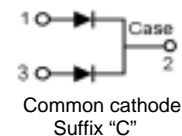
| Characteristic   | Symbol                          | SRF30       |      |      |       | Unit  |
|--|---------------------------------|-------------|------|------|-------|-------|
|  |                                 | 70CE        | 80CE | 90CE | 100CE |       |
| Peak Repetitive Reverse Voltage<br>Working 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<br>Total Device (Rated $V_R$ ), $T_C=100\mu$                               | $I_{F(AV)}$                     | 15<br>30    |      |      |       | A     |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)   | $I_{FM}$                        | 30          |      |      |       | A     |
| Non-Repetitive Peak Surge Current<br>(Surge applied at rate load conditions<br>halfwave, single phase, 60Hz) | $I_{FSM}$                       | 250         |      |      |       | A     |
| Operating and Storage Junction<br>Temperature Range  | $T_J, T_{STG}$                  | -65 to +150 |      |      |       | $\mu$ |



| 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   | 1.55        | 1.65  |
| G   | 1.15        | 1.25  |
| H   | 0.55        | 0.65  |
| I   | 2.50        | 2.60  |
| 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 | SRF30        |           |              |       | Unit |
|--|--------|--------------|-----------|--------------|-------|------|
|  |        | 70CE         | 80CE      | 90CE         | 100CE |      |
| Maximum Instantaneous Forward Voltage<br>( $I_F=15$ Amp $T_C=25\mu$ )<br>( $I_F=15$ Amp $T_C=125\mu$ )         | $V_F$  | 0.75<br>0.68 |           | 0.85<br>0.72 |       | V    |
| Maximum Instantaneous Reverse Current<br>(Rated DC Voltage, $T_C=25\mu$ )<br>(Rated DC Voltage, $T_C=125\mu$ ) | $I_R$  |              | 0.5<br>30 |              |       | mA   |



# S30C70CE-S30C100CE

FIG-1 FORWARD CURRENT DERATING CURVE

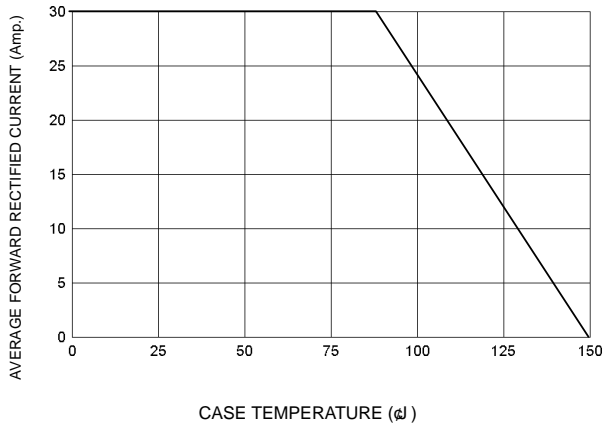


FIG-2 TYPICAL FORWARD CHARACTERISTICS

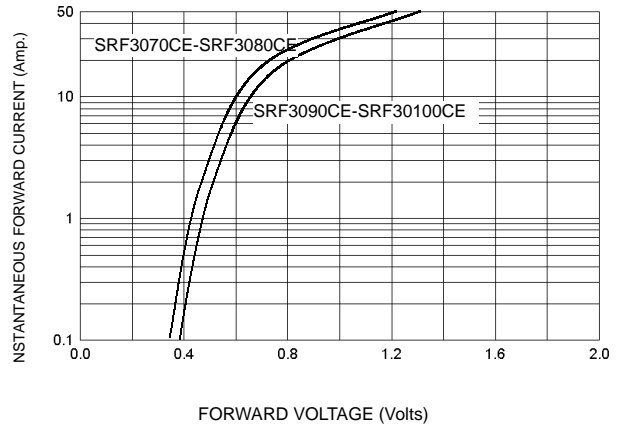


FIG-3 TYPICAL REVERSE CHARACTERISTICS

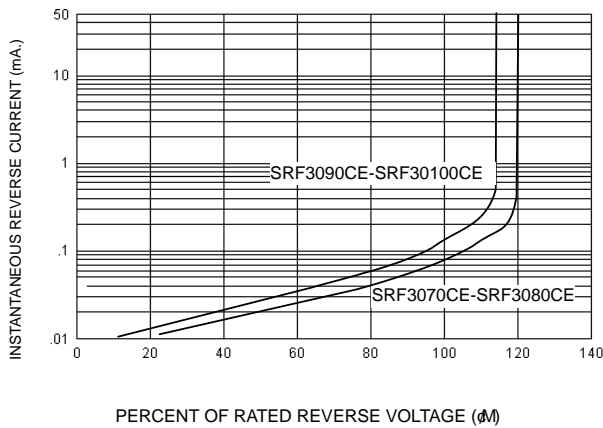


FIG-4 TYPICAL JUNCTION CAPACITANCE

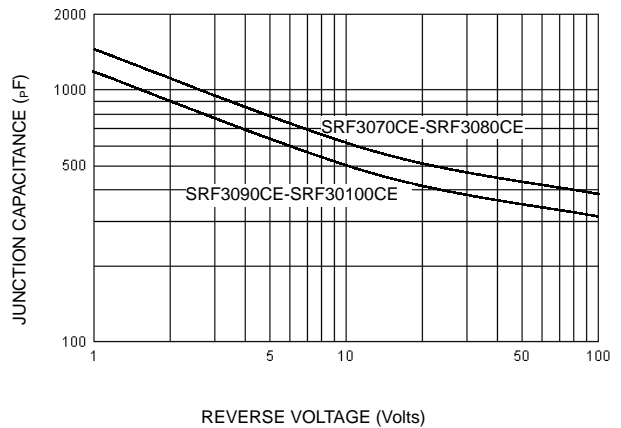


FIG-5 PEAK FORWARD SURGE CURRENT

