

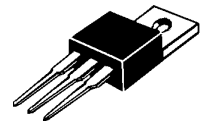
### Schottky Barrier Rectifiers

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 Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

#### SCHOTTKY BARRIER RECTIFIERS

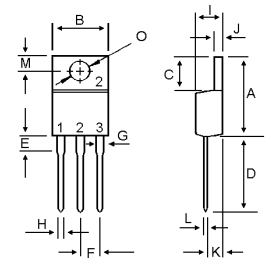
**10 AMPERES  
30-60 VOLTS**



**TO-220AB**

### MAXIMUM RATINGS

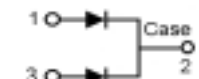
| Characteristic   | Symbol                          | S10C        |      |      |      |      |      | Unit |
|--|---------------------------------|-------------|------|------|------|------|------|------|
|  |                                 | 30CE        | 35CE | 40CE | 45CE | 50CE | 60CE |      |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                       | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 30          | 35   | 40   | 45   | 50   | 60   | V    |
| RMS Reverse Voltage  | $V_{R(RMS)}$                    | 21          | 25   | 28   | 32   | 35   | 42   | V    |
| Average Rectifier Forward Current<br>Total Device (Rated $V_R$ , $T_C=100$ )                                 | $I_{F(AV)}$                     | 5.0<br>10   |      |      |      |      |      | A    |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)   | $I_{FM}$                        | 10          |      |      |      |      |      | A    |
| Non-Repetitive Peak Surge Current<br>(Surge applied at rate load conditions<br>halfwave, single phase, 60Hz) | $I_{FSM}$                       | 125         |      |      |      |      |      | A    |
| Operating and Storage Junction<br>Temperature Range  | $T_J, T_{stg}$                  | -65 to +150 |      |      |      |      |      |      |



| DIM | MILLIMETERS |       |
|-----|-------------|-------|
|     | MIN         | MAX   |
| A   | 14.68       | 15.32 |
| B   | 9.78        | 10.42 |
| C   | 5.02        | 6.52  |
| D   | 13.06       | 14.62 |
| E   | 3.57        | 4.07  |
| F   | 2.42        | 2.66  |
| G   | 1.12        | 1.36  |
| H   | 0.72        | 0.96  |
| I   | 4.22        | 4.98  |
| J   | 1.14        | 1.38  |
| K   | 2.20        | 2.98  |
| L   | 0.33        | 0.55  |
| M   | 2.48        | 2.98  |
| O   | 3.70        | 3.90  |

### ELECTRIAL CHARACTERISTICS

| Characteristic   | Symbol | S10C         |      |      |              |      |      | Unit |
|--|--------|--------------|------|------|--------------|------|------|------|
|  |        | 30CE         | 35CE | 40CE | 45CE         | 50CE | 60CE |      |
| Maximum Instantaneous Forward Voltage<br>( $I_F=5.0$ Amp $T_C=25$ )<br>( $I_F=5.0$ Amp $T_C=125$ )         | $V_F$  | 0.57<br>0.46 |      |      | 0.70<br>0.52 |      | V    |      |
| Maximum Instantaneous Reverse Current<br>( Rated DC Voltage, $T_C=25$ )<br>( Rated DC Voltage, $T_C=125$ ) | $I_R$  | 0.5<br>20    |      |      |              |      | mA   |      |



Common cathode  
Suffix "C"

# S10C30CE thru S10C60CE

FIG-1 FORWARD CURRENT DERATING CURVE

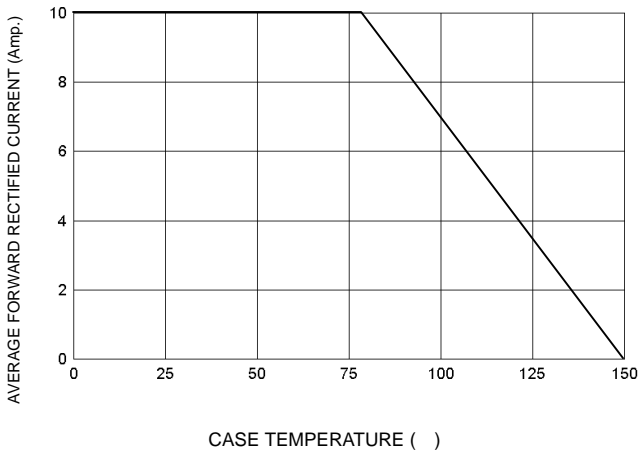


FIG-2 TYPICAL FORWARD CHARACTERISTICS

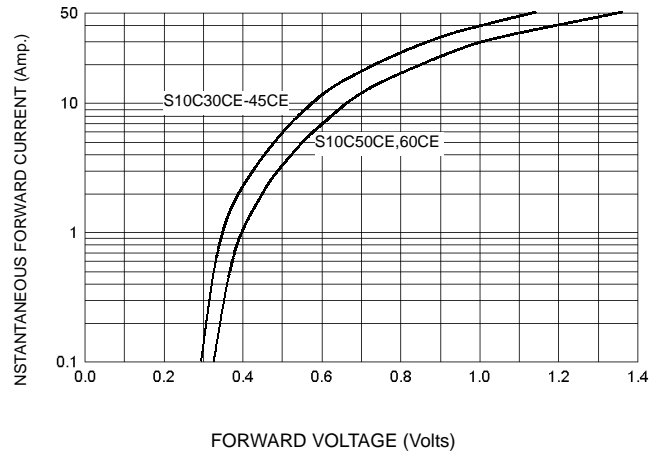


FIG-3 TYPICAL REVERSE CHARACTERISTICS

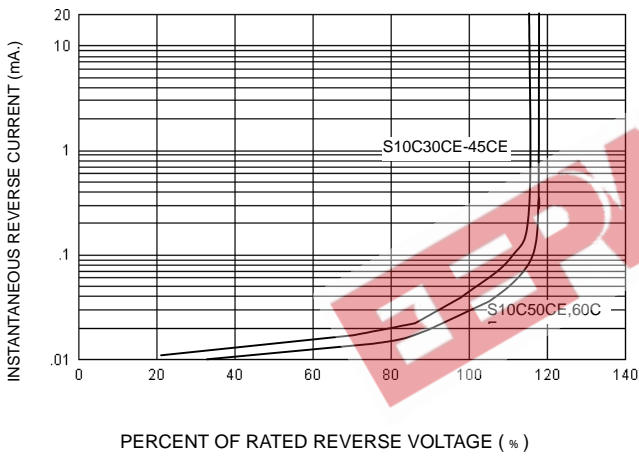


FIG-4 TYPICAL JUNCTION CAPACITANCE

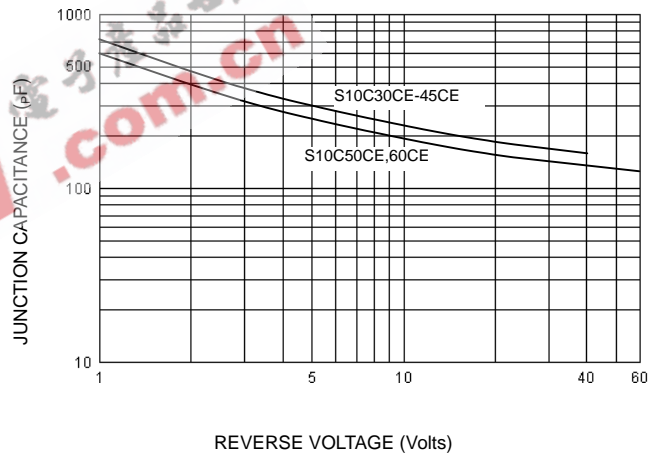


FIG-5 PEAK FORWARD SURGE CURRENT

