

# SK22 THRU S210

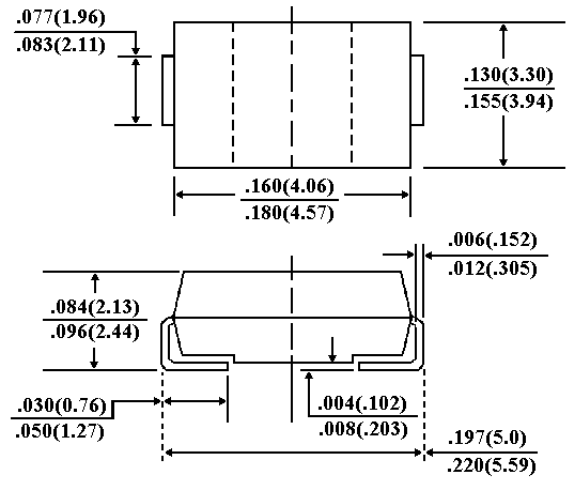
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### VOLTAGE - 20 to 100 Volts    CURRENT - 2.0 Amperes

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capability, low  $V_F$
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed:  
260 °C/10 seconds at terminals

#### SMB/DO-214AA



Dimensions in inches and (millimeters)

#### MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic

Terminals: Solder plated, solderable per MIL-STD-750,  
Method 2026

Polarity: Color band denotes cathode

Standard packaging: 12mm tape (EIA-481)

Weight: 0.003 ounce, 0.093 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load.

|                                                                                                 | SYMBOLS           | SK22        | SK23 | SK24 | SK25 | SK26 | SK28 | SK29 | S210 | UNITS |
|-------------------------------------------------------------------------------------------------|-------------------|-------------|------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                          | V <sub>RRM</sub>  | 20          | 30   | 40   | 50   | 60   | 80   | 90   | 100  | Volts |
| Maximum RMS Voltage                                                                             | V <sub>RMS</sub>  | 14          | 21   | 28   | 35   | 42   | 56   | 64   | 71   | Volts |
| Maximum DC Blocking Voltage                                                                     | V <sub>DC</sub>   | 20          | 30   | 40   | 50   | 60   | 80   | 90   | 100  | Volts |
| Maximum Average Forward Rectified Current at T <sub>L</sub> (See Figure 1)                      | I <sub>(AV)</sub> | 2.0         |      |      |      |      |      |      |      | Amps  |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I <sub>FSM</sub>  | 50.0        |      |      |      |      |      |      |      | Amps  |
| Maximum Instantaneous Forward Voltage at 2.0A (Note 1)                                          | V <sub>F</sub>    | 0.50        |      |      | 0.70 |      | 0.85 |      |      | Volts |
| Maximum DC Reverse Current T <sub>A</sub> =25 ºJ (Note 1)                                       | I <sub>R</sub>    | 0.5         |      |      |      |      |      |      |      | mA    |
| At Rated DC Blocking Voltage T <sub>A</sub> =100 ºJ                                             |                   | 20.0        |      |      |      |      |      |      |      |       |
| Maximum Thermal Resistance (Note 2)                                                             | R £KJL<br>R £KJA  | 17<br>75    |      |      |      |      |      |      |      | ºC/W  |
| Operating Junction Temperature Range                                                            | T <sub>J</sub>    | -50 to +125 |      |      |      |      |      |      |      | ºC    |
| Storage Temperature Range                                                                       | T <sub>STG</sub>  | -50 to +150 |      |      |      |      |      |      |      | ºC    |

#### NOTES:

1. Pulse Test with PW=300 µs sec, 2% Duty Cycle.
2. Mounted on P.C.Board with 8.0mm<sup>2</sup> (.013mm thick) copper pad areas.

## RATING AND CHARACTERISTIC CURVES

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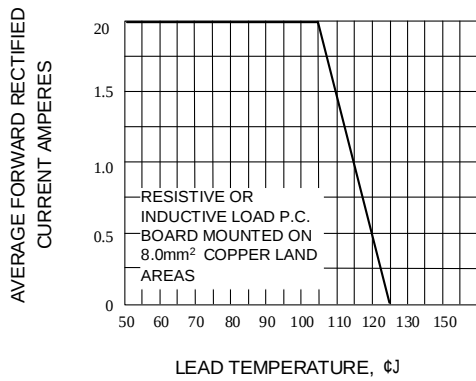


Fig. 1-FORWARD CURRENT DERATING CURVE

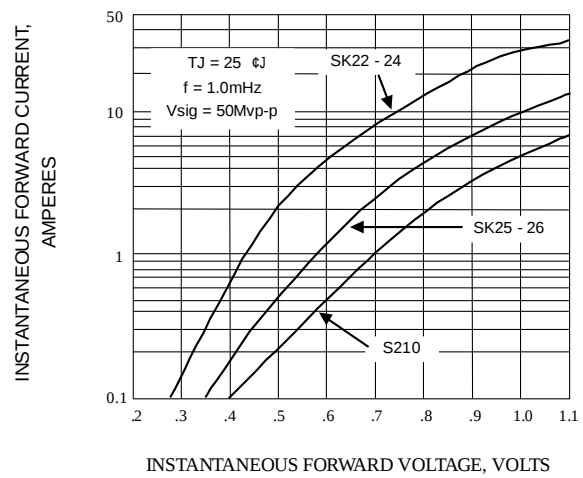


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

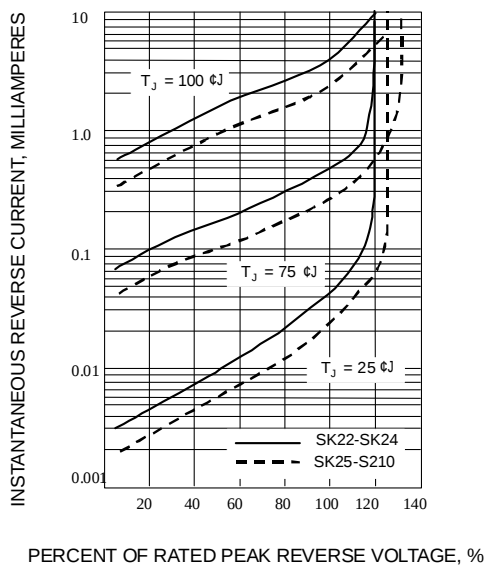


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

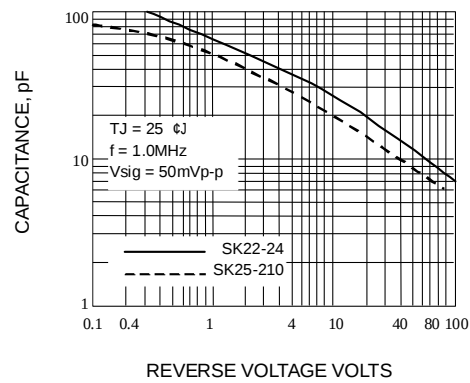


Fig. 4-TYPICAL JUNCTION CAPACITANCE

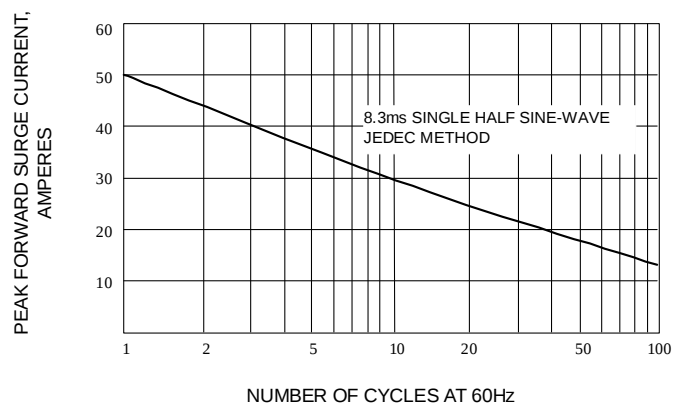


Fig. 5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT