

# SK22 THRU S210

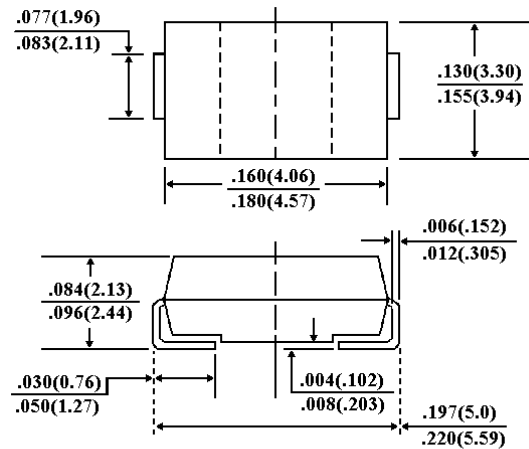
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### 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  | $V_{RRM}$                        | 20          | 30   | 40   | 50   | 60       | 80   | 90   | 100  | Volts |
| Maximum RMS Voltage   | $V_{RMS}$                        | 14          | 21   | 28   | 35   | 42       | 56   | 64   | 71   | Volts |
| Maximum DC Blocking Voltage   | $V_{DC}$                         | 20          | 30   | 40   | 50   | 60       | 80   | 90   | 100  | Volts |
| Maximum Average Forward Rectified Current at $T_J$ (See Figure 1)                               | $I_{(AV)}$                       | 2.0         |      |      |      |          |      |      |      | Amps  |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$                        | 50.0        |      |      |      |          |      |      |      | Amps  |
| Maximum Instantaneous Forward Voltage at 2.0A (Note 1)  | $V_F$                            | 0.50        |      | 0.70 |      | 0.85     |      |      |      | Volts |
| Maximum DC Reverse Current $T_A=25$ °C (Note 1)   | $I_R$                            | 0.5         |      |      |      |          |      |      |      | mA    |
| At Rated DC Blocking Voltage $T_A=100$ °C   |                                  | 20.0        |      |      |      |          |      |      |      |       |
| Maximum Thermal Resistance (Note 2)   | R $\theta$ KJL<br>R $\theta$ KJA |             |      |      |      | 17<br>75 |      |      |      | °C/W  |
| Operating Junction Temperature Range  | $T_J$                            | -50 to +125 |      |      |      |          |      |      |      | °C    |
| Storage Temperature Range   | $T_{STG}$                        | -50 to +150 |      |      |      |          |      |      |      | °C    |

#### NOTES:

1. Pulse Test with PW=300  $\mu$ g 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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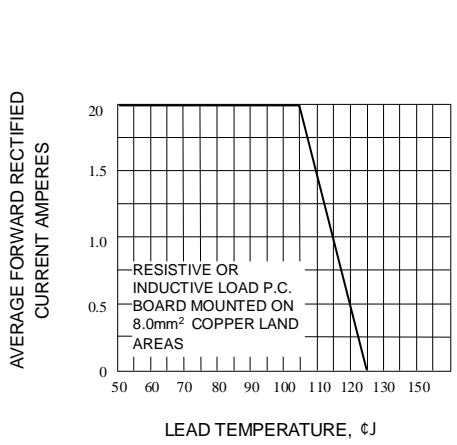


Fig. 1-FORWARD CURRENT DERATING CURVE

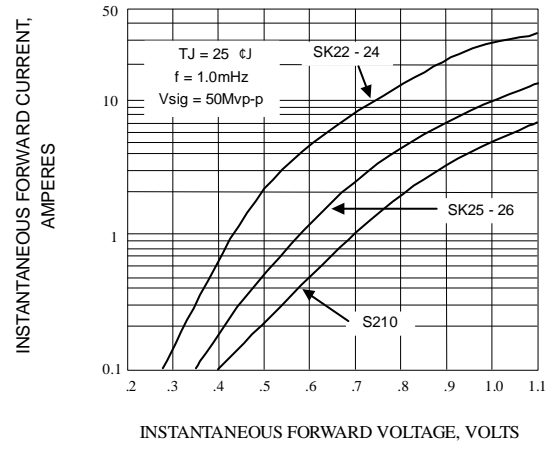


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

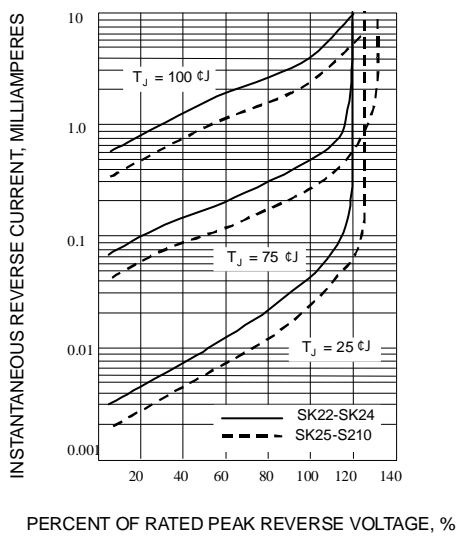


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

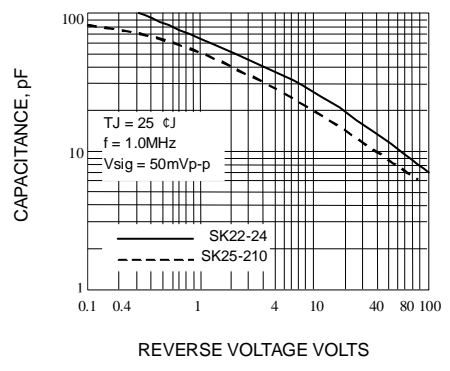


Fig. 4-TYPICAL JUNCTION CAPACITANCE

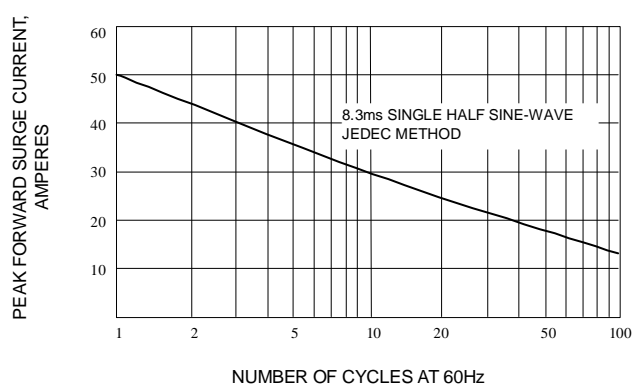


Fig. 5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT