

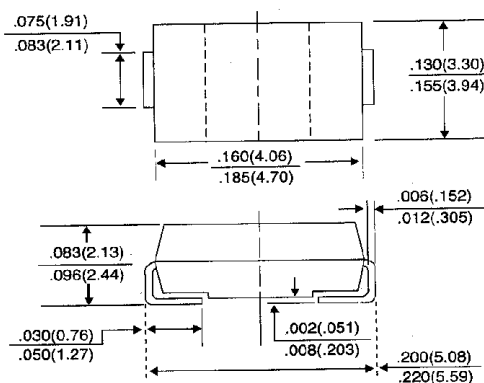
## SK22 THRU S210

**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 ounces 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 TL (See Figure 1)   | $I_{(AV)}$                         | 2.0         |      |      |      |      |      |      |      | Amps         |
| Peak forward Surge Current<br>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 (NOTE 1) $T_A = 25^\circ C$<br>at Rated DC Blocking Voltage $T_A = 100^\circ C$ | $I_R$                              | 0.5<br>20.0 |      |      |      |      |      |      |      | mA           |
| Maximum Thermal Resistance (NOTE 2)  | $R_{\theta JL}$<br>$R_{\theta JA}$ | 17<br>75    |      |      |      |      |      |      |      | $^\circ C/W$ |
| Operating Junction Temperature Range   | $T_J$                              | -50 to +125 |      |      |      |      |      |      |      | $^\circ C$   |
| Storage Temperature Range  | $T_{STG}$                          | -50 to +150 |      |      |      |      |      |      |      | $^\circ C$   |

**NOTES:**

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

RATING AND CHARACTERISTIC CURVES  
SK22 THRU S210

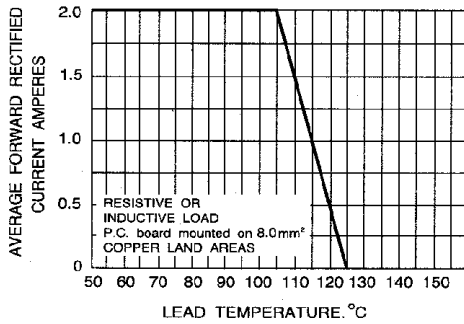


FIG. 1 - FORWARD CURRENT DERATING CURVE

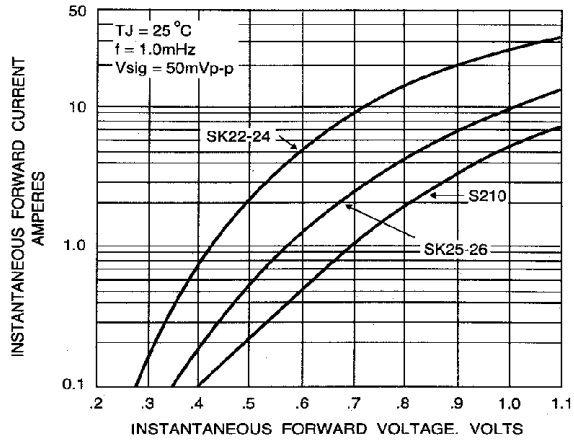


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

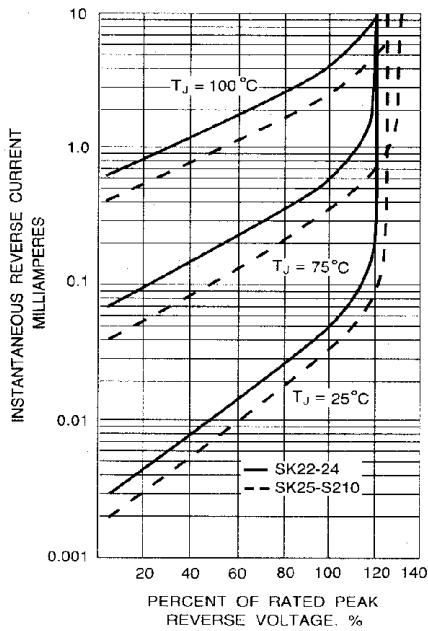


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

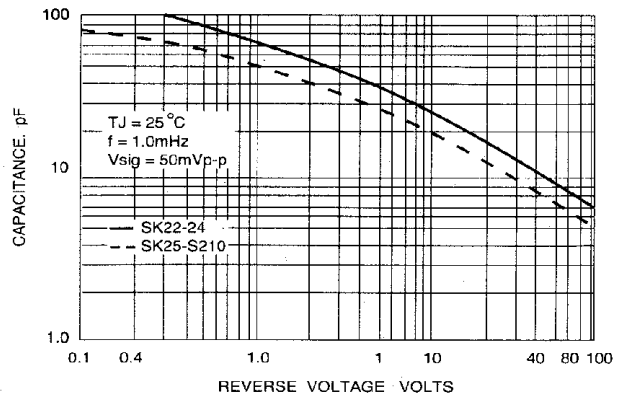


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

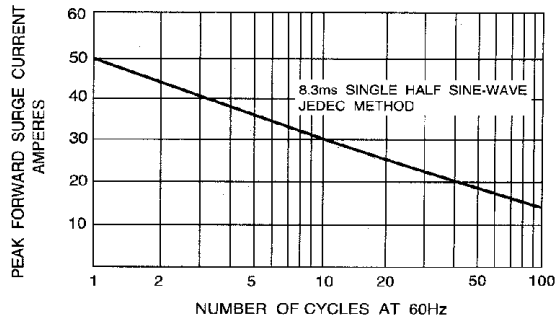


FIG. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT