

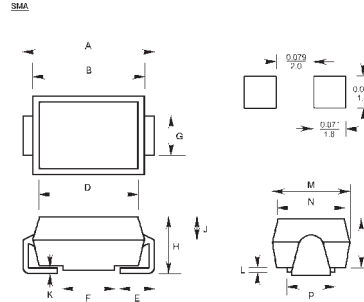


SK22 THRU SK2B

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER
Reverse Voltage - 20 to 100 Volts
Forward Current - 2.0 Amperes

Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- 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



| DIM | DIMENSIONS | | | | Note |
|-----|------------|-------|------|------|------|
| | Inches | | mm | | |
| | Min. | Max. | Min. | Max. | |
| A | 0.216 | 0.226 | 5.48 | 5.74 | |
| B | 0.176 | 0.182 | 4.48 | 4.63 | |
| C | 0.094 | 0.100 | 2.40 | 2.55 | |
| D | 0.170 | 0.176 | 4.33 | 4.48 | |
| E | 0.039 | 0.055 | 1.00 | 1.40 | |
| F | 0.060 | 0.081 | 2.03 | 2.07 | |
| G | 0.068 | 0.083 | 1.72 | 2.10 | |
| H | 0.112 | 0.118 | 2.85 | 3.00 | |
| J | 0.057 | - | 1.44 | - | |
| K | - | 0.018 | - | 0.45 | |
| L | 0.016 | - | 0.40 | - | |
| M | 0.109 | 0.115 | 2.77 | 2.93 | |
| N | 0.105 | 0.107 | 2.67 | 2.73 | |
| P | 0.078 | 0.081 | 2.00 | 2.05 | |

Mechanical Data

- **Case:** SMA molded plastic
- **Terminals:** Solder plated solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode
- **Weight:** 0.004 ounce, 0.11 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 | SK27 | SK28 | SK29 | SK2B | Units | |
|--|------------------------------------|--------------|------|------|------|------|------|------|------|------|-------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | Volts | |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | Volts | |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | Volts | |
| Maximum average forward rectified current at $T_c=105^\circ\text{C}$ (see Figure 1) | $I_{(AV)}$ | 2.0 | | | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) | I_{FSM} | 50.0 | | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 2.0A (Note 1) | V_F | 0.55 | | | 0.70 | | | 0.85 | | | Volts | |
| Maximum DC reverse current (Note 1) at rated DC blocking voltage | I_R | 0.5 20.0 | | | | | | | | | | mA |
| Typical thermal resistance (Note 2) | $R_{\theta JL}$ $R_{\theta JA}$ | 17.0 75.0 | | | | | | | | | | °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 μ Sec, 2% Duty Cycle
- (2) Mounted on P.C. Board with 8.0mm² (0.013mm thick) copper pad areas

RATINGS AND CHARACTERISTIC CURVES

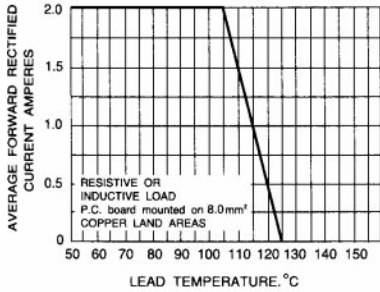


FIG. 1 - FORWARD CURRENT DERATING CURVE

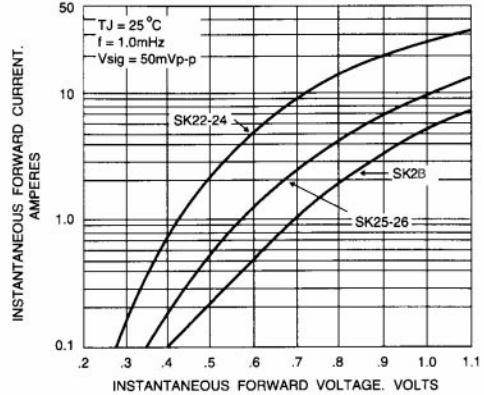


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

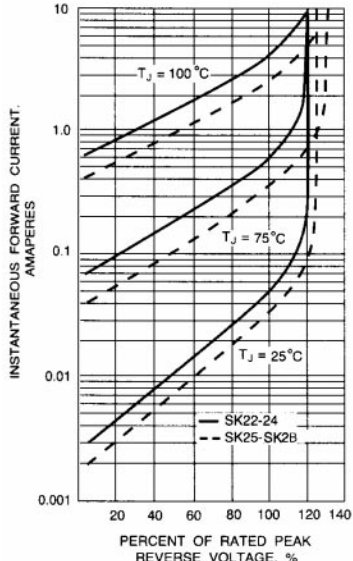


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

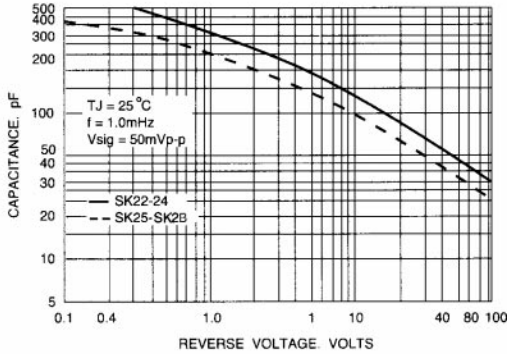


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

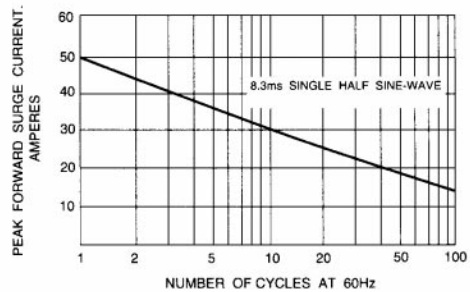


FIG. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT