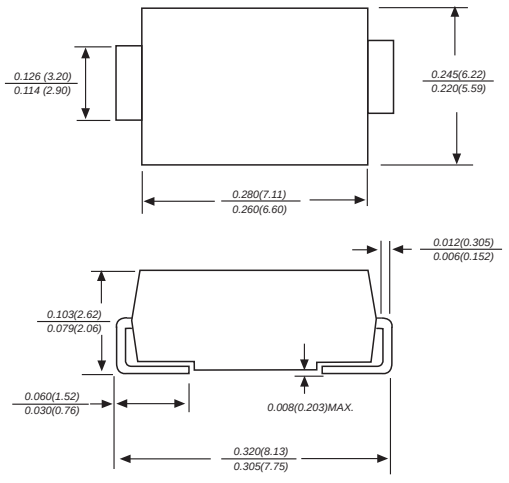
# SK52 THRU SK5200

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

*Reverse Voltage - 20 to 200 Volts  Forward Current - 5.0 Amperes*

### DO-214AB/SMC




*Dimensions in inches and (millimeters)*

### FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250℃/10 seconds at terminals

### MECHANICAL DATA

**Case**: JEDEC DO-214AB molded plastic body
**Terminals**: Solder plated, solderable per MIL-STD-750, Method 2026
**Polarity**: Color band denotes cathode end
**Mounting Position**: Any
**Weight**:0.007 ounce, 0.25grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| MDD Catalog Number | *SYMBOLS* | SK52 | SK53 | SK54 | SK55 | SK56 | SK58 | SK510 | SK5150 | SK5200 | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | VOLTS |
| Maximum RMS voltage | $V_{RMS}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 150 | VOLTS |
| Maximum DC blocking voltage | $V_{DC}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | VOLTS |
| Maximum average forward rectified current at $T_L$(see fig.1) | $I_{(AV)}$ | 5.0 | | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 150.0 | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 5.0A | $V_F$ | 0.55 | | | 0.70 | | 0.85 | | | 0.95 | Volts |
| Maximum DC reverse current $T_A$=25℃ | $I_R$ | 0.5 | | | | | | | 0.2 | | mA |
| at rated DC blocking voltage $T_A$=100℃ | | 20 | | | | | 10 | | 2.0 | | |
| Typical junction capacitance (NOTE 1) | $C_J$ | 200 | | | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 50.0 | | | | | | | | | ℃/W |
| Operating junction temperature range | $T_J$, | -50 to +125 | | | | | -50 to +150 | | | | ℃ |
| Storage temperature range | $T_{STG}$ | -50 to +150 | | | | | | | | | ℃ |

**Note:** 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES SK52 THRU SK5200

FIG. 1- FORWARD CURRENT DERATING CURVE

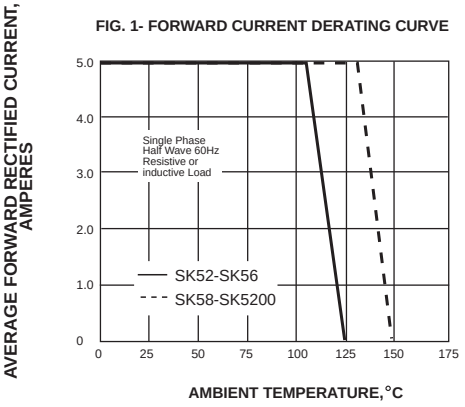



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

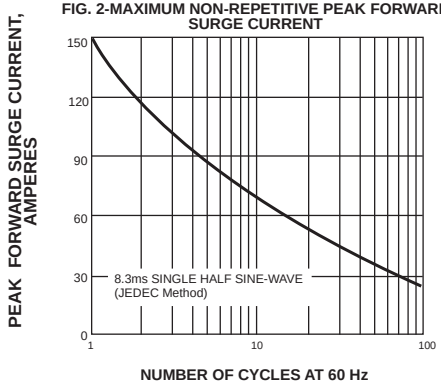



FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

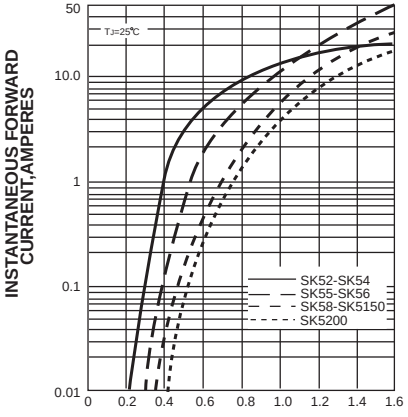



FIG. 4-TYPICAL REVERSE CHARACTERISTICS

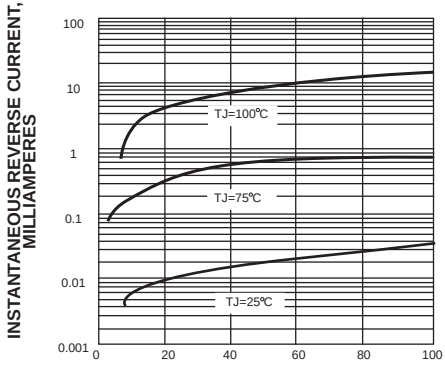



FIG. 5-TYPICAL JUNCTION CAPACITANCE

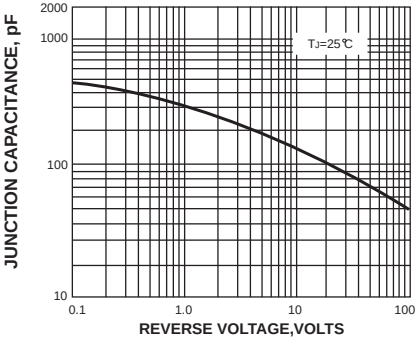



FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE