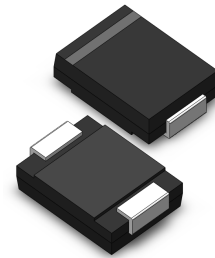


**VOLTAGE RANGE: 20 - 100V**

**CURRENT: 5.0 A**

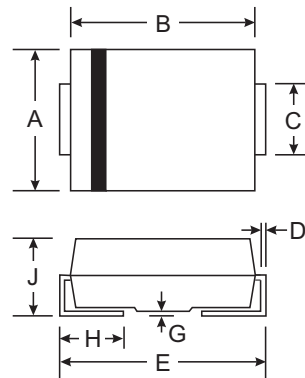


### Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



| SMC/DO-214AB         |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 5.59 | 6.22 |
| B                    | 6.60 | 7.11 |
| C                    | 2.75 | 3.18 |
| D                    | 0.15 | 0.31 |
| E                    | 7.75 | 8.13 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| All Dimensions in mm |      |      |



### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

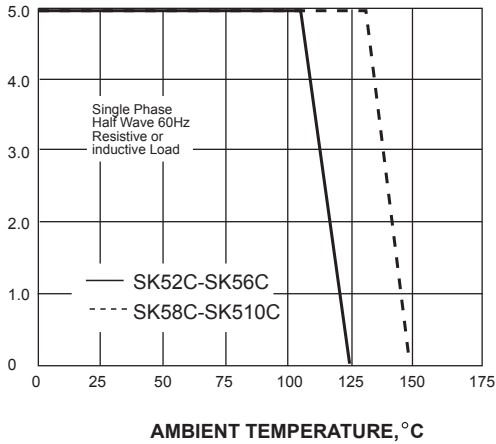
| Characteristic  | Symbol            | SK52C       | SK53C | SK54C | SK55C | SK56C | SK58C       | SK510C | Unit |
|---|-------------------|-------------|-------|-------|-------|-------|-------------|--------|------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>  | 20          | 30    | 40    | 50    | 60    | 80          | 100    | V    |
| Maximum RMS voltage   | V <sub>RMS</sub>  | 14          | 21    | 28    | 35    | 42    | 56          | 70     | V    |
| Maximum DC blocking voltage   | V <sub>DC</sub>   | 20          | 30    | 40    | 50    | 60    | 80          | 100    | V    |
| Maximum average forward rectified current at T <sub>L</sub> (see fig.1)   | I <sub>(AV)</sub> | 5.0         |       |       |       |       |             |        | A    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)                                   | I <sub>FSM</sub>  | 150.0       |       |       |       |       |             |        | A    |
| Maximum instantaneous forward voltage at 5.0A   | V <sub>F</sub>    | 0.55        |       | 0.70  |       | 0.85  |             | V      |      |
| Maximum DC reverse current<br>at rated DC blocking voltage<br><small>T<sub>A</sub>=25°C</small><br><small>T<sub>A</sub>=100°C</small> | I <sub>R</sub>    | 0.5         |       |       |       |       | 10          |        | mA   |
| Typical junction capacitance (NOTE 1)   | C <sub>J</sub>    | 200         |       |       |       |       |             |        | pF   |
| Typical thermal resistance (NOTE 2)   | R <sub>θJA</sub>  | 50.0        |       |       |       |       |             |        | °C/W |
| Operating junction temperature range  | T <sub>J</sub>    | -65 to +125 |       |       |       |       | -65 to +150 |        | °C   |
| Storage temperature range   | T <sub>STG</sub>  | -65 to +150 |       |       |       |       |             |        | °C   |

**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 SK52C THRU SK510C

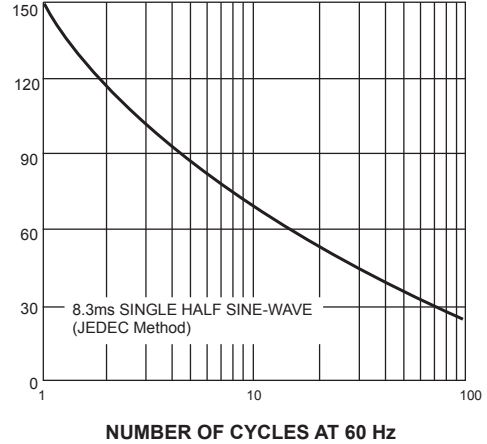
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



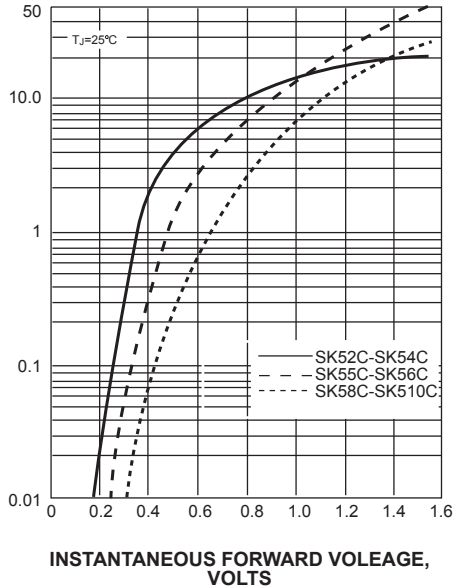
PEAK FORWARD SURGE CURRENT, AMPERES

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



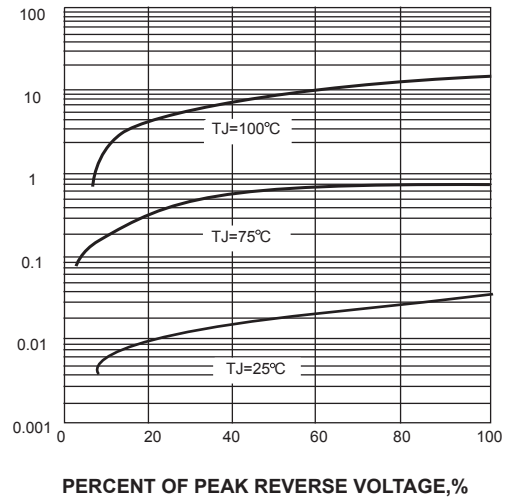
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



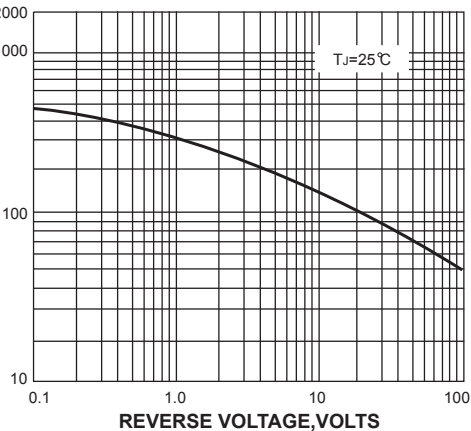
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

