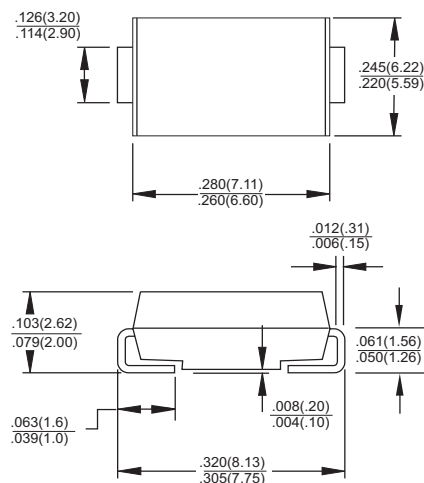




## Features

- ◇ For surface mounted application
- ◇ Metal to silicon rectifier, majority carrier conduction
- ◇ Low forward voltage drop
- ◇ Easy pick and place
- ◇ High surge current capability
- ◇ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ◇ Epitaxial construction
- ◇ High temperature soldering: 260°C / 10 seconds at terminals



## Mechanical Data

- ◇ Case: Molded plastic
- ◇ Terminals: Pure tin plated, lead free.
- ◇ Polarity: Indicated by cathode band
- ◇ Packaging: 16mm tape per EIA STD RS-481
- ◇ Weight: 0.1 gram

Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number   | Symbol          | SK 52C      | SK 53C | SK 54C | SK 55C | SK 56C | SK 59C | SK 510C | SK 515C | Units |
|---|-----------------|-------------|--------|--------|--------|--------|--------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 20          | 30     | 40     | 50     | 60     | 90     | 100     | 150     | V     |
| Maximum RMS Voltage   | $V_{RMS}$       | 14          | 21     | 28     | 35     | 42     | 63     | 70      | 105     | V     |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 20          | 30     | 40     | 50     | 60     | 90     | 100     | 150     | V     |
| Maximum Average Forward Rectified Current at $T_L$ (See Fig. 1)   | $I_{(AV)}$      | 5.0         |        |        |        |        |        |         |         | A     |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)                            | $I_{FSM}$       | 120         |        |        |        |        |        |         |         | A     |
| Maximum Instantaneous Forward Voltage @ 5.0A  | $V_F$           | 0.55        |        | 0.75   |        | 0.85   |        | 0.95    |         | V     |
| Maximum DC Reverse Current (Note 1)<br>@ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage<br>@ $T_A = 125^\circ\text{C}$ | $I_R$           | 0.5         |        |        |        | 0.3    |        |         |         | mA    |
|   |                 | 20          |        | 10     |        | 5.0    |        | mA      |         |       |
| Typical Thermal Resistance ( Note 2 )   | $R_{\theta JL}$ | 17          |        |        |        |        |        |         |         | °C/W  |
|   | $R_{\theta JA}$ | 50          |        |        |        |        |        |         |         |       |
| Operating Temperature Range   | $T_J$           | -55 to +150 |        |        |        |        |        |         |         | °C    |
| Storage Temperature Range   | $T_{STG}$       | -55 to +150 |        |        |        |        |        |         |         | °C    |

- Notes:
1. Pulse Test with PW=300 usec, 1% Duty Cycle
  2. Measured on P.C.Board with 0.6" x 0.6" (16mm x 16mm) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES ( SK52C THRU SK515C)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

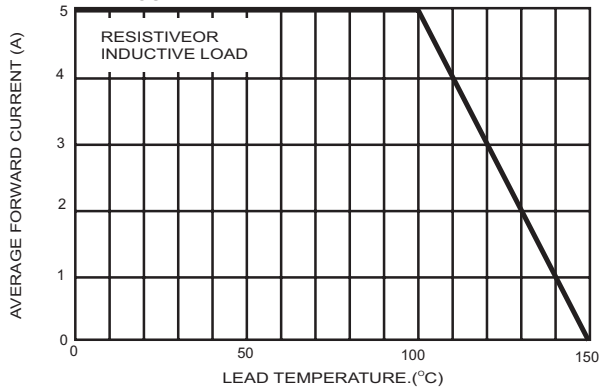


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

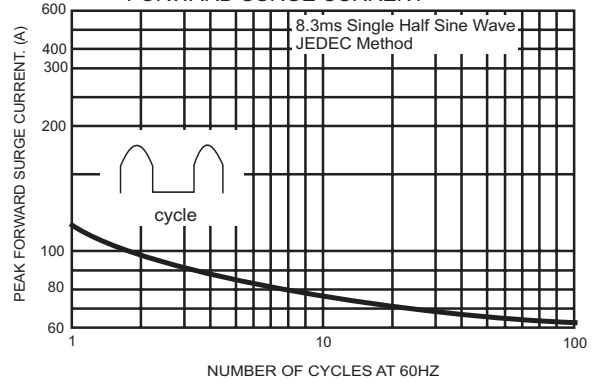


FIG.3-TYPICAL FORWARD CHARACTERISTICS

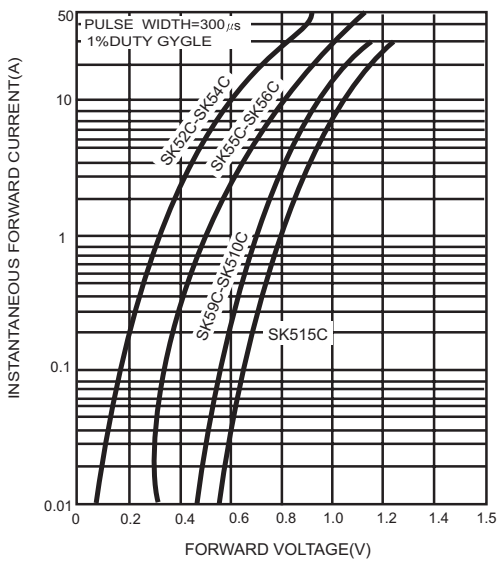


FIG.4-TYPICAL REVERSE CHARACTERISTICS

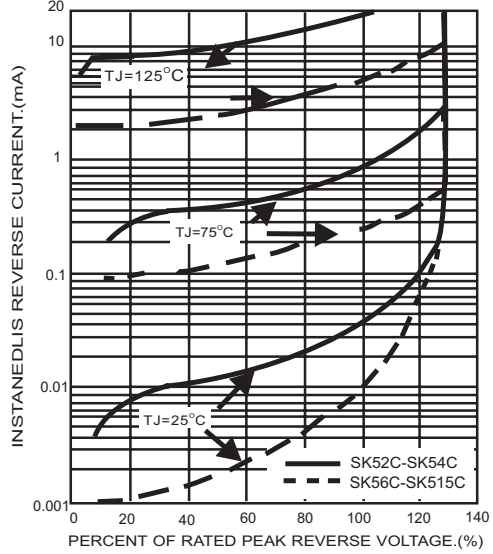


FIG.5-TYPICAL JUNCTION CAPACITANCE

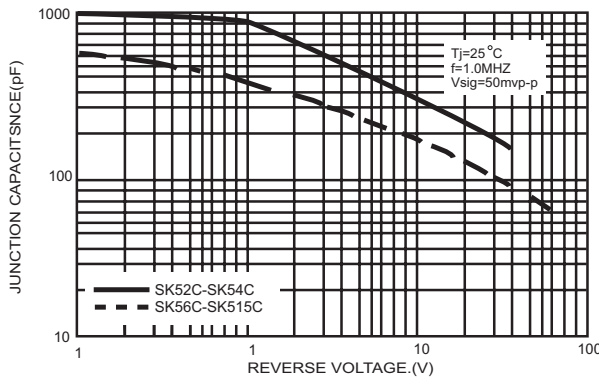


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

