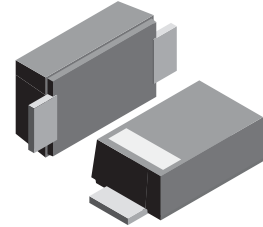


VOLTAGE RANGE: 20 - 100V
CURRENT: 5.0 A

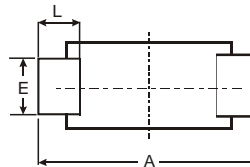
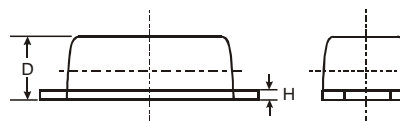
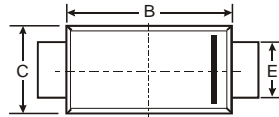


Features

- 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

Mechanical Data

- Case: SMAF, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0018 ounce, 0.064 grams



| SMAF | | | |
|----------------------|-------|------|------|
| Dim | Min | Max | Typ |
| A | 4.75 | 4.85 | 4.80 |
| B | 3.68 | 3.72 | 3.70 |
| C | 2.57 | 2.63 | 2.60 |
| D | 0.097 | 1.03 | 1.00 |
| E | 1.38 | 1.42 | 1.40 |
| H | 0.13 | 0.17 | 0.15 |
| L | 0.63 | 0.67 | 0.65 |
| All Dimensions in mm | | | |



Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

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

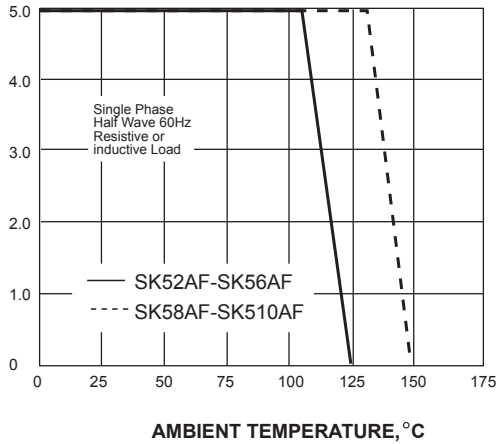
| Characteristic | Symbol | SK52AF | SK53AF | SK54AF | SK55AF | SK56AF | SK58AF | SK510AF | Unit |
|---|-------------------|-------------|--------|--------|--------|--------|-------------|---------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Maximum DC blocking voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum average forward rectified current at T _L (see fig.1) | I _(AV) | 5.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 150.0 | | | | | | | A |
| Maximum instantaneous forward voltage at 5.0A | V _F | 0.55 | | 0.70 | | 0.85 | | V | |
| Maximum DC reverse current at rated DC blocking voltage | I _R | 0.5 | | | | | | | mA |
| <small>T_A=25°C</small> <small>T_A=100°C</small> | | 20 | | | | 10 | | | |
| Typical junction capacitance (NOTE 1) | C _J | 200 | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | R _{θJA} | 50.0 | | | | | | | °C/W |
| Operating junction temperature range | T _J | -65 to +125 | | | | | -65 to +150 | | °C |
| Storage temperature range | T _{STG} | -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 SK52AF THRU SK510AF

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

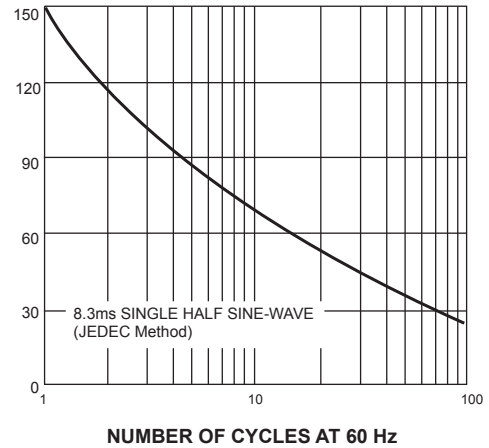
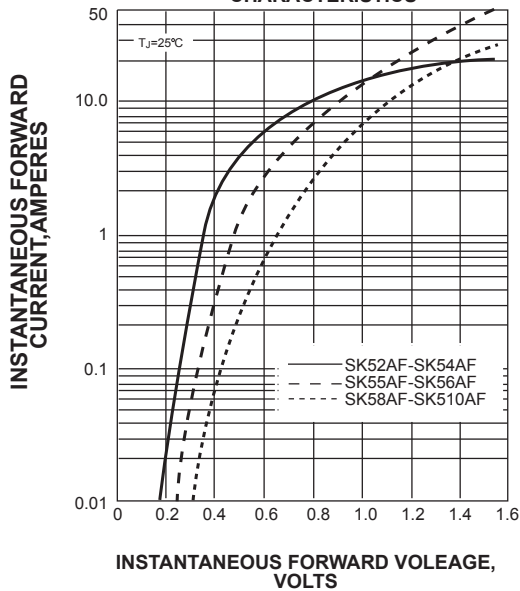


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

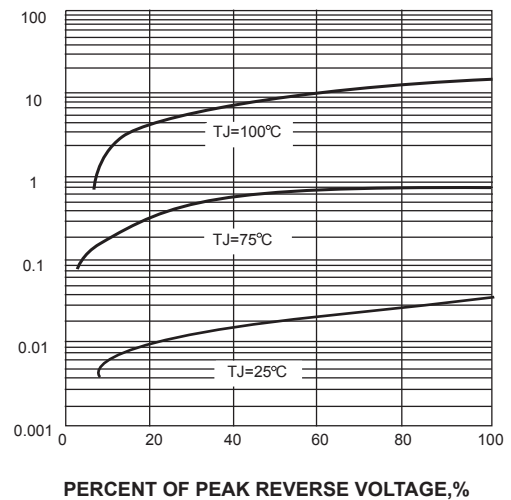
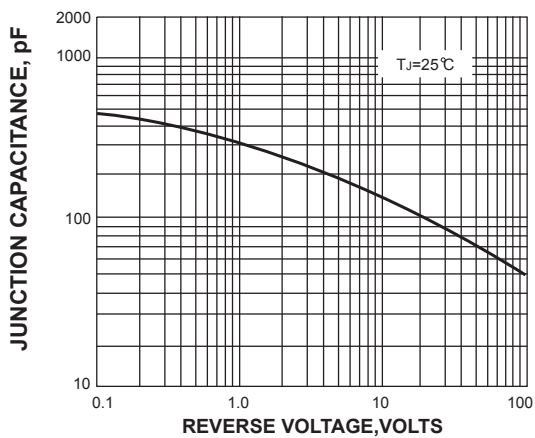


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

