



SK32B THRU SK310B

3.0 AMPS. Surface Mount Schottky Barrier Rectifiers



Voltage Range
20 to 100 Volts
Current
3.0 Amperes

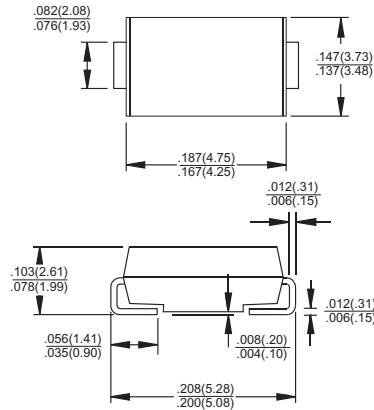
Features

- ✧ 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-O
- ✧ Epitaxial construction
- ✧ High temperature soldering: 260°C / 10 seconds at terminals

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.1 gram

SMB/DO-214AA



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 32B | SK 33B | SK 34B | SK 35B | SK 36B | SK 39B | SK 310B | Units | |
|-------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|--------|--------|-------------|--------|--------|---------|---------------------------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | V | |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 63 | 70 | V | |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | V | |
| Maximum Average Forward Rectified Current at T_L (See Fig. 1) | $I_{(AV)}$ | 3.0 | | | | | | | A | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 100 | | | | | 150 | | A | |
| Maximum Instantaneous Forward Voltage @ 3.0A | V_F | 0.5 | | 0.75 | | 0.85 | | V | | |
| Maximum DC Reverse Current (Note 1) @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$ | I_R | 0.5 | | | | | 0.6 | | mA | |
| | | 20 | | 10.0 | | 20.0 | | mA | | |
| Typical Thermal Resistance (Note 2) | $R\theta_{JL}$ | 17 | | | | | | | $^\circ\text{C}/\text{W}$ | |
| | $R\theta_{JA}$ | 75 | | | | | | | $^\circ\text{C}/\text{W}$ | |
| Operating Temperature Range | T_J | -55 to +125 | | | -55 to +150 | | | | $^\circ\text{C}$ | |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | | $^\circ\text{C}$ |

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle

2. Measured on P.C.Board with 0.4 x 0.4" (10 x 10mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (SK32B THRU SK310B)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

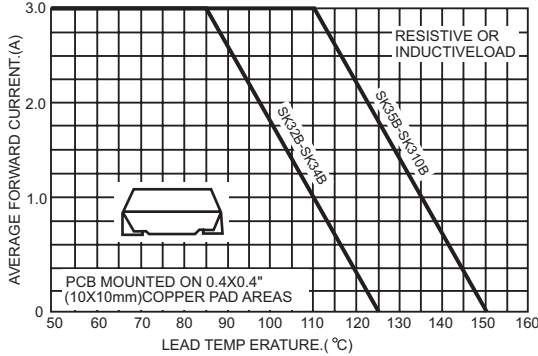


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

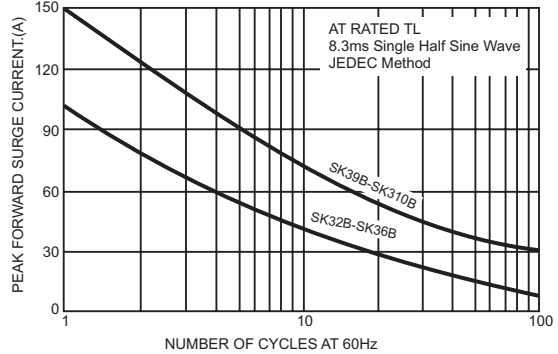


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

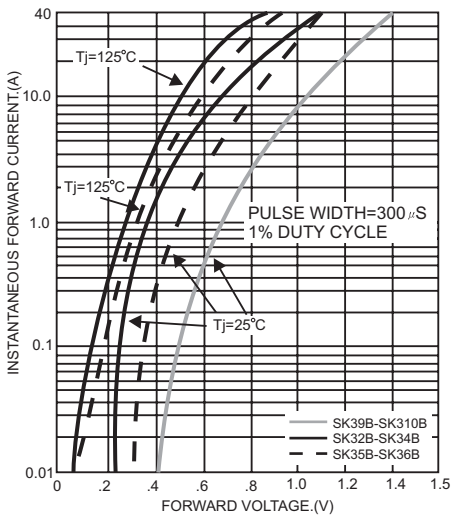


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

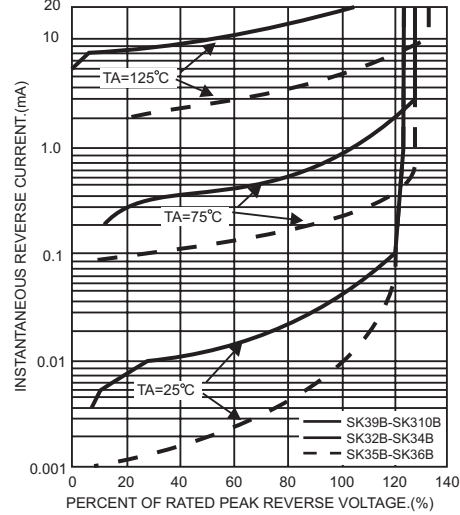


FIG. 5- TYPICAL JUNCTION CAPACITANCE

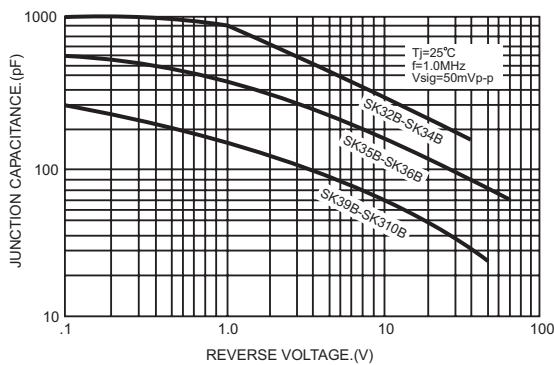


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

