

# EVVOSEMI<sup>®</sup>

THINK CHANGE DO



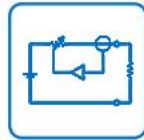
ESD



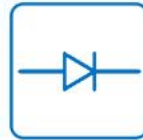
TVS



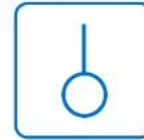
MOS



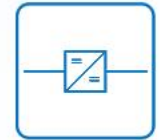
LDO



Diode



Sensor



DC-DC

## Product Specification

|              |             |                |
|--------------|-------------|----------------|
| ▶ Domestic   | Part Number | SK12B - SK115B |
| ▶ Overseas   | Part Number | SK12B - SK115B |
| ▶ Equivalent | Part Number | SK12B - SK115B |

EV is the abbreviation of name EVVO

## 1.0 AMP. Surface Mount Schottky Barrier Rectifiers



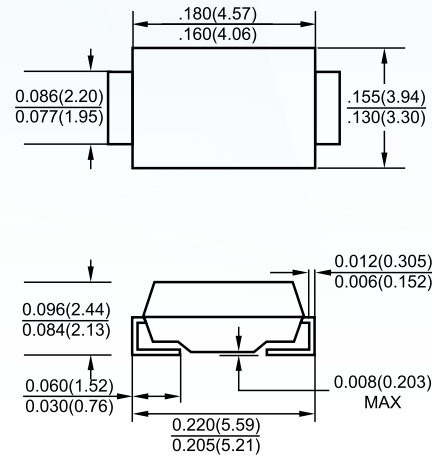
### Features

- ✧ 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
- ✧ Weight: 0.093 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 12B      | SK 13B | SK 14B | SK 15B | SK 16B      | SK 90B | SK 110B | SK 115B | 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 $T_A=75^\circ\text{C}$   | $I_{(AV)}$      | 1.0         |        |        |        |             |        |         |         | A     |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)                    | $I_{FSM}$       | 30          |        |        |        |             |        |         |         | A     |
| Maximum Instantaneous Forward Voltage @ 1.0A  | $V_F$           | 0.5         |        | 0.75   |        | 0.85        |        | 0.95    |         | V     |
| Maximum DC Reverse Current (Note 1)@ $T_A=25^\circ\text{C}$<br>at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$ | $I_R$           | 0.5         |        |        |        | 0.1         |        |         | mA      |       |
|   |                 | 10          |        | 5.0    |        | 2.0         |        |         |         |       |
| Typical Junction Capacitance (Note 2)   | $C_j$           | 110         |        |        |        |             |        |         |         | pF    |
| Typical Thermal Resistance ( Note 1 )   | $R_{\theta JL}$ | 25          |        |        |        |             |        |         |         | °C/W  |
| Operating Temperature Range   | $T_J$           | -55 to +125 |        |        |        | -55 to +150 |        |         |         | °C    |
| Storage Temperature Range   | $T_{STG}$       | -55 to +150 |        |        |        |             |        |         |         | °C    |

- Notes:
1. Thermal Resistance from Junction to Lead.
  2. Measured at 1.0 MHz and Applies Reverse Voltage of 4.0V.
  3. Measured on P.C.Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Area.

RATINGS AND CHARACTERISTIC CURVES (SK12B THRU SK115B)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

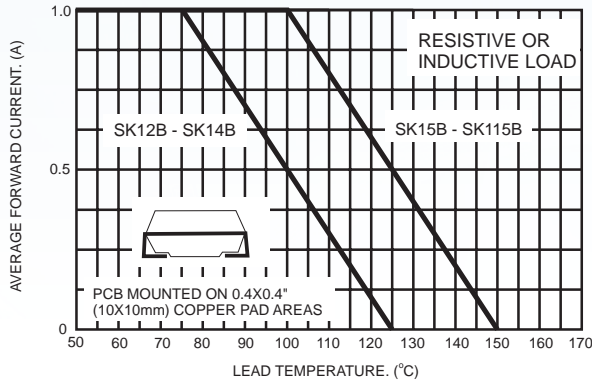


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

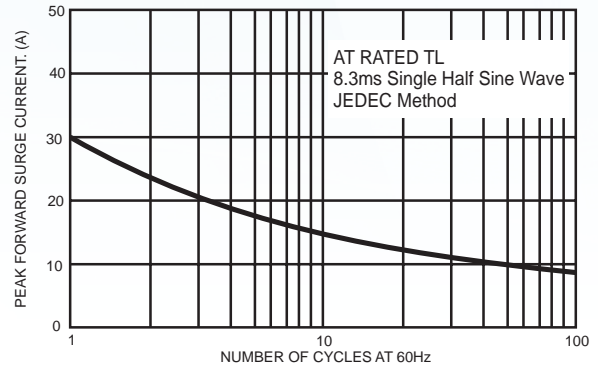


FIG.3- TYPICAL FORWARD CHARACTERISTICS

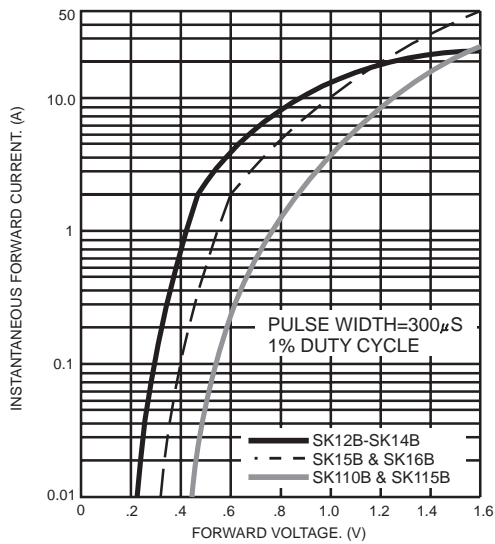


FIG.4- TYPICAL REVERSE CHARACTERISTICS

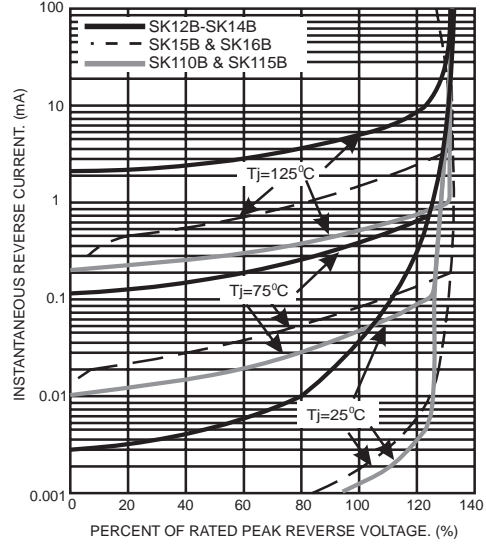


FIG.5- TYPICAL JUNCTION CAPACITANCE

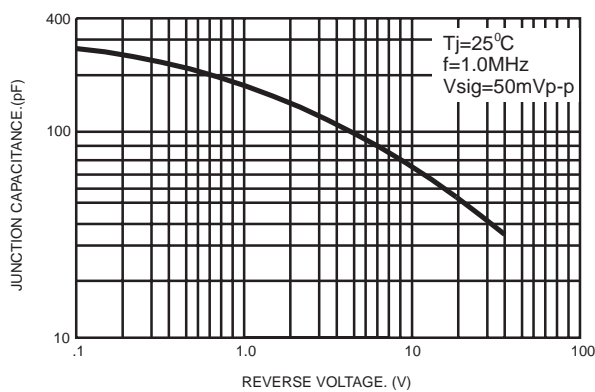
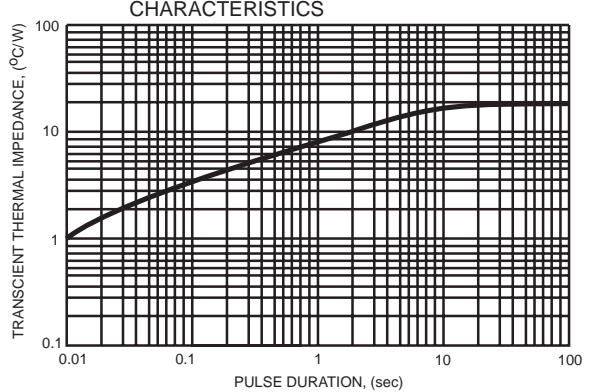


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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