## SK12B THRU SK110B

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

## Reverse Voltage - 20 to 100 V <br> Forward Current - 1 A

## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built in strain relief, ideal for automated placement
- High forward surge current capability


## Mechanical Data

- Case: JEDEC DO-214AA molded plastic body
- Terminals: leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any


Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Ratings at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified. Single phase, half-wave, 60 Hz , resistive or inductive load, for capacitive load current derate by $20 \%$.

| Parameter | Symbols | SK12B | SK13B | SK14B | SK15B | SK16B | SK18B | SK110B | Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Repetitive Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RMS Voltage | $\mathrm{V}_{\text {RMS }}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Maximum DC Blocking Voltage | VDC | 20 | 30 | 40 | 50 | 60 | 80 | 100 | $\checkmark$ |
| Maximum Average Forward Rectified Current at $\mathrm{T}_{\mathrm{L}}$ | $\mathrm{I}_{\text {(AV) }}$ | 1 |  |  |  |  |  |  | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | $\mathrm{I}_{\text {FSM }}$ | 40 |  |  |  |  |  |  | A |
| Maximum Instantaneous Forward Voltage at 1 A | $V_{F}$ | 0.45 | 0.55 |  | 0.7 |  | 0.85 |  | V |
| Maximum DC Reverse Current $\quad \mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$ | $I_{\text {R }}$ | 0.5 |  |  |  |  |  |  | mA |
| at Rated DC Blocking Voltage $\quad \mathrm{T}_{\mathrm{a}}=100^{\circ} \mathrm{C}$ |  | 6 |  |  | 5 |  |  |  |  |
| Typical Junction Capacitance ${ }^{1)}$ | C | 110 |  |  | 90 |  |  |  | pF |
| Typical Thermal Resistance ${ }^{2)}$ | $\mathrm{R}_{\text {өJA }}$ | 88 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating Junction Temperature Range | $\mathrm{T}_{\mathrm{j}}$ | -65 to + 125 |  |  | -65 to + 150 |  |  |  | ${ }^{\circ} \mathrm{C}$ |
| Storage temperature range | $\mathrm{T}_{\text {stg }}$ | -65 to + 150 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C}$ |

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FIG. 3-TYPIGAL INSTANTANEOUS FORWARD


INSTANTANEOUS FORWARD WOLEAGE, WOLTS

FIG. 5-TYPICAL JUACTION CA PACITANCE


FIG. 2-MAXIMUM MONREPETITNE PEAK FORNARD SURGE C URRENT


FIG . 4-TYPIGAL REWERSE CHARAC TERISTIGS


FIG. $6-$ TYPICAL TRANSIENT THERMAL IMPEDANCE



[^0]:    ${ }^{1)}$ Measured at 1 MHz and applied reverse voltage of 4 V D.C.
    ${ }^{2)}$ P.C.B. mounted with $0.2 \times 0.2(5 \times 5 \mathrm{~mm})$ copper pad areas

