Technical Data
Data Sheet N0089, Rev.A

# SB3100 SCHOTTKY RECTIFIER

DO-201AD

## Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

## Circuit Diagram


## Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

## Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | - | 100 | V |
| Average Rectified Forward Current | $I_{F\ (AV)}$ | 50% duty cycle @$T_C$ =105°C, rectangular wave form | 3 | A |
| Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$ | 8.3 ms, half Sine pulse, $T_C$ =25°C | 110 | A |

## Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|---|---|---|---|---|---|
| Forward Voltage Drop* | $V_{F1}$ | @ 3A, Pulse, $T_J$ = 25 °C | 0.76 | 0.79 | V |
| | $V_{F2}$ | @ 3A, Pulse, $T_J$ = 125 °C | 0.65 | 0.70 | V |
| Reverse Current* | $I_{R1}$ | @$V_R$ = Rated $V_R$, Pulse, $T_J$ = 25 °C | 0.01 | 1.0 | mA |
| | $I_{R2}$ | @$V_R$ = Rated $V_R$, Pulse, $T_J$ = 125 °C | 0.1 | 10 | mA |
| Junction Capacitance | $C_T$ | @$V_R$ = 5V, $T_C$ = 25 °C<br>$f_{SIG}$ = 1MHz | 90 | 250 | pF |

* Pulse width < 300 µs, duty cycle < 2%

## Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|---|---|---|---|
| Junction Temperature | $T_J$ | - | -55 to +150 | °C |
| Storage Temperature | $T_{stg}$ | - | -55 to +150 | °C |
| Typical Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 8 | °C/W |
| Approximate Weight | wt | - | 1.02 | g |

## Ratings and Characteristics Curves

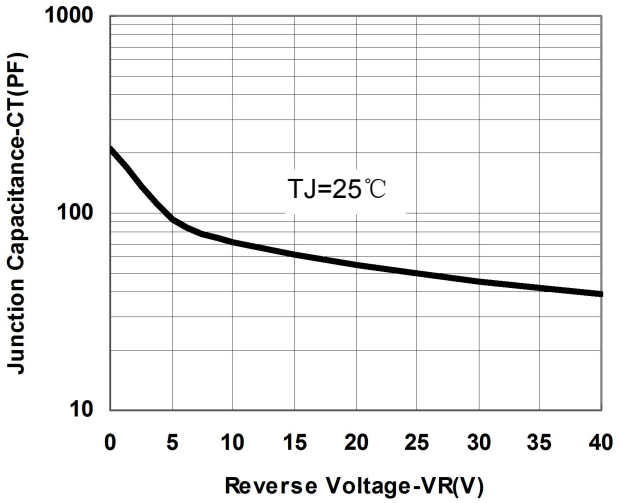


Fig.1-Typical Junction Capacitance

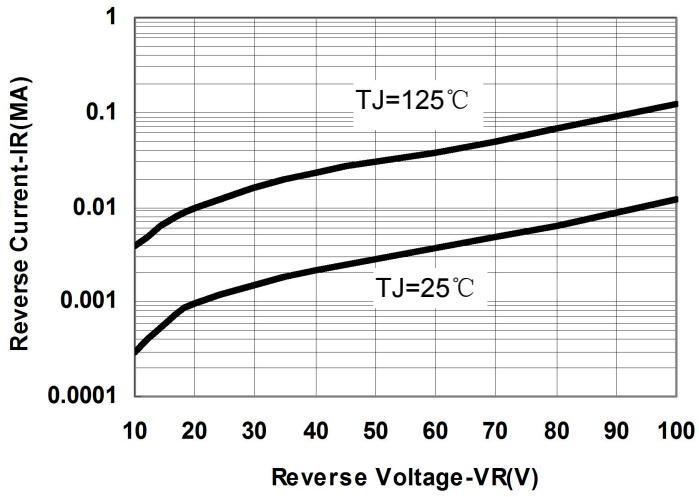


Fig.2-Typical Reverse Current

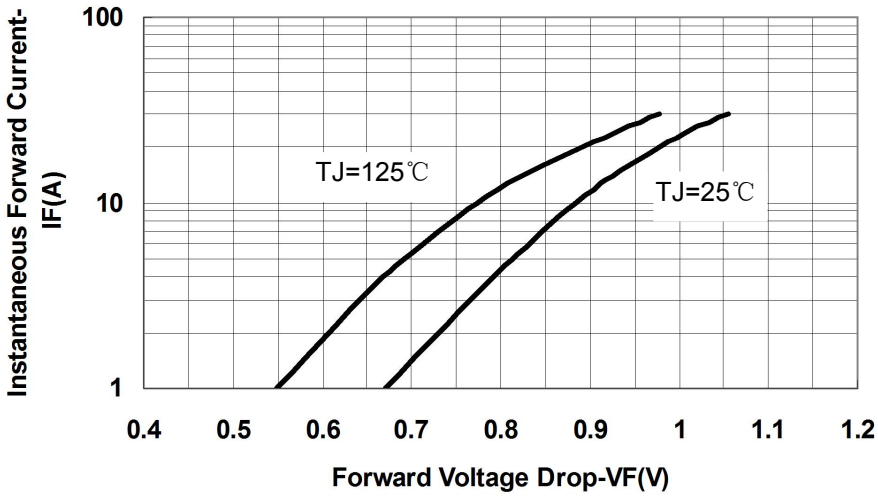


Fig.3-Typical Forward Voltage Drop Characteristics

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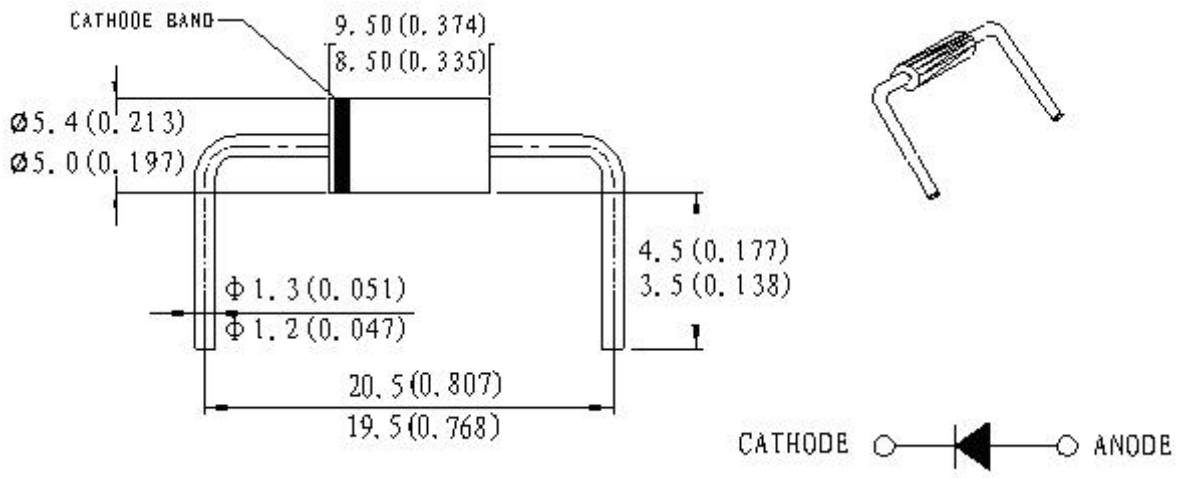
RoHS

## Mechanical Dimensions DO-201AD(C-02)(Millimeters/Inches)

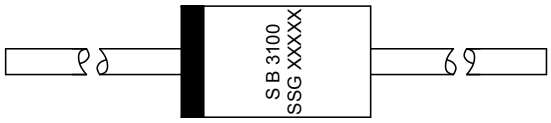



## Ordering Information

| Device | Package | Shipping |
|---|---|---|
| SB3100(C-02) | DO-201AD(C-02)<br>(Pb-Free) | 200pcs / bag |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram




Where XXXXX is YYWWL

| | |
|---|---|
| SB3100 | = Part Name |
| SSG | = SSG |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

Cautions: Molding resin
Epoxy resin UL:94V-0

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