

SB5100 SCHOTTKY RECTIFIER

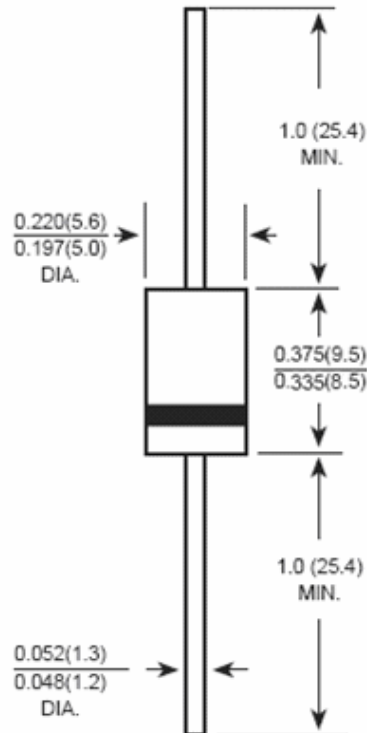
Applications:

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

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

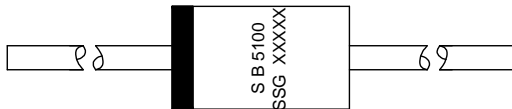
Mechanical Dimensions: In Inches / mm



DO-201AD



Marking Diagram:



Where XXXXX is YYWWL

- SB = Device Type
- 5 = Forward Current (5A)
- 100 = Reverse Voltage (100V)
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|--------|-----------------------|-----------------|
| SB5100 | DO-201AD (Pb-Free) | 1250 pcs / tape |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.



Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

| Characteristic | Symbol | SB5100 | Unit |
|---|---------------------------------|--------------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 100 | V |
| Maximum RMS Voltage | V_{RMS} | 70 | V |
| Average Rectified Output Current (Note 1) @ $T_A = 105^\circ\text{C}$ | $I_{F(AV)}$ | 5.0 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 120 | A |
| Forward Voltage @ $I_F = 5.0\text{A}, T_A = 25^\circ\text{C}$ @ $I_F = 5.0\text{A}, T_A = 125^\circ\text{C}$ | V_{FM} | 0.85 0.70 | V |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$ | I_{RM} | 0.5 10 | mA |
| Maximum Junction Capacitance (Note 2) | C_j | 250 | pF |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 25 | K/W |
| Storage Temperature Range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |
| Case Style | DO-201AD | | |

Note:1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1MHz and applied reverse voltage of 5.0V D.C.

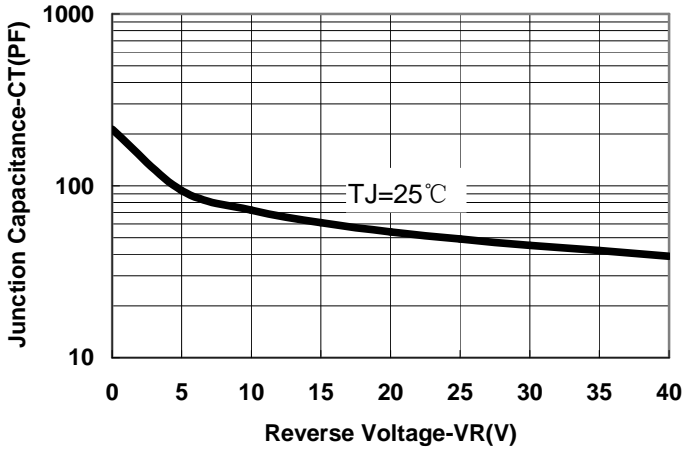


Fig.1-Typical Junction Capacitance Vs.Reverse Voltage

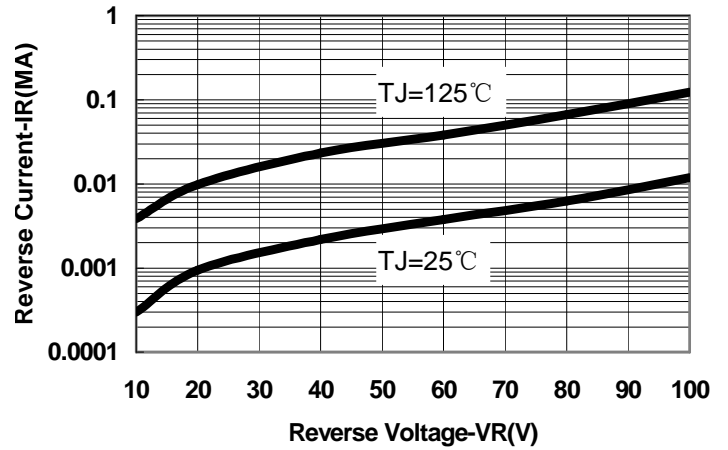


Fig.2-Typical Values Of Reverse Current Vs.Reverse Voltage

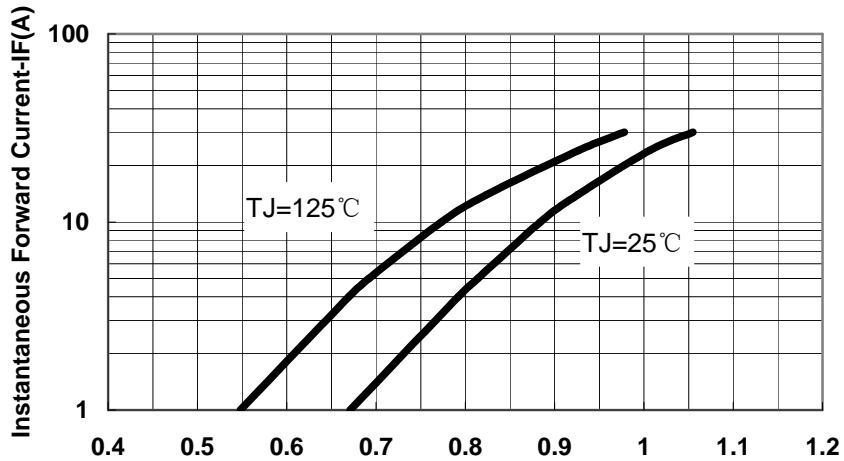


Fig.3-Typical Forward Voltage Drop Characteristics



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