

SB2100 SCHOTTKY RECTIFIER

Applications:

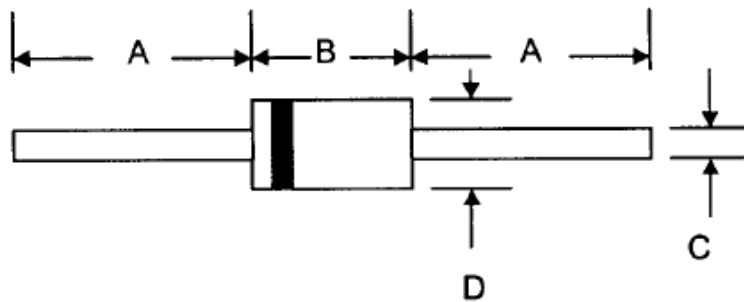
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

Features:

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 50A Peak
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability
- Classification Rating 94V-0
- Green Products in Compliance with the RoHS Directive
- 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 mm



| DO-15 | | |
|----------------------|------|-------|
| Dim | Min | Max |
| A | 25.4 | — |
| B | 5.50 | 7.62 |
| C | 0.71 | 0.864 |
| D | 2.60 | 3.60 |
| All Dimensions in mm | | |

DO-15



Marking Diagram:



Where XXXXX is YYWWL

- SB = Device Type
- 2 = Forward Current (2A)
- 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 |
|--------|--------------------|----------------|
| SB2100 | DO-15 (Pb-Free) | 3000pcs / 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:

| Characteristics | Symbol | Condition | Max. | Units |
|--|-------------|--|------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 100 | V |
| Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @TC =100°C rectangular wave form(L=0.375") | 2.0 | A |
| Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3 ms, half Sine pulse | 50 | A |



Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|----------------------|----------|---|------|-------|
| Forward Voltage Drop | V_{F1} | @ 2A, Pulse, $T_J = 25^\circ\text{C}$ | 0.85 | V |
| Reverse Current | I_{R1} | @ $V_R = \text{rated VR}$ $T_J = 25^\circ\text{C}$ | 0.5 | mA |
| | I_{R2} | @ $V_R = \text{rated VR}$ $T_J = 100^\circ\text{C}$ | 20 | mA |
| Junction Capacitance | C_j | @ $V_R = 5.0\text{ V}$, $T_c = 25^\circ\text{C}$ $f_{\text{SIG}} = 1\text{MHz}$ | 140 | pF |

* Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|-----------------------|--------------|---------------|--------------------|
| Junction Temperature | T_J | - | -55 to +150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta\text{JC}}$ | DC operation | 8 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 0.093 | g |
| Case Style | DO-15 | | | |

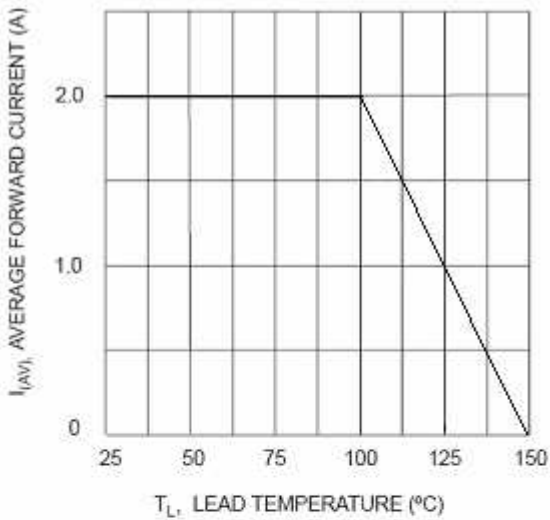


Fig. 1 Forward Current Derating Curve

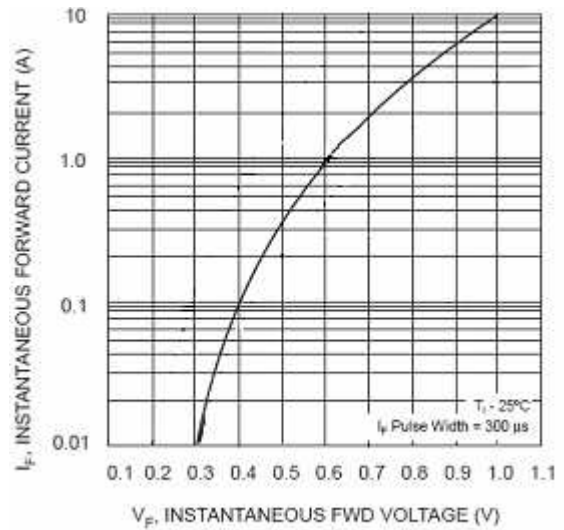


Fig. 2 Typ. Forward Characteristics

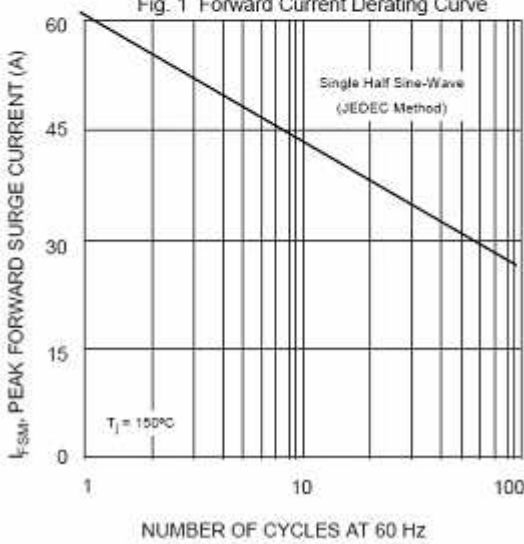


Fig. 3 Max Non-Repulsive Peak Fwd Surge Current

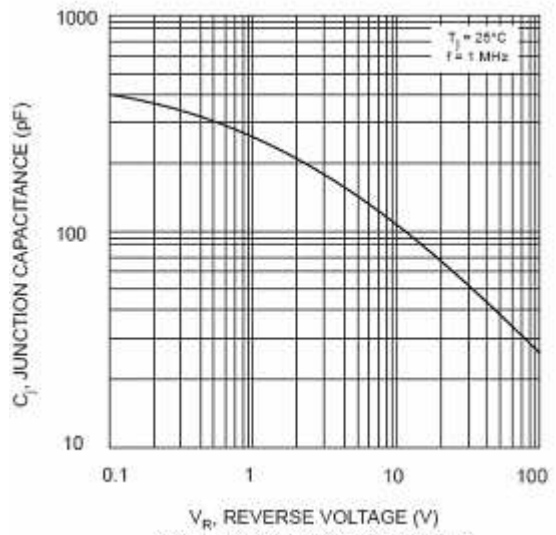


Fig. 4 Typical Junction Capacitance

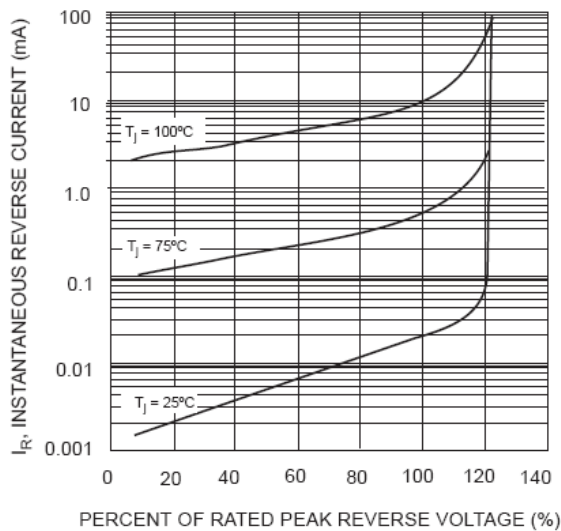


Fig. 5 Typical Reverse Characteristics



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