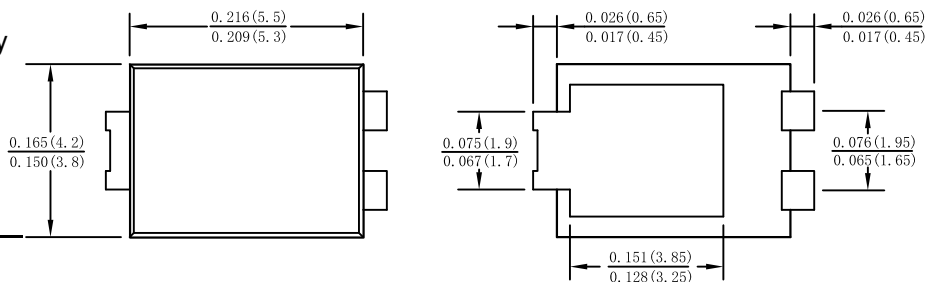




### Features

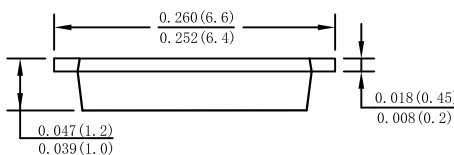
- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability
- Plastic material-UL flammability 94V-0

Case: TO-277B



### Mechanical Data

- Case: TO-277B, molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Meet MSL level 1, per J-STD-020, LF Maximum peak of 260 °C
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version



dimensions in inches and (millimeters)

### 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%.

| Parameter  | Symbol                             | SB1545L                              |                                | Unit               |
|--|------------------------------------|--------------------------------------|--------------------------------|--------------------|
| Peak Repetitive Reverse Voltage  | $V_{RRM}$                          | 45                                   |                                | V                  |
| Working Peak Reverse Voltage   | $V_{RWM}$                          | 45                                   |                                | V                  |
| DC blocking voltage  | $V_{DC}$                           | 45                                   |                                | V                  |
| RMS Rectified Voltage  | $V_{R(RMS)}$                       | 32                                   |                                | V                  |
| Average Rectified Output Current (Note1)   | $I_F(AV)$                          | 15.0                                 |                                | A                  |
| Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load (JEDEC Method) (Note2)  | $I_{FSM}$                          | 250                                  |                                | A                  |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ )   | $I^2t$                             | 259.375                              |                                | A <sup>2</sup> s   |
| Forward Voltage Drop<br>$T_A = 25^\circ\text{C}$ @ $I_F = 1A$<br>$T_A = 25^\circ\text{C}$ @ $I_F = 5A$<br>$T_A = 25^\circ\text{C}$ @ $I_F = 10A$<br>$T_A = 25^\circ\text{C}$ @ $I_F = 15A$ | $V_{FM}$                           | Typ.<br>0.29<br>0.37<br>0.42<br>0.47 | Max.<br>-<br>-<br>0.47<br>0.52 | V                  |
| Peak Reverse Current<br>At Rated DC Blocking Voltage<br>$T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$  | $I_R$                              | 0.3<br>15                            |                                | mA                 |
| Typical Thermal Resistance<br>Junction to Ambient  | $R_{\theta JA}$<br>$R_{\theta JL}$ | 110<br>3.5                           |                                | $^\circ\text{C/W}$ |
| Operating junction temperature range   | $T_J$                              | -55 to +150                          |                                | $^\circ\text{C}$   |
| storage temperature range  | $T_{STG}$                          | -55 to +150                          |                                | $^\circ\text{C}$   |

Note: 1. Valid Provided that are kept at ambient temperature at a distance of 9.5mm from the case.

2. Fr-4pcb. 2oz. Copper, minimum recommend pad layout .18.8mm×14.4. Anode pad dimensions 5.6mm×14.4mm.



Fig.1 - Forward Current Derating Curve

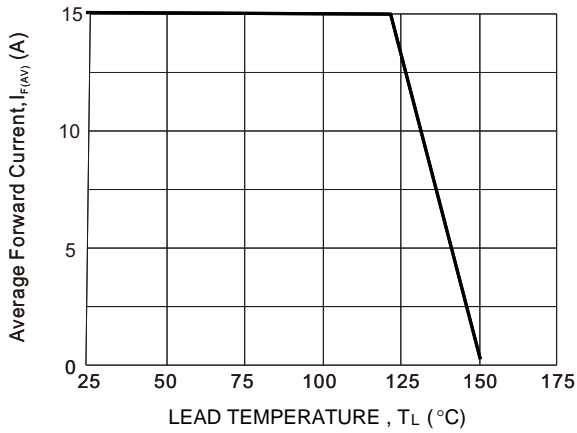


Fig. 2 Typical Forward Characteristics (per leg)

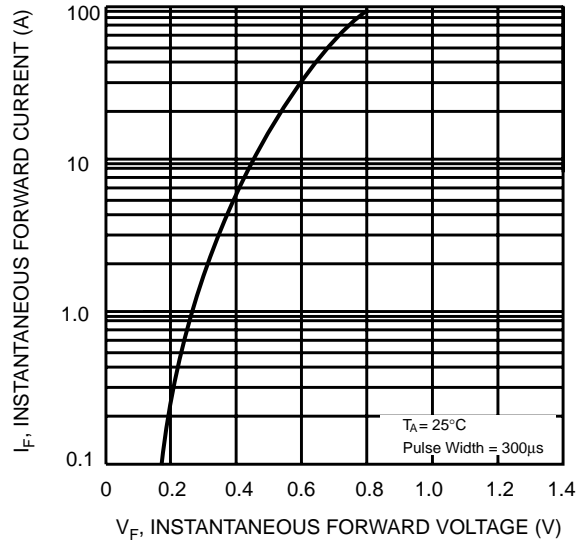


Fig. 3 Maximum Peak Forward Surge Current (per leg)

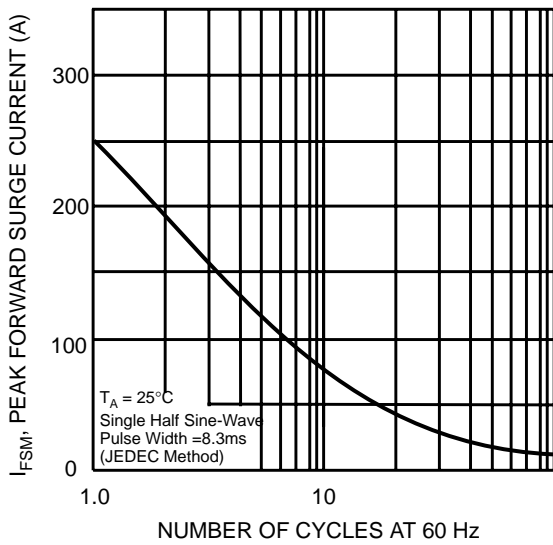


Fig4: Typical Reverse Characteristics

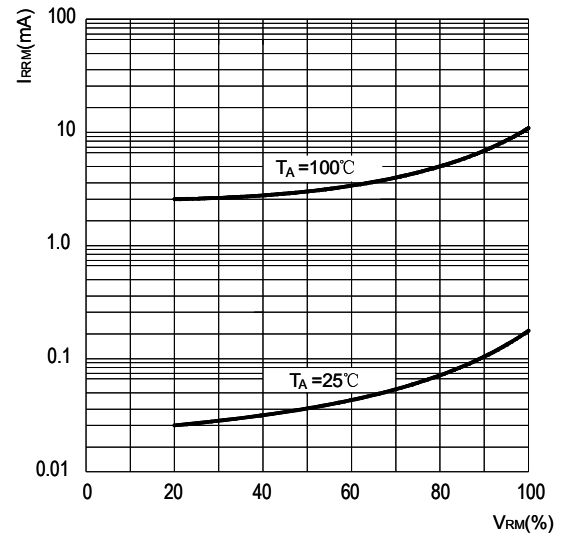
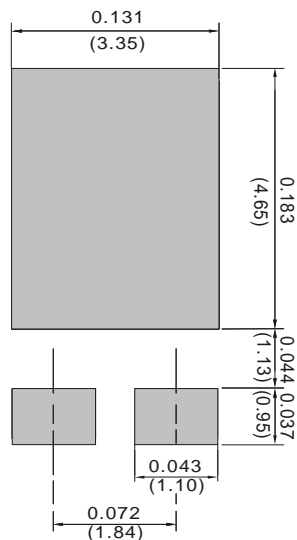


FIG.5 MOUNTING PAD LAYOUT





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