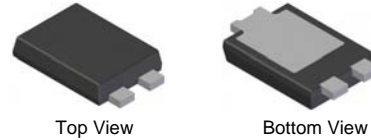


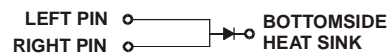
#### Features

- Schottky Barrier Chip
- Bypass Diodes for Solar Panels
- High Junction Temperature
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability



#### Mechanical Data

- Case: TO-277B Molded Plastic "Green" Molding Compound
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version



Note: Pins Left & Right must be electrically connected at the printed circuit board.

#### 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                             | SB 0845L    | SB 0850L | SB 0860L | SB 0880L | SB 08100L | SB 08150L | SB 08200L | Unit                 |                           |
|---|------------------------------------|-------------|----------|----------|----------|-----------|-----------|-----------|----------------------|---------------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$                          |             |          |          |          |           |           |           |                      |                           |
| Working Peak Reverse Voltage  | $V_{RWM}$                          | 45          | 50       | 60       | 80       | 100       | 150       | 200       | V                    |                           |
| DC blocking voltage   | $V_{DC}$                           |             |          |          |          |           |           |           |                      |                           |
| RMS Rectified Voltage   | $V_{R(RMS)}$                       | 32          | 35       | 42       | 56       | 70        | 105       | 140       | V                    |                           |
| Average Rectified Output Current (Note1)  | $I_O$                              | 8.0         |          |          |          |           |           |           | A                    |                           |
| Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load (JEDEC Method) (Note2) | $I_{FSM}$                          | 140         |          |          |          |           |           |           | A                    |                           |
| $I^2 t$ Rating for Fusing ( $t < 8.3\text{ms}$ )  | $I^2 t$                            | 81.3        |          |          |          |           |           |           | $\text{A}^2\text{s}$ |                           |
| Forward Voltage Drop $T_A=25^\circ\text{C}$ @ $I_F=8\text{A}$   | $V_{FM}$                           | 0.50        | 0.55     | 0.75     | 0.90     |           |           |           | V                    |                           |
| Peak Reverse Current $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage $T_A=100^\circ\text{C}$                | $I_R$                              | 0.3         |          |          |          |           |           |           | 15                   | mA                        |
| Typical Thermal Resistance Junction to Ambient  | $R_{\theta JA}$<br>$R_{\theta JL}$ | 80          |          |          |          |           |           |           | 15                   | $^\circ\text{C}/\text{W}$ |
| 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×14.4mm. Anode pad dimensions 5.6mm×14.4mm.

FIG.1 - FORWARD CURRENT DERATING CURVE

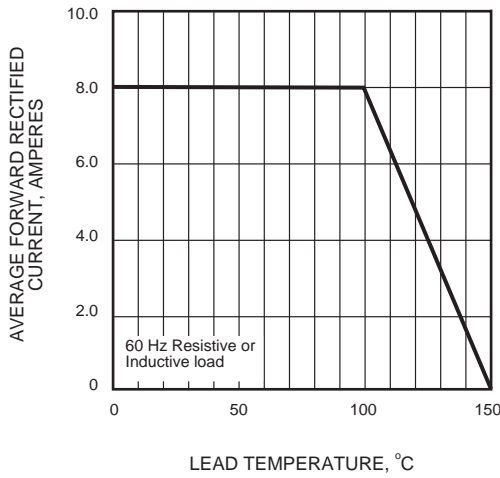


FIG.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

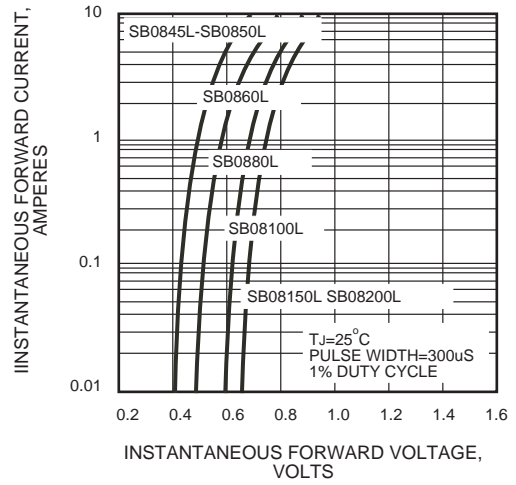


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

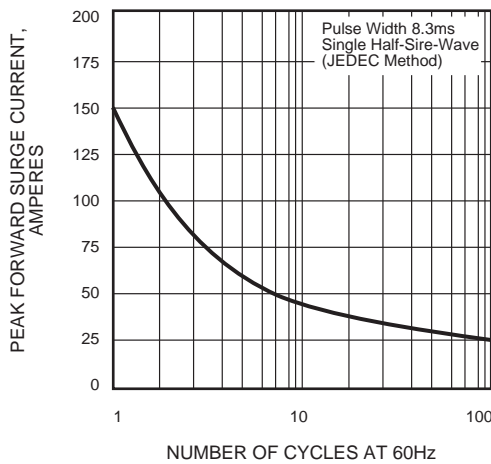


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

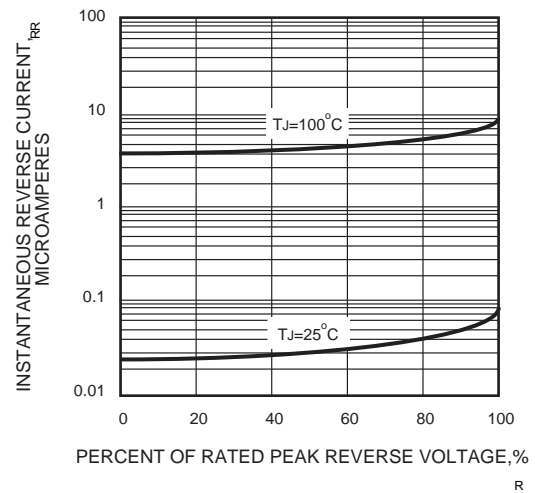
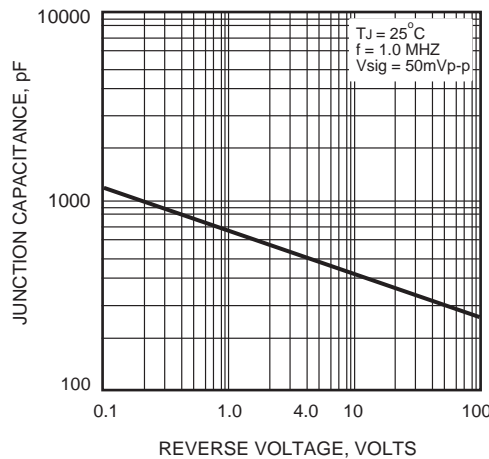


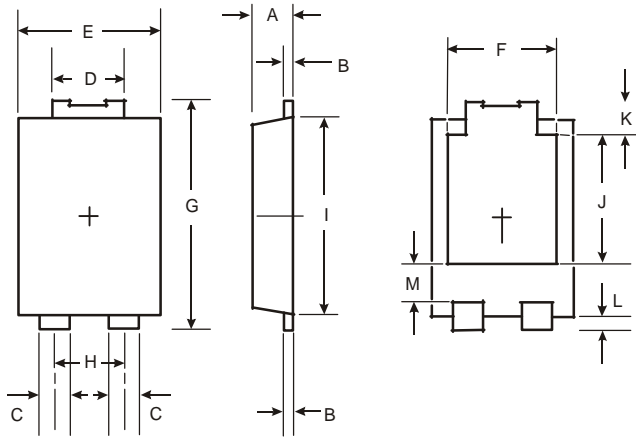
FIG.5 - TYPICAL JUNCTION CAPACITANCE



### Ordering Information

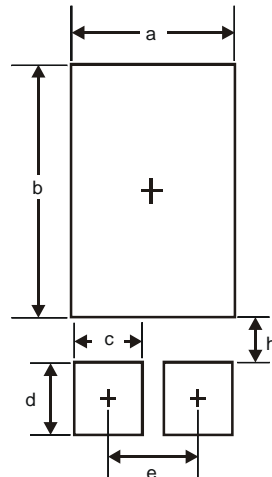
| Part Number | Case    | Packaging        |
|-------------|---------|------------------|
| SB08**L     | TO-277B | 5000/Tape & Reel |

### Outline Dimensions



| TO-277B              |           |      |
|----------------------|-----------|------|
| Dim                  | Min       | Max  |
| A                    | 1.05      | 1.15 |
| B                    | 0.33      | 0.43 |
| C                    | 0.80      | 0.99 |
| D                    | 1.70      | 1.88 |
| E                    | 3.90      | 4.05 |
| F                    | 3.054 Typ |      |
| G                    | 6.40      | 6.60 |
| H                    | 1.84 Typ  |      |
| I                    | 5.30      | 5.45 |
| J                    | 3.549 Typ |      |
| K                    | 0.75      | 0.95 |
| L                    | 0.50      | 0.65 |
| M                    | 1.10      | 1.41 |
| All Dimensions in mm |           |      |

### Suggested Pad Layout



| Dimensions | Value (in mm) |
|------------|---------------|
| a          | 3.360         |
| b          | 4.860         |
| c          | 1.390         |
| d          | 1.400         |
| e          | 1.840         |
| h          | 0.852         |