



## Schottky Barrier Rectifier

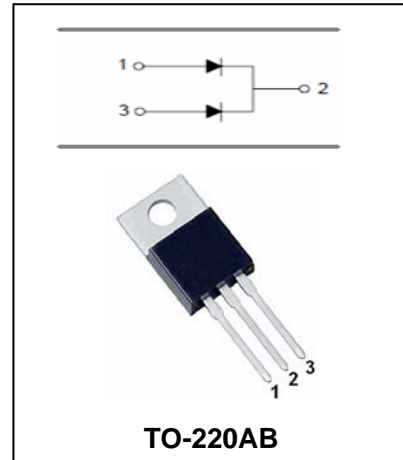
## SBL1030CT-SBL10100CT

### FEATURES

- Metal-Semiconductor Junction With Guard Ring.
- Epitaxial Construction.
- Low Forward Voltage Drop, Low Switching Losses.
- High Surge Capacity.
- For Use In Low Voltage, High Frequency Inverters Free Wheeling, and Polarity Protection Applications.
- The Plastic Material Carries U/L Recognition 94V-0.



Lead-free



### MAXIMUM RATING operating temperature range applies unless otherwise specified

| Sym bol            | Parameter   | SBL 1030 CT | SBL 1035 CT | SBL 1040 CT | SBL 1045 CT | SBL 1050 CT | SBL 1060 CT | SBL 1080 CT | SBL 10100 CT | Unit               |
|--------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------------|
| $V_{RRM}$          | Recurrent Peak Reverse Voltage  | 30          | 35          | 40          | 45          | 50          | 60          | 80          | 100          | V                  |
| $V_{RMS}$          | RMS Voltage   | 21          | 25          | 28          | 32          | 35          | 42          | 56          | 70           | V                  |
| $V_{DC}$           | DC Blocking Voltage   | 30          | 35          | 40          | 45          | 50          | 60          | 80          | 100          | V                  |
| $I_{F(AV)}$        | Average Forward Rectified Current Per $T_A=107^\circ\text{C}$                     | 10          |             |             |             |             |             |             |              | A                  |
| $I_{FSM}$          | Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load | 175         |             |             |             |             |             |             |              | A                  |
| $R_{\theta JC}$    | Thermal Resistance(Note 1)  | 3.0         |             |             |             |             |             |             |              | $^\circ\text{C/W}$ |
| $T_j$<br>$T_{stg}$ | Operating Junction and Storage Temperature Range                                  | -55 to +150 |             |             |             |             |             |             |              | $^\circ\text{C}$   |

Note: 1. Thermal resistance junction to case.

### ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Parameter       | Symbol | Test conditions   | SBL1030CT-SBL1045CT | SBL1050CT-SBL1060CT | SBL1080CT-SBL10100CT | UNIT |
|-----------------|--------|---|---------------------|---------------------|----------------------|------|
|                 |        |   | MAX                 |                     |                      |      |
| Forward Voltage | $V_F$  | $I_F=5\text{A}$   | 0.55                | 0.70                | 0.85                 | V    |
| Reverse Current | $I_R$  | $V_R=V_{RRM}, T_A=25^\circ\text{C}$<br>$V_R=V_{RRM}, T_A=100^\circ\text{C}$ | 0.5<br>50           |                     |                      | mA   |



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TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

FIG.1 – PEAK FORWARD SURGE CURRENT

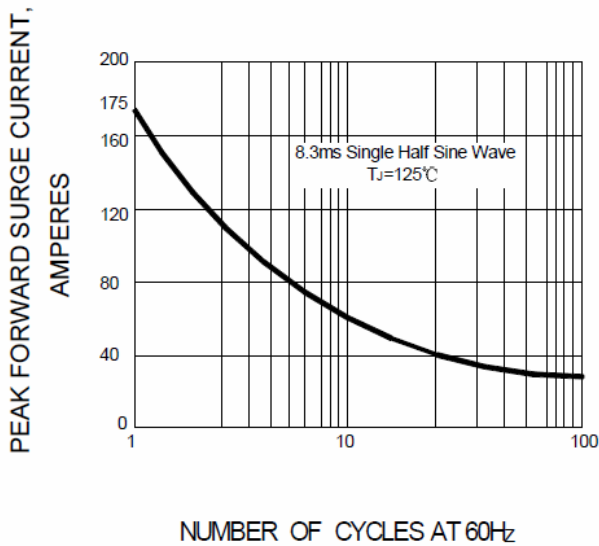


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

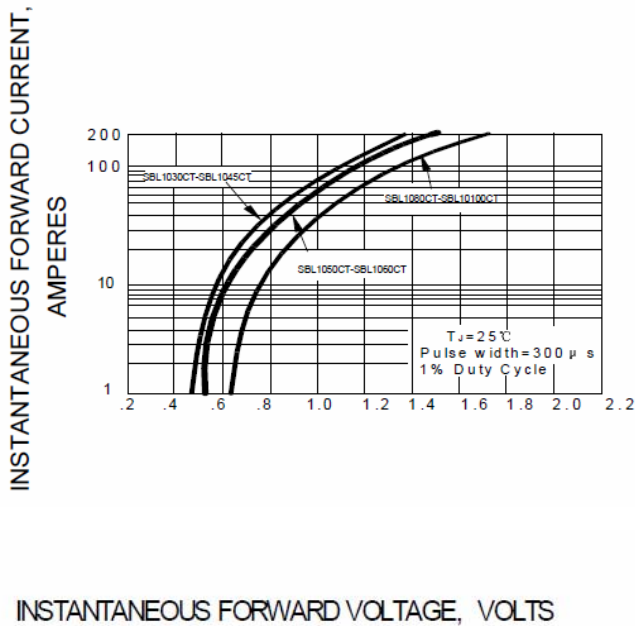


FIG.2 – FORWARD DERATING CURVE

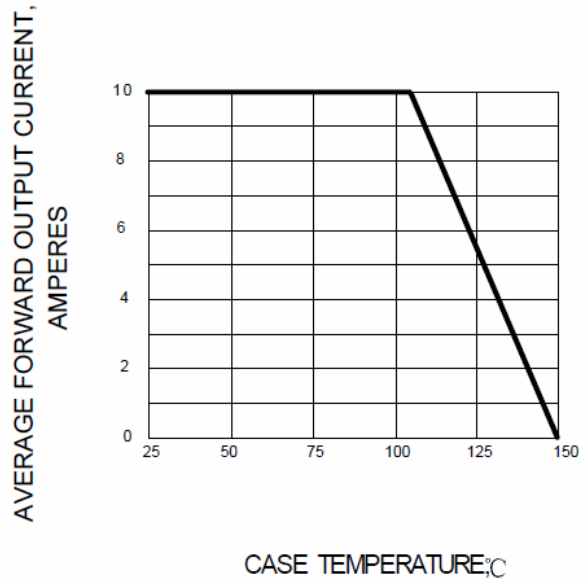
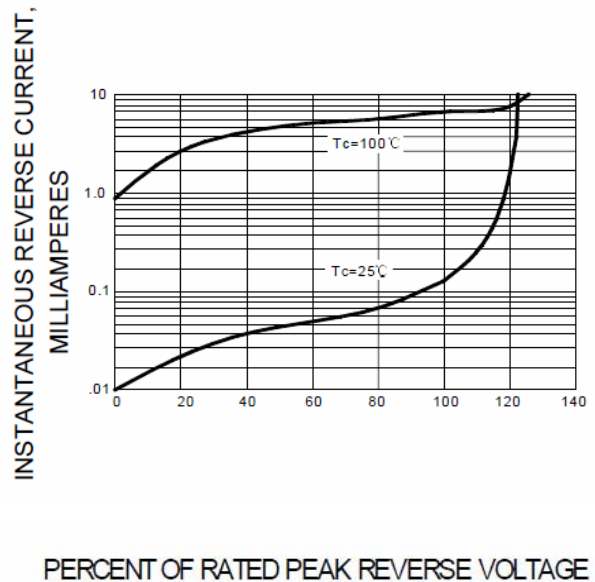


FIG.4 – TYPICAL REVERSE CHARACTERISTIC





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**PACKAGE OUTLINE**

Plastic surface mounted package

TO-220AB

