

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 30 --- 100 V  
CURRENT: 20 A

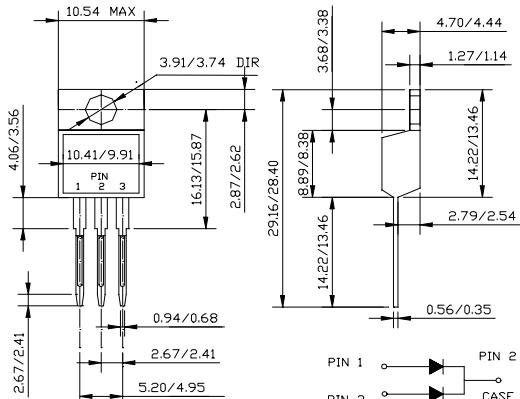
#### FEATURES

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC TO-220AB, molded plastic
- ◇ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.08 ounce, 2.24 grams
- ◇ Mounting position: Any

#### TO-220AB



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

|  |                 | SBL<br>2030CT | SBL<br>2035CT | SBL<br>2040CT | SBL<br>2045CT | SBL<br>2050CT | SBL<br>2060CT | SBL<br>2080CT | SBL<br>20100CT | UNITS |  |  |  |  |  |  |
|--|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-------|--|--|--|--|--|--|
| Maximum recurrent peak reverse voltage   | $V_{RRM}$       | 30            | 35            | 40            | 45            | 50            | 60            | 80            | 100            | V     |  |  |  |  |  |  |
| Maximum RMS voltage  | $V_{RMS}$       | 21            | 25            | 28            | 32            | 35            | 42            | 56            | 70             | V     |  |  |  |  |  |  |
| Maximum DC blocking voltage  | $V_{DC}$        | 30            | 35            | 40            | 45            | 50            | 60            | 80            | 100            | V     |  |  |  |  |  |  |
| Maximum average forward rectified current<br>$T_c=100^\circ C$                                     | $I_{F(AV)}$     | 20            |               |               |               |               |               |               |                | A     |  |  |  |  |  |  |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load            | $I_{FSM}$       | 250           |               |               |               |               |               |               |                | A     |  |  |  |  |  |  |
| Maximum instantaneous forward voltage<br>@ 10 A  | $V_F$           | 0.55          |               | 0.75          |               | 0.85          |               | V             |                |       |  |  |  |  |  |  |
| Maximum reverse current<br>$@T_c=25^\circ C$<br>at rated DC blocking voltage<br>$@T_c=100^\circ C$ | $I_R$           | 1.0<br>50     |               |               |               |               |               |               |                | mA    |  |  |  |  |  |  |
| Typical thermal resistance (Note1)   | $R_{\theta JC}$ | 1.5           |               |               |               |               |               |               |                | °C/W  |  |  |  |  |  |  |
| Operating junction temperature range   | $T_J$           | -55--- + 125  |               |               |               |               |               |               |                | °C    |  |  |  |  |  |  |
| Storage temperature range  | $T_{STG}$       | -55--- + 150  |               |               |               |               |               |               |                | °C    |  |  |  |  |  |  |

Note: 1. Thermal resistance junction to case.

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# RATINGS AND CHARACTERISTIC CURVES

SBL2030CT---SBL20100CT

FIG.1 – PEAK FORWARD SURGE CURRENT

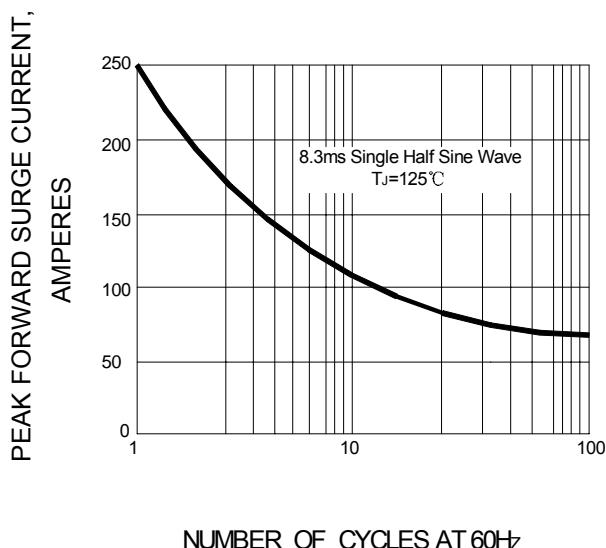


FIG.2 – FORWARD DERATING CURVE

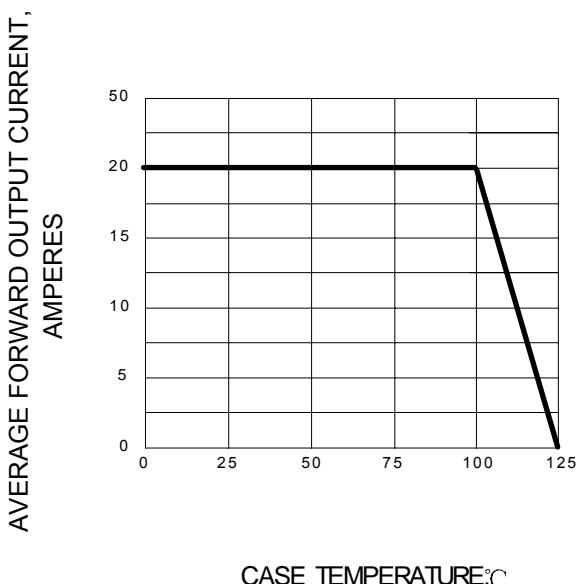


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

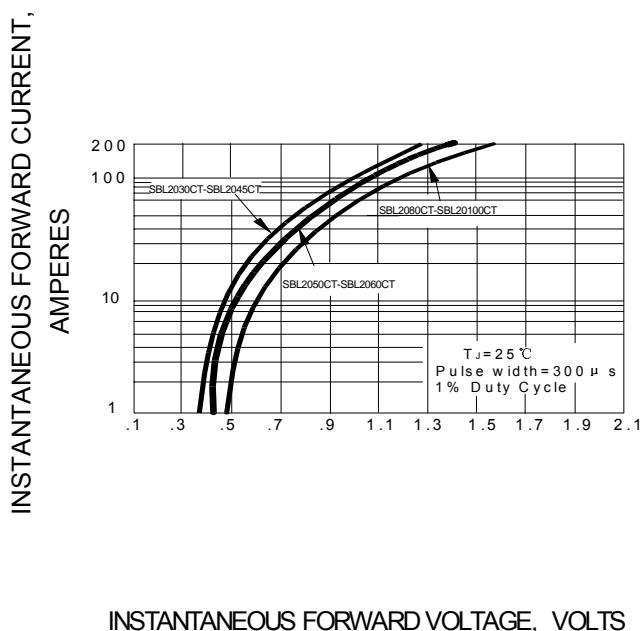


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

