

### SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 --- 100 V  
CURRENT: 5.0 A

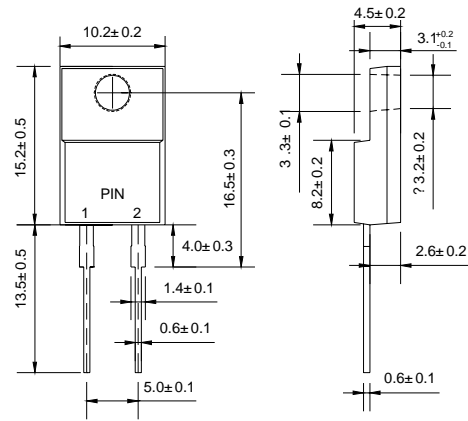
#### FEATURES

- ◇ 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 ITO-220AC, molded plastic
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.056 ounces, 1.587 gram
- ◇ Mounting position: Any

#### ITO-220AC



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

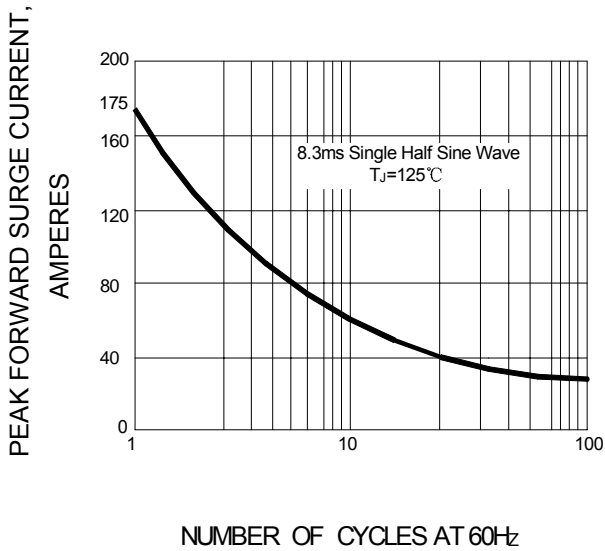
Ratings at 25°C ambient temperature unless otherwise specified.

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

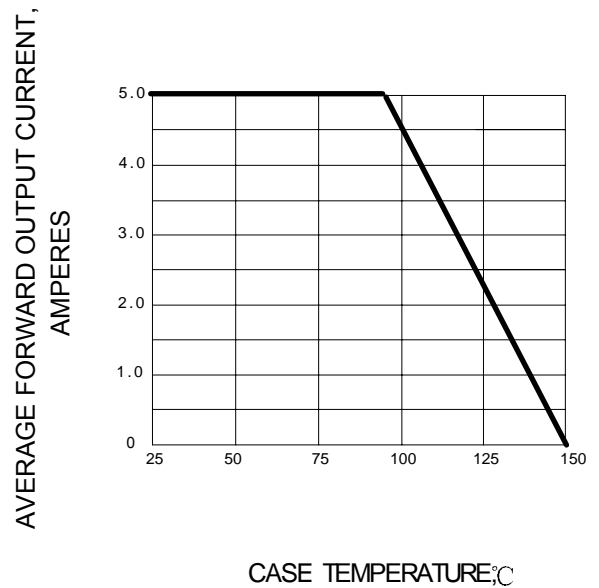
|   |                 | SBLF 530      | SBLF 535 | SBLF 540 | SBLF 545 | SBLF 550 | SBLF 560 | SBLF 580 | SBLF 5100 | UNITS              |
|---|-----------------|---------------|----------|----------|----------|----------|----------|----------|-----------|--------------------|
| Maximum recurrent peak 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>$T_C=95^\circ\text{C}$   | $I_{F(AV)}$     | 5.0           |          |          |          |          |          |          |           | A                  |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load $T_J=125^\circ\text{C}$ | $I_{FSM}$       | 175           |          |          |          |          |          |          |           | A                  |
| Maximum instantaneous forward voltage<br>@ 5.0A   | $V_F$           | 0.55          |          |          | 0.70     |          | 0.85     |          |           | V                  |
| Maximum reverse current @ $T_C=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_C=100^\circ\text{C}$      | $I_R$           | 0.5<br>33     |          |          |          |          |          |          |           | mA                 |
| Typical thermal resistance (Note1)  | $R_{\theta JC}$ | 3.0           |          |          |          |          |          |          |           | $^\circ\text{C/W}$ |
| Operating junction temperature range  | $T_J$           | -55 --- + 150 |          |          |          |          |          |          |           | $^\circ\text{C}$   |
| Storage temperature range   | $T_{STG}$       | -55 --- + 150 |          |          |          |          |          |          |           | $^\circ\text{C}$   |

Note: 1. Thermal resistance junction to case.

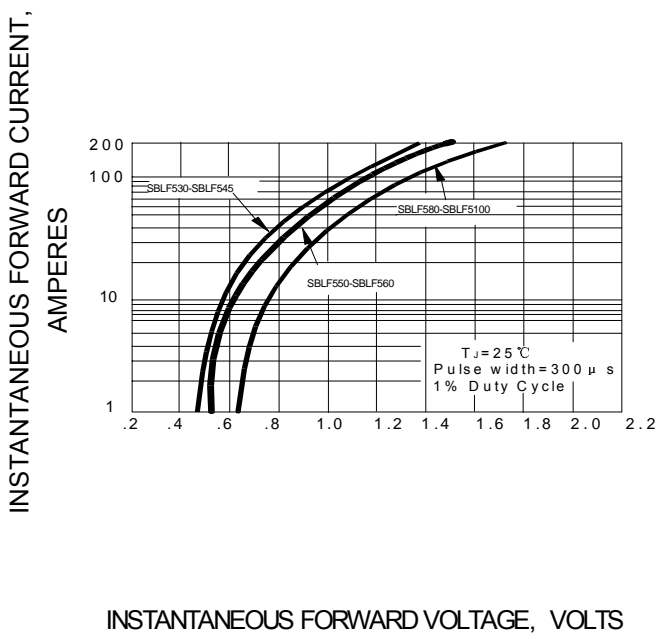
**FIG.1 – PEAK FORWARD SURGE CURRENT**



**FIG.2 – FORWARD DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**

