

SCHOTTKY BARRIER RECTIFIERS

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

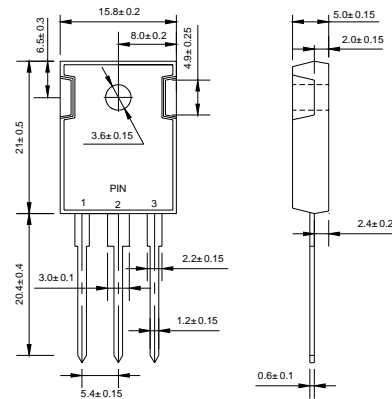
FEATURES

- ◇ 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-3P, molded plastic
- ◇ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.223 ounce, 6.3 grams
- ◇ Mounting position: Any

TO-247AD(TO-3P)



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%.

| | | SBL 2030PT | SBL 2035PT | SBL 2040PT | SBL 2045PT | SBL 2050PT | SBL 2060PT | SBL 2080PT | SBL 20100PT | 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 $T_C=100^\circ\text{C}$ | $I_{F(AV)}$ | 20 | | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load | I_{FSM} | 250 | | | | | | | | A |
| Maximum instantaneous forward voltage @ 10 A | V_F | 0.55 | | | 0.75 | | 0.85 | | | V |
| Maximum reverse current @ $T_C=25^\circ\text{C}$ at rated DC blocking voltage @ $T_C=100^\circ\text{C}$ | I_R | 1.0 50 | | | | | | | | mA |
| Typical thermal resistance (Note1) | $R_{\theta JC}$ | 1.5 | | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -55--- + 125 | | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55--- + 150 | | | | | | | | $^\circ\text{C}$ |

Note: 1. Thermal resistance junction to case.

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FIG.1 – PEAK FORWARD SURGE CURRENT

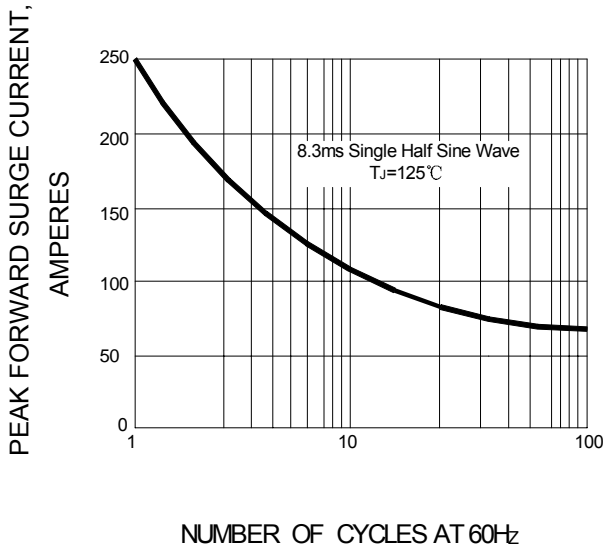


FIG.2 – FORWARD DERATING CURVE

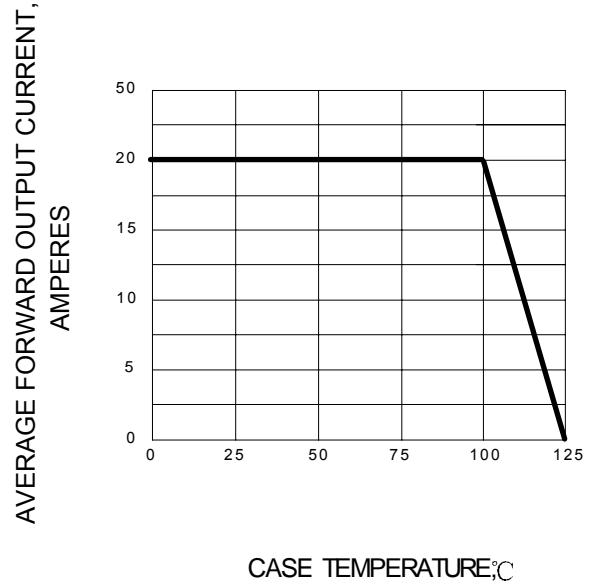


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

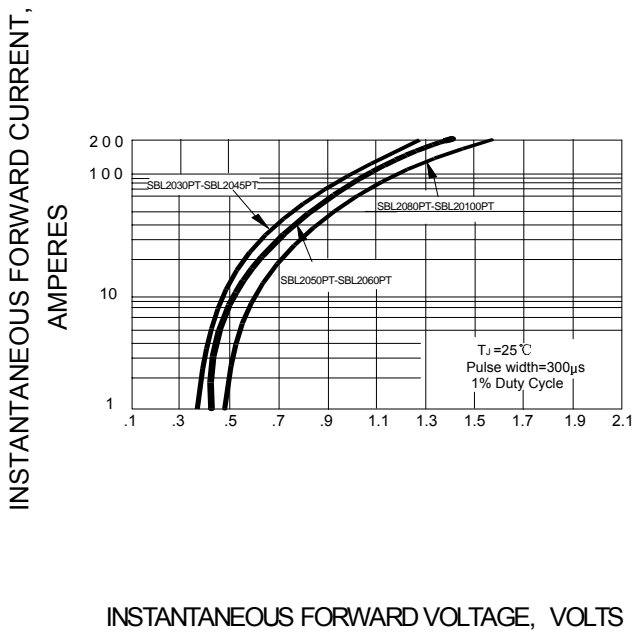


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

