LITE-ON SEMICONDUCTOR

# B370B thru B3100B

**SURFACE MOUNT**
**SCHOTTKY BARRIER RECTIFIERS**

REVERSE VOLTAGE - **70** to **100** Volts
FORWARD CURRENT - **3.0** Amperes

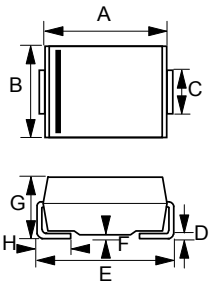
## FEATURES

- For surface mounted applications
- Metal-Semiconductor junction with guardring
- Epitaxial construction
- Very Low forward voltage drop
- High current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case : Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity : Color band denotes cathode
- Weight : 0.003 ounces, 0.093 grams

## SMB




| SMB | | |
|---|---|---|
| DIM. | MIN. | MAX. |
| A | 4.06 | 4.57 |
| B | 3.30 | 3.94 |
| C | 1.96 | 2.21 |
| D | 0.15 | 0.31 |
| E | 5.21 | 5.59 |
| F | 0.05 | 0.20 |
| G | 2.01 | 2.50 |
| H | 0.76 | 1.52 |
| All Dimensions in millimeter | | |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

| CHARACTERISTICS | SYMBOL | B370B | B380B | B390B | B3100B | UNIT |
|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 70 | 80 | 90 | 100 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 49 | 56 | 63 | 70 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 70 | 80 | 90 | 100 | V |
| Maximum Average Forward Rectified Current @$T_L$ =100℃ | $I_{(AV)}$ | 3.0 | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load | $I_{FSM}$ | 100 | | | | A |
| Maximum Forward Voltage at 3.0A DC @$T_J$ =25℃<br>@$T_J$ =100℃ | $V_F$ | 0.79<br>0.69 | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @$T_J$ =25℃<br>@$T_J$ =100℃ | $I_R$ | 0.5<br>20 | | | 0.01<br>20 | mA |
| Typical Junction Capacitance (Note 1) | $C_J$ | 120 | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JL}$ | 22 | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | ℃ |

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2.Unit mounted on 0.75t glass-epoxy substrate with 2x3 mm copper pad.

REV. 4, Aug-2014, KSHB13

## RATING AND CHARACTERISTIC CURVES
## B370B thru B3100B

FIG.1 - FORWARD CURRENT DERATING CURVE

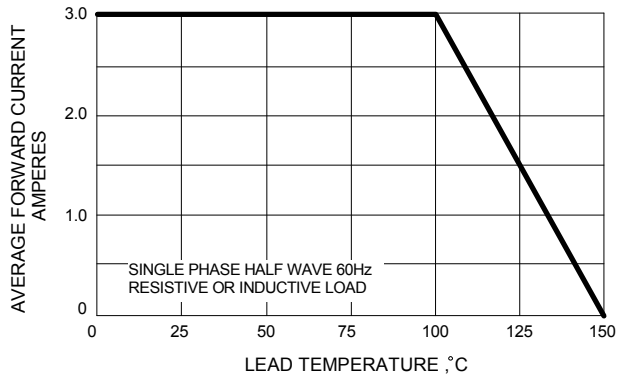



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

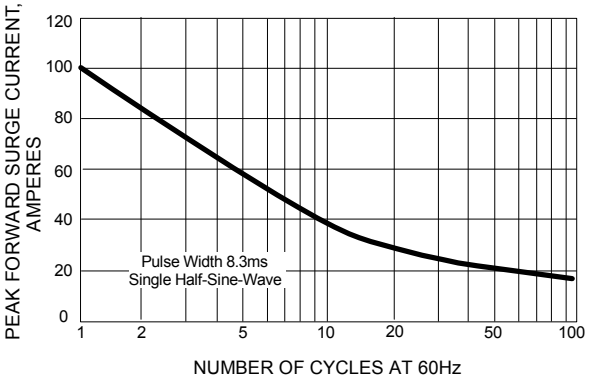



FIG.3 - TYPICAL FORWARD CHARACTERISTICS

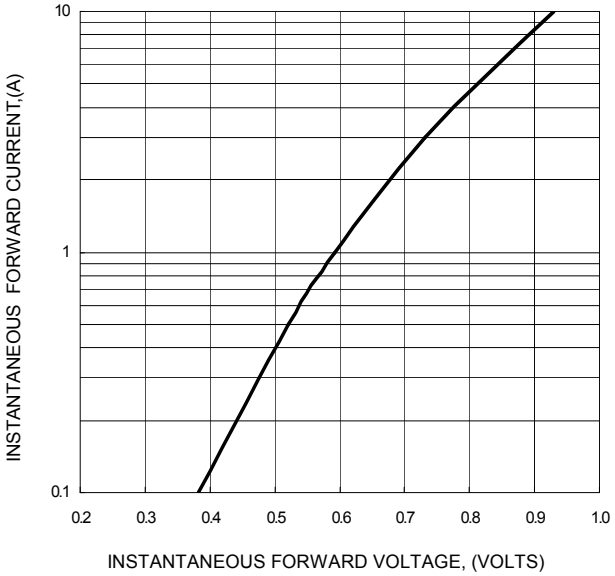



FIG.4 - TYPICAL JUNCTION CAPACITANCE

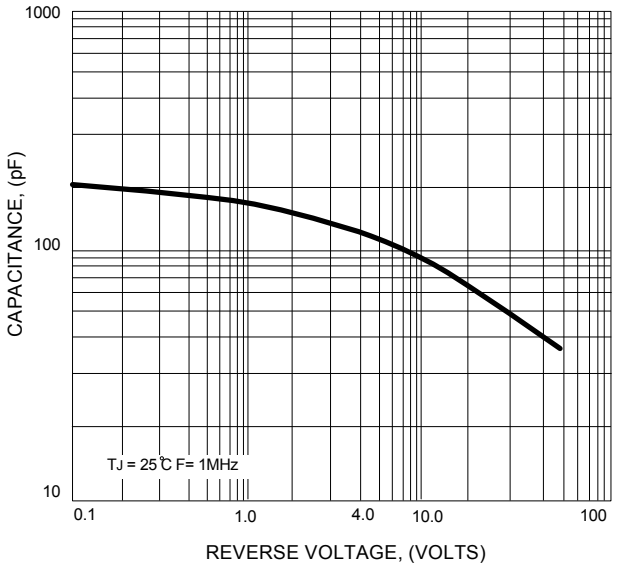
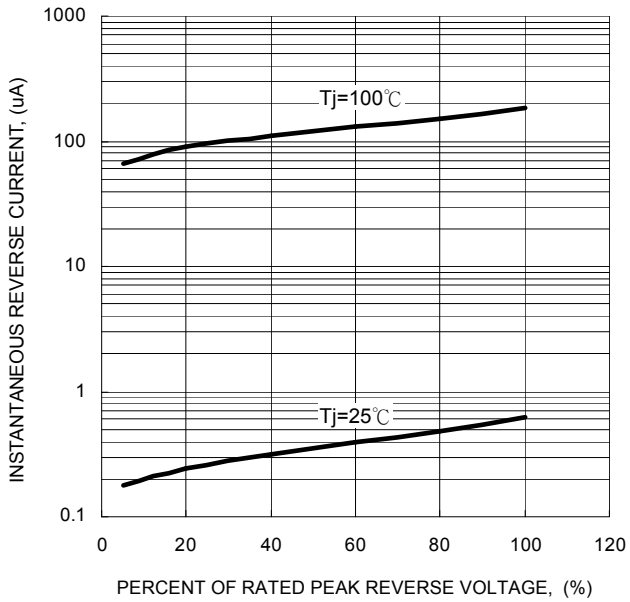



FIG.5 - TYPICAL REVERSE CHARACTERISTICS



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