



# SB620 SERIES

## ISOLATION SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volt **CURRENT** 6 Ampere

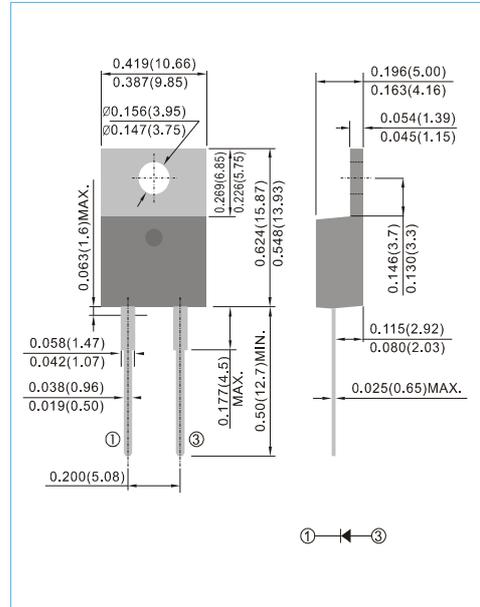
### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling , and polarity protection applications.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: TO-220AC molded plastic package
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.067 ounces, 1.89 grams.

**TO-220AC** Unit : inch(mm)



## 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 current by 20%

| PARAMETER   | SYMBOL          | SB620       | SB630 | SB640 | SB650       | SB660 | UNITS  |   |
|---|-----------------|-------------|-------|-------|-------------|-------|--------|---|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 20          | 30    | 40    | 50          | 60    | V      |   |
| Maximum RMS Voltage   | $V_{RMS}$       | 14          | 21    | 28    | 35          | 42    | V      |   |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 20          | 30    | 40    | 50          | 60    | V      |   |
| Maximum Average Forward Current   | $I_{F(AV)}$     | 6           |       |       |             |       |        | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 75          |       |       |             |       |        | A |
| Maximum Forward Voltage at 6A   | $V_F$           | 0.55        |       |       | 0.7         |       | V      |   |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                             | $I_R$           | 0.2<br>15   |       |       |             |       | mA     |   |
| Typical Thermal Resistance  | $R_{\theta JC}$ | 3           |       |       |             |       | °C / W |   |
| Operating Junction Temperature Range  | $T_J$           | -55 to +125 |       |       | -55 to +150 |       | °C     |   |
| Storage Temperature Range   | $T_{STG}$       | -55 to +150 |       |       |             |       | °C     |   |

NOTE : Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

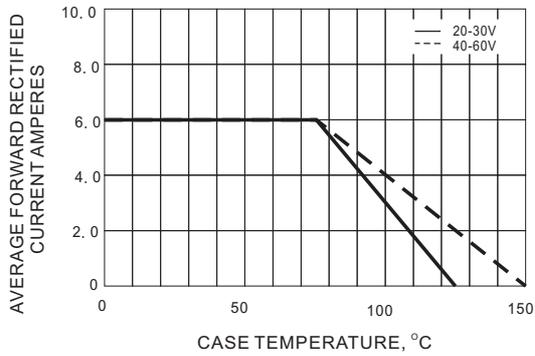


Fig.1- FORWARD CURRENT DERATING CURVE

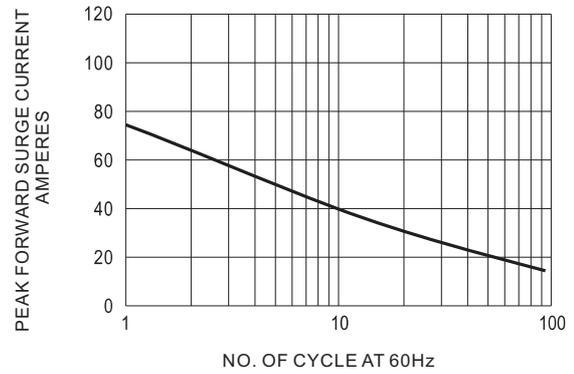


Fig.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

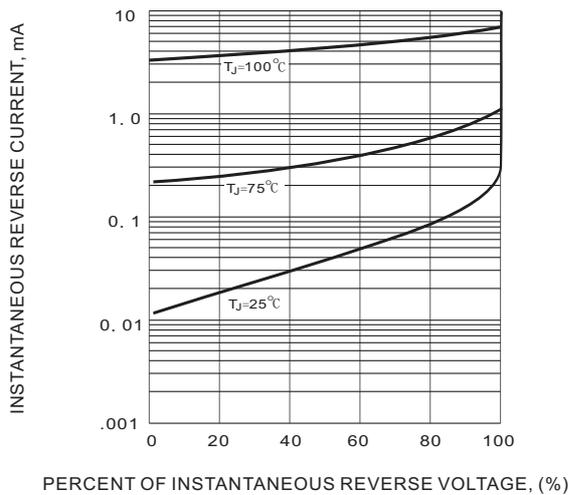


Fig.3-TYPICAL REVERSE CHARACTERISTIC

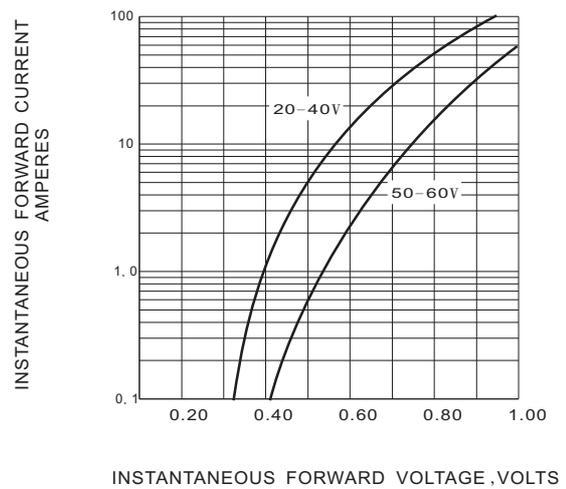


Fig.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



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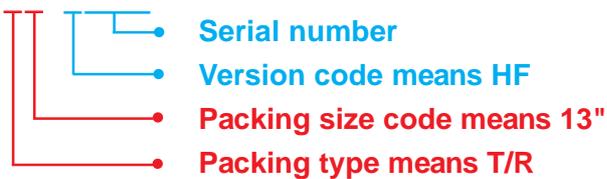
Part No\_packing code\_Version

SB620\_T0\_00001

For example :

RB500V-40\_R2\_00001

Part No.



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                        | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS                      | 1                    | serial number                         |
| Bulk Packing (B/P)                   | B                    | 13"                              | 2                    |                           |                      |                                       |
| Tube Packing (T/P)                   | T                    | 26mm                             | X                    |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                             | Y                    |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP (PBCU)   | U                    |                           |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                           |                      |                                       |



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