

# SB3020CT SERIES

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volt **CURRENT** 30 Ampere

**Recongnized File #E228882**

### FEATURES

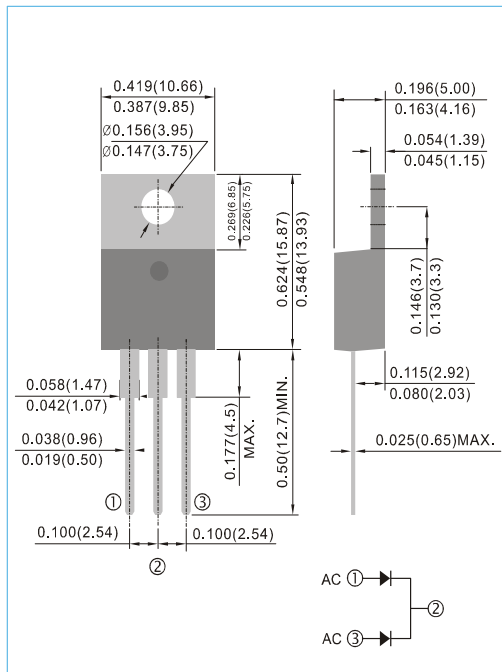
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling, and polarity 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-220AB Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.067 ounces, 1.89 grams

### TO-220AB

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             | SB3020CT    | SB3030CT | SB3040CT    | SB3045CT | SB3050CT | SB3060CT | UNITS  |
|---|--------------------|-------------|----------|-------------|----------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>   | 20          | 30       | 40          | 45       | 50       | 60       | V      |
| Maximum RMS Voltage   | V <sub>RMS</sub>   | 14          | 21       | 28          | 31.5     | 35       | 42       | V      |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>    | 20          | 30       | 40          | 45       | 50       | 60       | V      |
| Maximum Average Forward Current at<br>T <sub>c</sub> =75°C                              | I <sub>F(AV)</sub> | 30          |          |             |          |          |          | A      |
| Peak Forward Surge Current : 8.3 ms single<br>half sine-wave superimposed on rated load | I <sub>FSM</sub>   | 275         |          |             |          |          |          | A      |
| Maximum Forward Voltage at 15A per leg  | V <sub>F</sub>     | 0.55        |          |             |          | 0.75     |          | V      |
| Maximum DC Reverse Current at<br>Rated DC Blocking Voltage                              | I <sub>R</sub>     | 0.2<br>50   |          |             |          |          |          | mA     |
| Typical Thermal Resistance  | R <sub>θJC</sub>   | 1.5         |          |             |          |          |          | °C / W |
| Operating Junction Temperature Range  | T <sub>J</sub>     | -55 to +125 |          | -55 to +150 |          |          |          | °C     |
| Storage Temperature Range   | T <sub>STG</sub>   | -55 to +150 |          |             |          |          |          | °C     |

## SB3020CT SERIES

### RATING AND CHARACTERISTIC CURVES

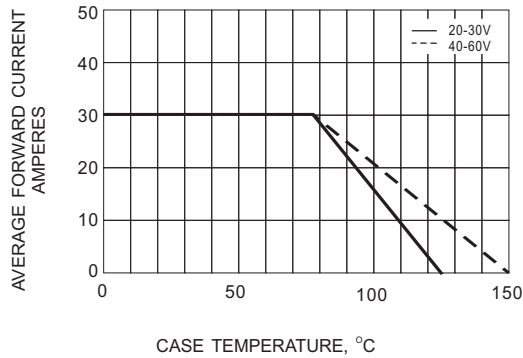


Fig.1 FORWARD CURRENT DERATING CURVE

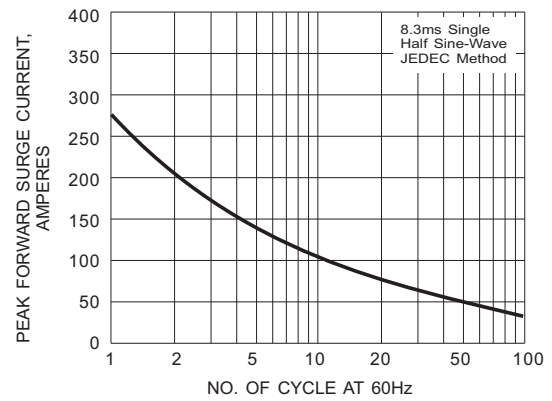


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

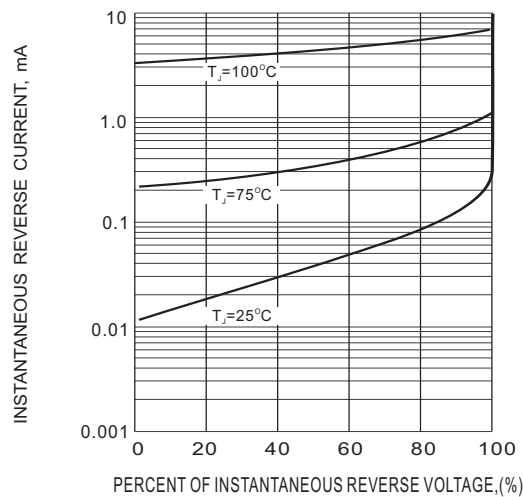


Fig.3 TYPICAL REVERSE CHARACTERISTIC

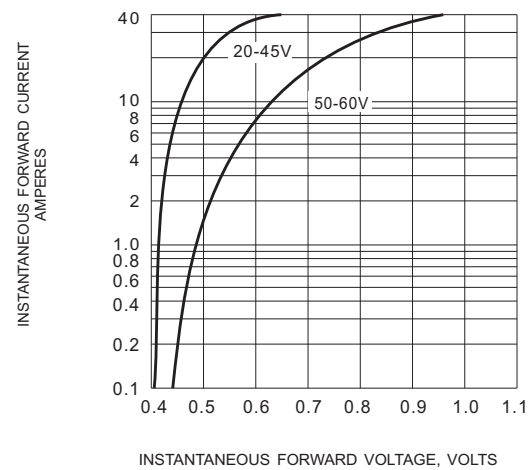


Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

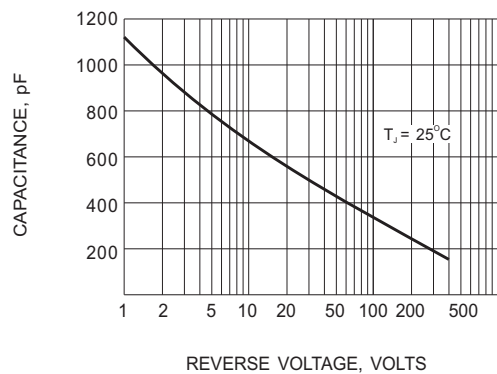


Fig.5 TYPICAL JUNCTION CAPACITANCE

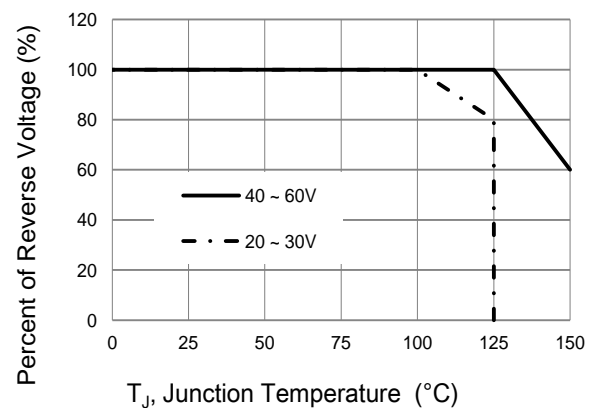


Fig.\* Operating Temperature Derating Curve

## SB3020CT SERIES

Part No\_packing code\_Version

SB3020CT\_T0\_00001

For example :

**RB500V-40\_R2\_00001**

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXXX</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)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                  | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>                | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                            |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                            |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                            |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                            |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                            |                      |                                       |



## SB3020CT SERIES

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Panjit:

[SB3045CT\\_T0\\_00001](#)