



SBT10120LFCT

ULTRA LOW VF SCHOTTKY BARRIER RECTIFIER

Voltage

120 V

Current

10 A

ITO-220AB

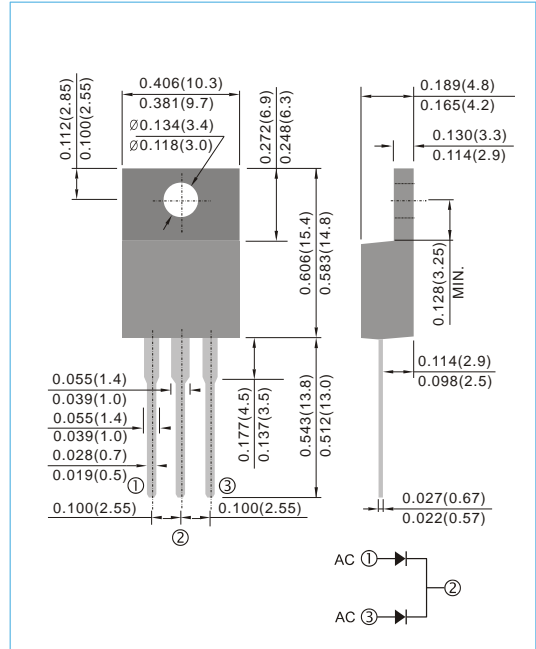
Unit : inch(mm)

Features

- Ideal for automated placement
- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical Data

- Case: Molded plastic, ITO-220AB
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.056 ounces, 1.6 grams
- Marking: Part number



Maximum Ratings And Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | | SYMBOL | LIMIT | UNIT |
|---|------------|-----------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage | | V_{RRM} | 120 | V |
| Maximum rms voltage | | V_{RMS} | 84 | V |
| Maximum dc blocking voltage | | V_R | 120 | V |
| Maximum average forward rectified current | per diode | $I_{F(AV)}$ | 5 | A |
| | per device | | 10 | |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load per diode | | I_{FSM} | 80 | A |
| Typical thermal resistance per diode | (Note 1) | $R_{\theta JC}$ | 9 | $^\circ\text{C/W}$ |
| Operating junction temperature range | | T_J | -55 to +150 | $^\circ\text{C}$ |
| Storage temperature range | | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Note : 1. Device mounted on a infinite heatsink , then measured the center of the marking side.



SBT10120LFCT

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | | MIN. | TYP. | MAX. | UNITS |
|---|----------|--------------------|-------------------------|------|------|------|---------------|
| Breakdown voltage per diode | V_{BR} | $I_R=0.5\text{mA}$ | $T_J=25^\circ\text{C}$ | 120 | - | - | V |
| Instantaneous forward voltage per diode | V_F | $I_F=1\text{A}$ | $T_J=25^\circ\text{C}$ | - | 0.6 | - | V |
| | | $I_F=2\text{A}$ | | - | 0.68 | - | |
| | | $I_F=5\text{A}$ | | - | 0.78 | 0.83 | |
| | | $I_F=1\text{A}$ | $T_J=125^\circ\text{C}$ | - | 0.49 | - | V |
| Reverse current per diode | I_R | $V_R=96\text{V}$ | $T_J=25^\circ\text{C}$ | - | 0.7 | - | μA |
| | | $V_R=120\text{V}$ | $T_J=25^\circ\text{C}$ | - | - | 20 | μA |
| | | | $T_J=125^\circ\text{C}$ | - | 0.7 | - | mA |

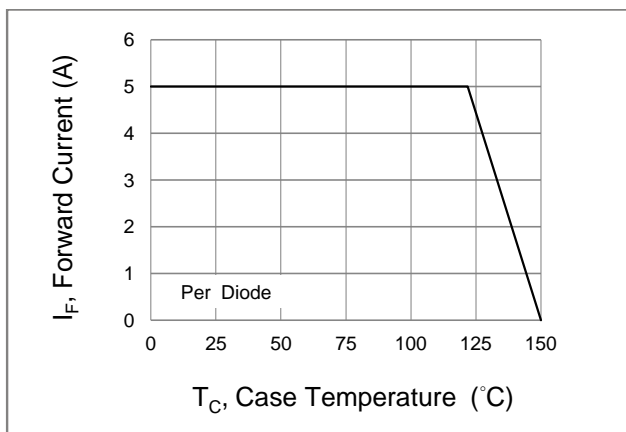


Fig.1 Forward Current Derating Curve

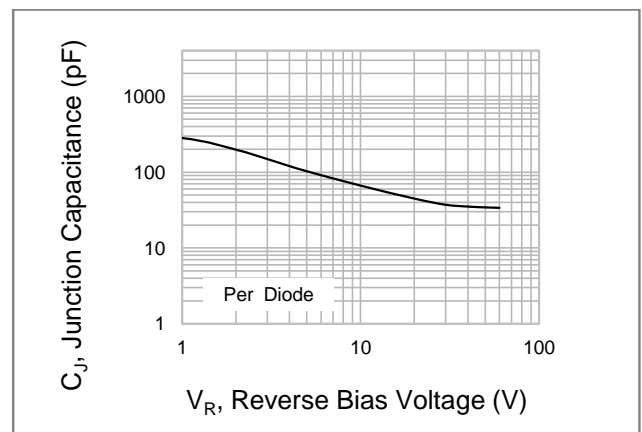


Fig.2 Typical Junction Capacitance

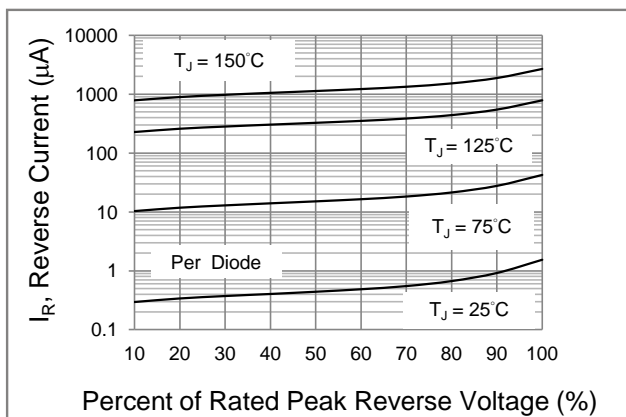


Fig.3 Typical Reverse Characteristics

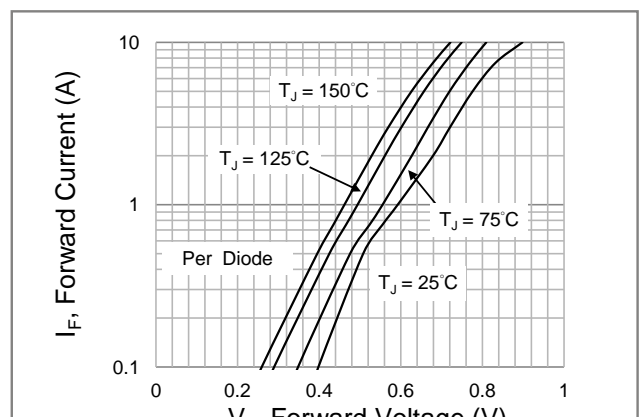


Fig.4 Typical Forward Characteristics



SBT10120LFCT

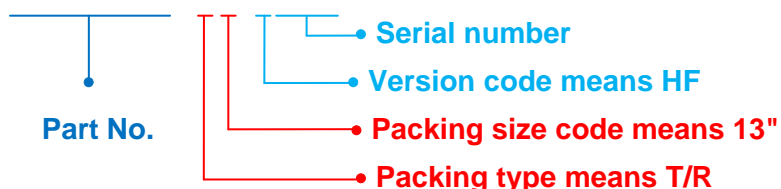
Part No_packing code_Version

SBT10120LFCT_T0_00001

SBT10120LFCT_T0_10001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th 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 | | | |



SBT10120LFCT

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.