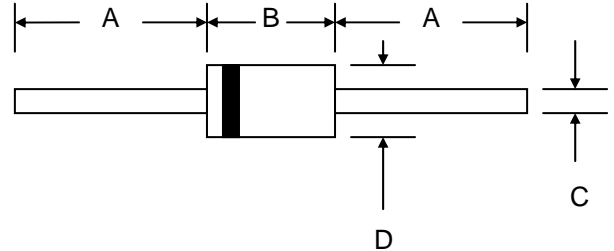


Features

- Schottky Barrier Chip
- Guard Ring for Transient and ESD Protection
- Surge Overload Rating to 50A Peak
- Low Power Loss, High Efficiency
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes



Mechanical Data

- Case: DO-15, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.40 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

| DO-15 | | |
|----------------------|------|-------|
| Dim | Min | Max |
| A | 25.4 | — |
| B | 5.50 | 7.62 |
| C | 0.71 | 0.864 |
| D | 2.60 | 3.60 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | SB220 | SB230 | SB240 | SB250 | SB260 | SB280 | SB2100 | Unit |
|---|--------------|-------------|-------|-------|-------------|-------|-------|--------|------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Working Peak Reverse Voltage | V_{RWM} | | | | | | | | |
| DC Blocking Voltage | V_R | | | | | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Average Rectified Output Current (Note 1) | I_O | 2.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 50 | | | | | | | A |
| Forward Voltage @ $I_F = 2.0\text{A}$ | V_{FM} | 0.50 | | | 0.70 | | 0.85 | | V |
| Peak Reverse Current @ $T_J = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J = 100^\circ\text{C}$ | I_{RM} | 0.5 10 | | | | | | | mA |
| Typical Junction Capacitance (Note 2) | C_J | 150 | | | | | 100 | | pF |
| Thermal Resistance, Junction to Ambient (Note 3) | R_{JA} | 35 | | | | | | | °C/W |
| Thermal Resistance, Junction to Lead (Note 3) | R_{JL} | 14 | | | | | | | |
| Operating Temperature Range | T_J | -65 to +125 | | | -65 to +150 | | | | °C |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | | | | | °C |

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Vertical PCB mounting with 12.7mm lead length on 63.5 x 63.5mm copper pad.

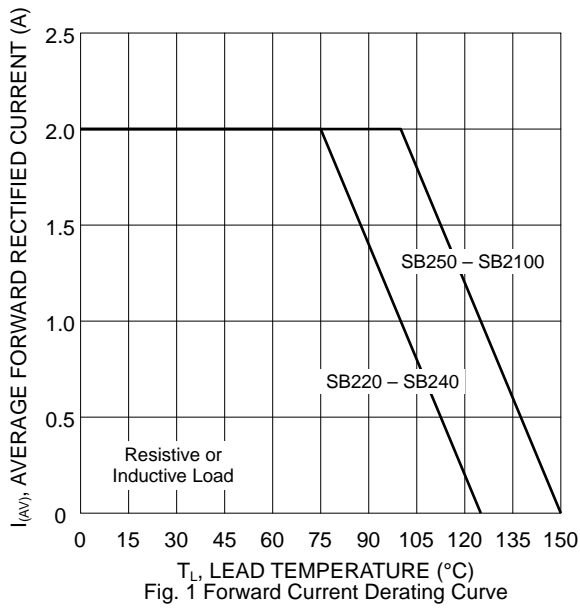


Fig. 1 Forward Current Derating Curve

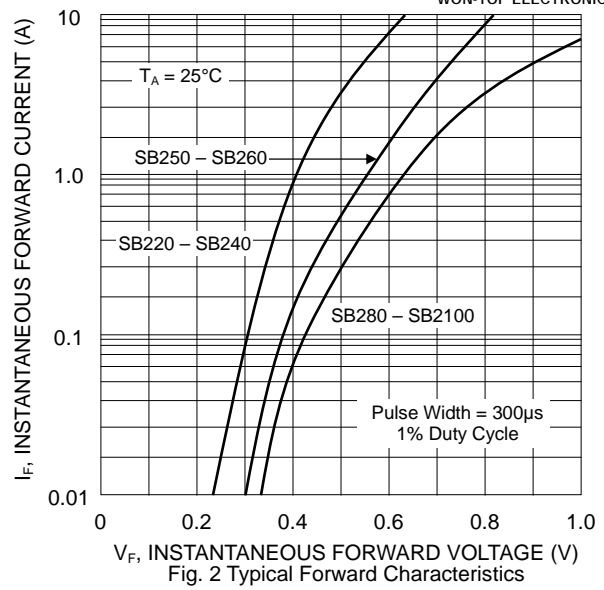


Fig. 2 Typical Forward Characteristics

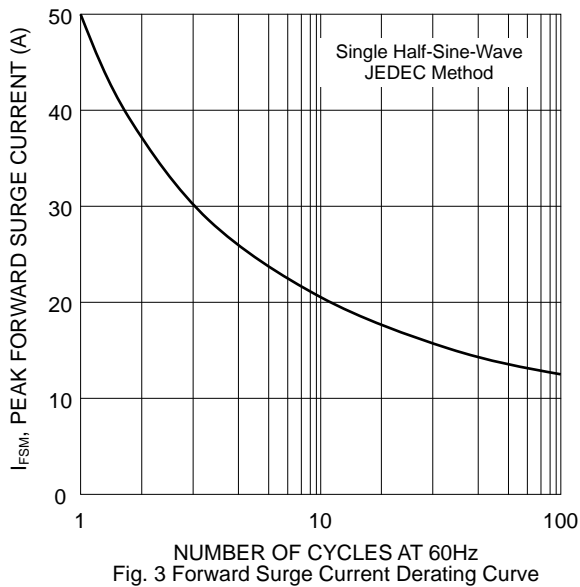


Fig. 3 Forward Surge Current Derating Curve

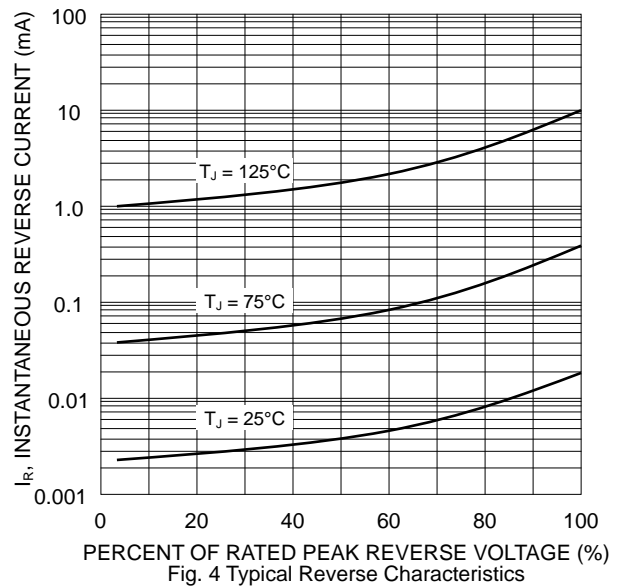


Fig. 4 Typical Reverse Characteristics

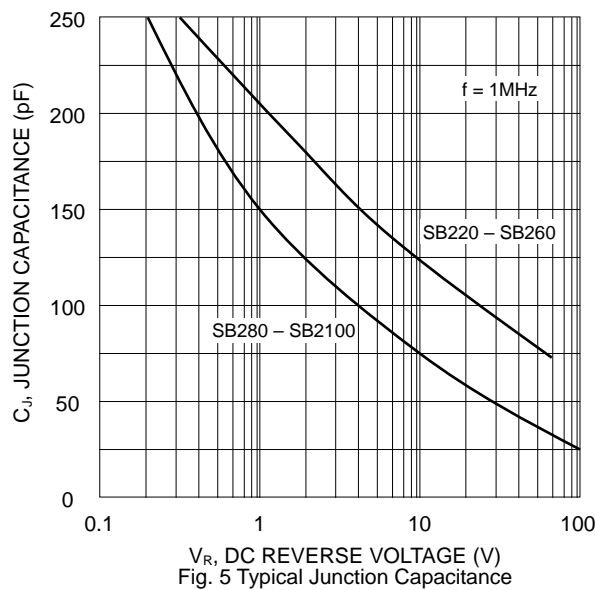
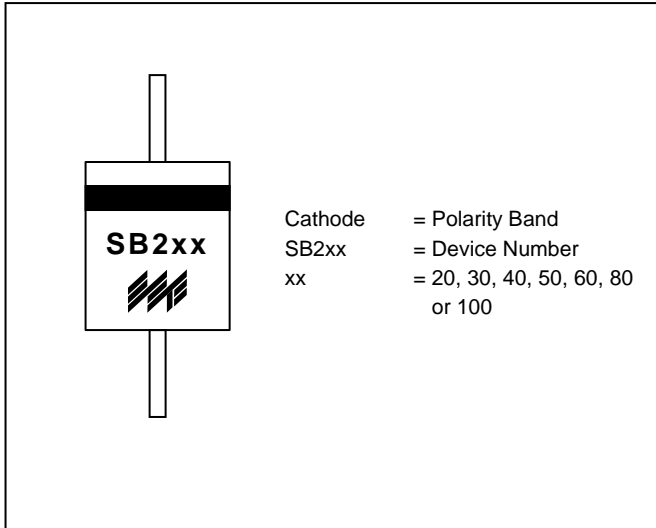
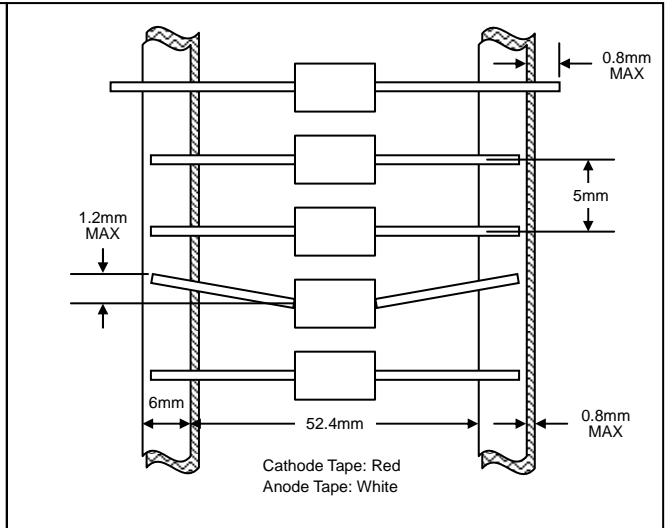


Fig. 5 Typical Junction Capacitance

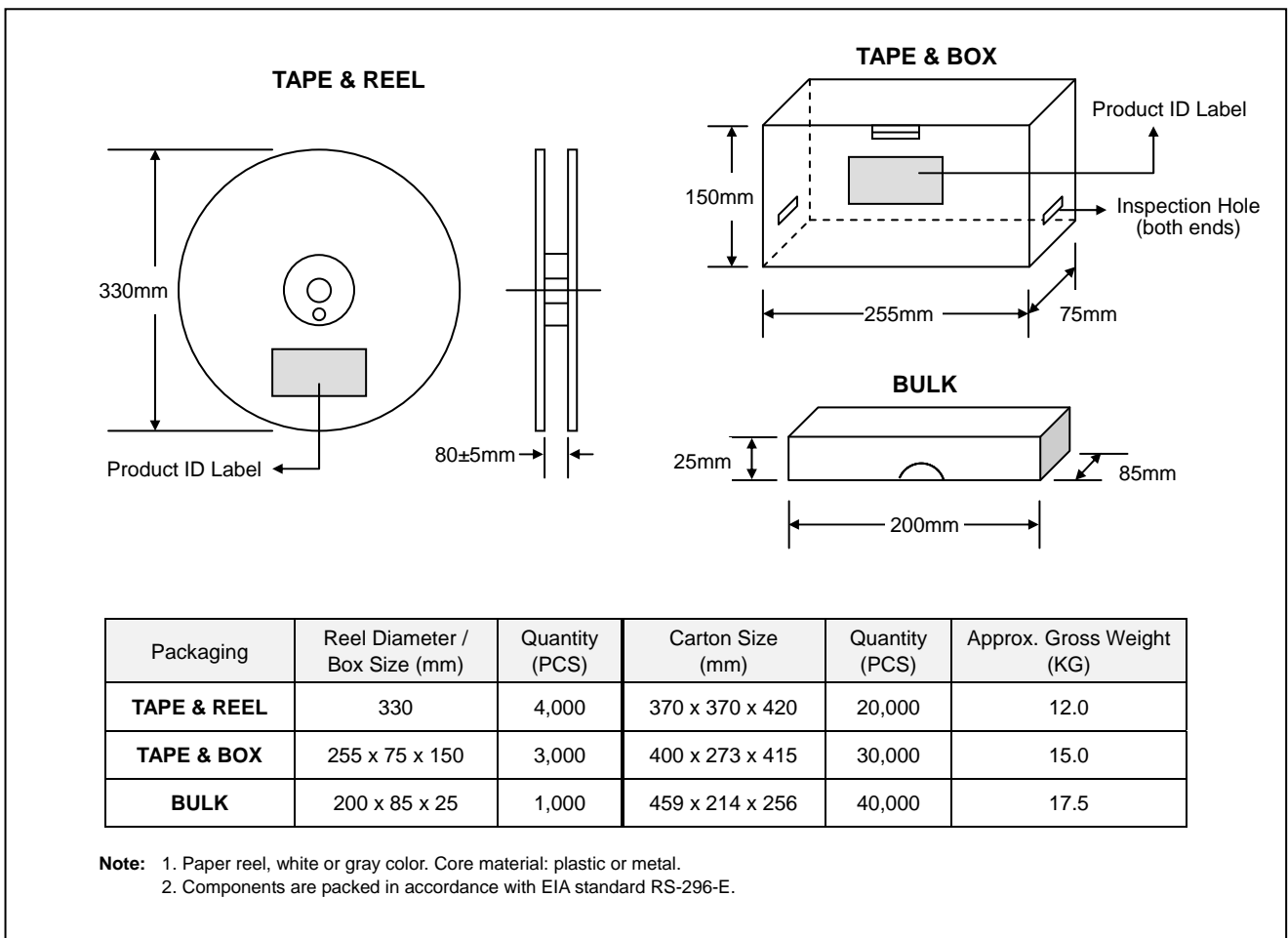
MARKING INFORMATION



TAPING SPECIFICATIONS




PACKAGING INFORMATION



ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-----------------|--------------|-------------------|
| SB2xx-T3 | DO-15 | 4000/Tape & Reel |
| SB2xx-TB | DO-15 | 3000/Tape & Box |
| SB2xx | DO-15 | 1000 Units/Box |

1. Products listed in **bold** are WTE **Preferred** devices.
2. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
3. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SB220-TB-LF.**

WON-TOP ELECTRONICS and  are registered trademarks of Won-Top Electronics Co., Ltd (WTE). WTE has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road,
Chine Chen Dist., Kaohsiung 806, Taiwan
Phone: 886-7-822-5408 or 886-7-822-5410
Fax: 886-7-822-5417
Email: sales@wontop.com
Internet: http://www.wontop.com

We power your everyday.