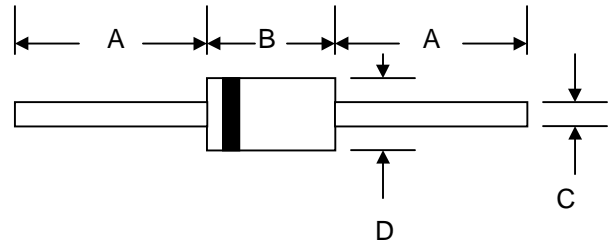


### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



### Mechanical Data

- Case: DO-41, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.34 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-41		
Dim	Min	Max
A	25.4	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
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	SB120	SB130	SB140	SB150	SB160	SB180	SB1100	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$								
Working Peak Reverse Voltage	$V_{RWM}$	20	30	40	50	60	80	100	V
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	70	V
Average Rectified Output Current @ $T_L = 100^\circ\text{C}$ (Note 1)	$I_o$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40							A
Forward Voltage @ $I_F = 1.0\text{A}$	$V_{FM}$	0.50		0.70		0.85		V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_{RM}$	0.5 10							mA
Typical Junction Capacitance (Note 2)	$C_j$	110		80		pF			
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$ $R_{\theta JA}$	15 50							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150							$^\circ\text{C}$

Note: 1. Valid provided that leads are kept 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.

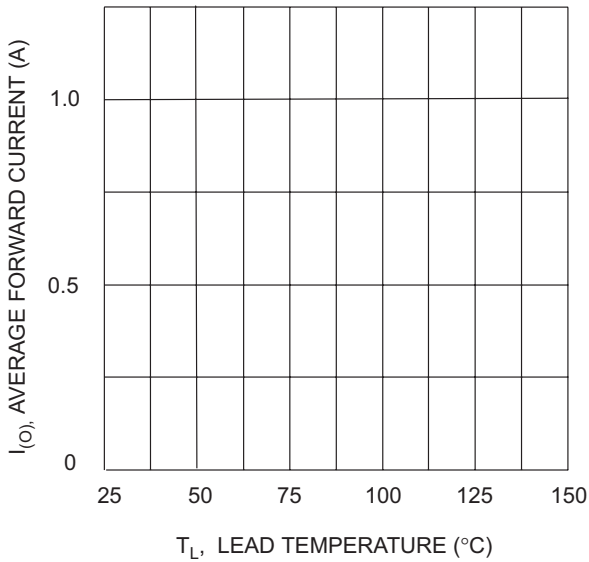


Fig. 1 Forward Current Derating Curve

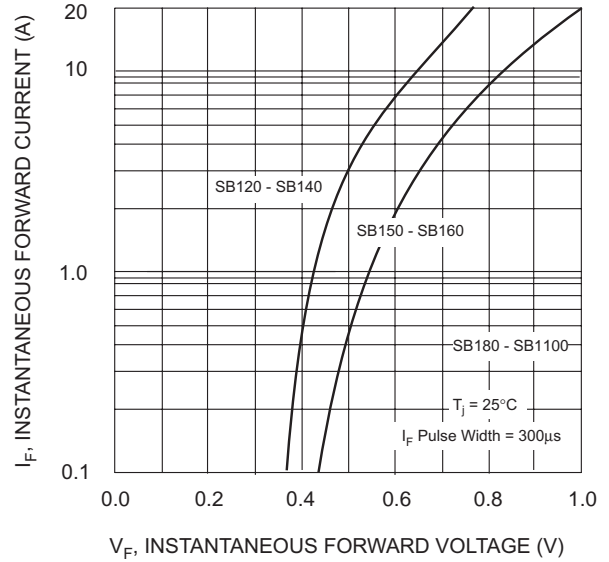


Fig. 2 Typical Forward Characteristics

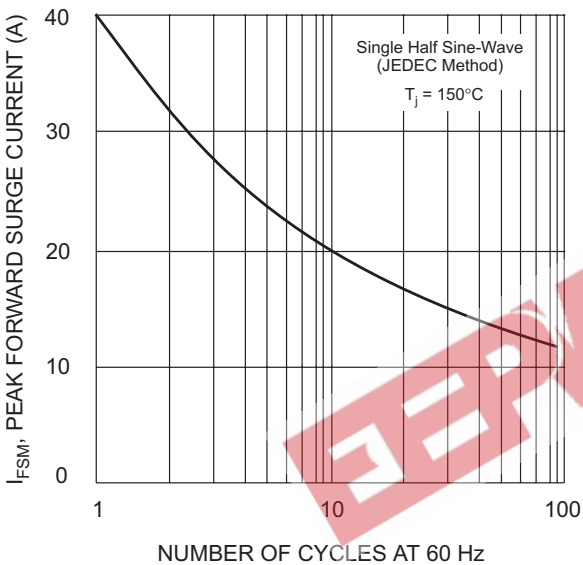


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

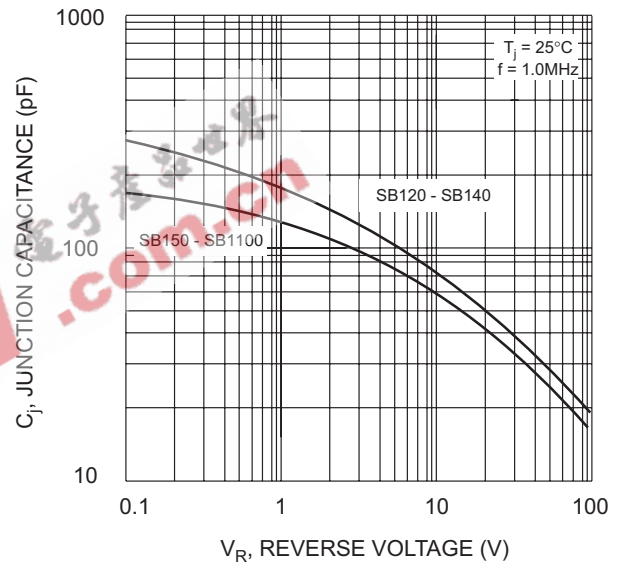


Fig. 4 Typical Junction Capacitance

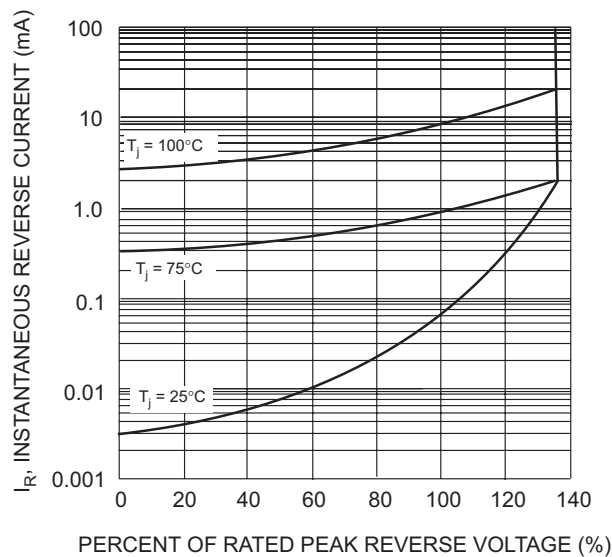
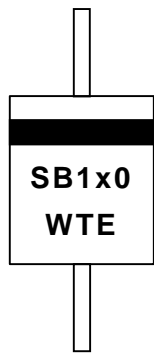


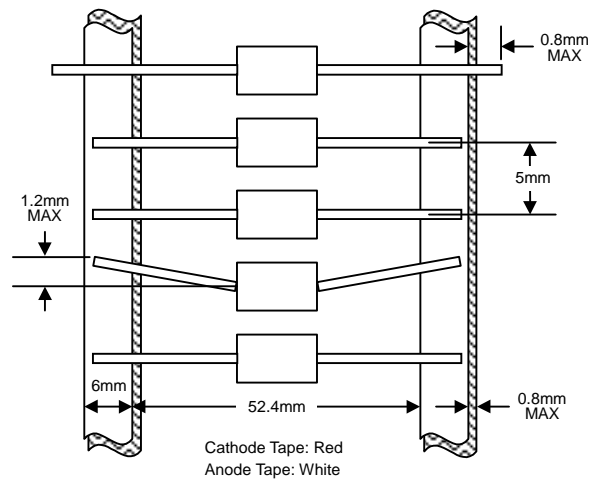
Fig. 5 Typical Reverse Characteristics

## MARKING INFORMATION

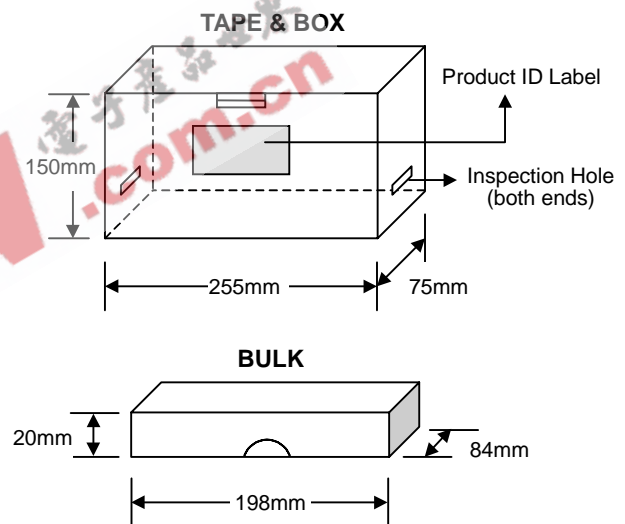
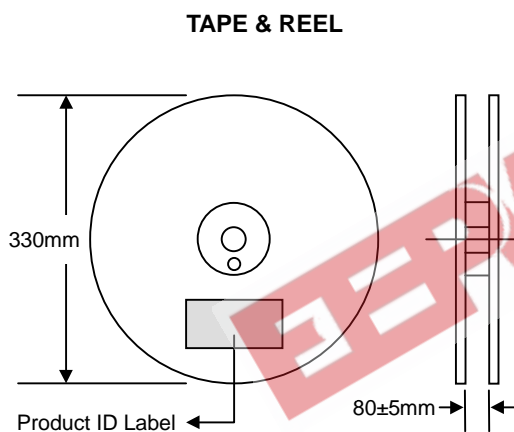


Cathode = Polarity Band  
 SB1x0 = Device Number  
 x = 2, 3, 4, 5, 6, 8 or 10  
 WTE = Manufacturer's Logo

## TAPING SPECIFICATIONS



## PACKAGING INFORMATION



Packaging	Reel Diameter / Box Size (mm)	Quantity (PCS)	Carton Size (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
<b>TAPE &amp; REEL</b>	330	5,000	370 x 370 x 420	25,000	13.0
<b>TAPE &amp; BOX</b>	255 x 75 x 150	5,000	400 x 273 x 415	50,000	21.0
<b>BULK</b>	198 x 84 x 20	1,000	459 x 214 x 256	50,000	19.5

**Note:** 1. Paper reel, white or gray color. Core material: plastic or metal.  
 2. Components are packed in accordance with EIA standard RS-296-E.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SB120-T3	DO-41	5000/Tape & Reel
<b>SB120-TB</b>	DO-41	5000/Tape & Box
SB120	DO-41	1000 Units/Box
SB130-T3	DO-41	5000/Tape & Reel
<b>SB130-TB</b>	DO-41	5000/Tape & Box
SB130	DO-41	1000 Units/Box
SB140-T3	DO-41	5000/Tape & Reel
<b>SB140-TB</b>	DO-41	5000/Tape & Box
SB140	DO-41	1000 Units/Box
SB150-T3	DO-41	5000/Tape & Reel
<b>SB150-TB</b>	DO-41	5000/Tape & Box
SB150	DO-41	1000 Units/Box
SB160-T3	DO-41	5000/Tape & Reel
<b>SB160-TB</b>	DO-41	5000/Tape & Box
SB160	DO-41	1000 Units/Box
SB180-T3	DO-41	5000/Tape & Reel
<b>SB180-TB</b>	DO-41	5000/Tape & Box
SB180	DO-41	1000 Units/Box
SB1100-T3	DO-41	5000/Tape & Reel
<b>SB1100-TB</b>	DO-41	5000/Tape & Box
SB1100	DO-41	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, **SB120-TB-LF**.

Won-Top Electronics Co., Ltd (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.

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**Internet:** http://www.wontop.com

*We power your everyday.*