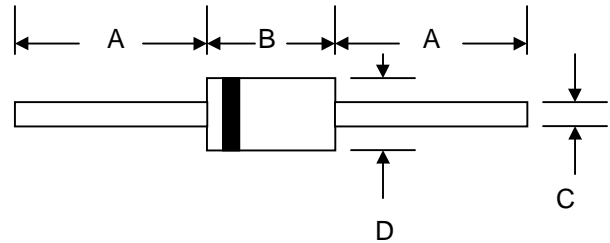


### Features

- 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: 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

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	Unit	
Peak Repetitive Reverse Voltage	$V_{RRM}$						V	
Working Peak Reverse Voltage	$V_{RWM}$	20	30	40	50	60		
DC Blocking Voltage	$V_R$							
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V	
Average Rectified Output Current (Note 1) @ $T_L = 100^\circ\text{C}$	$I_O$	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		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 Junction to Lead	$R_{\theta JL}$	15					K/W	
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	50					K/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.

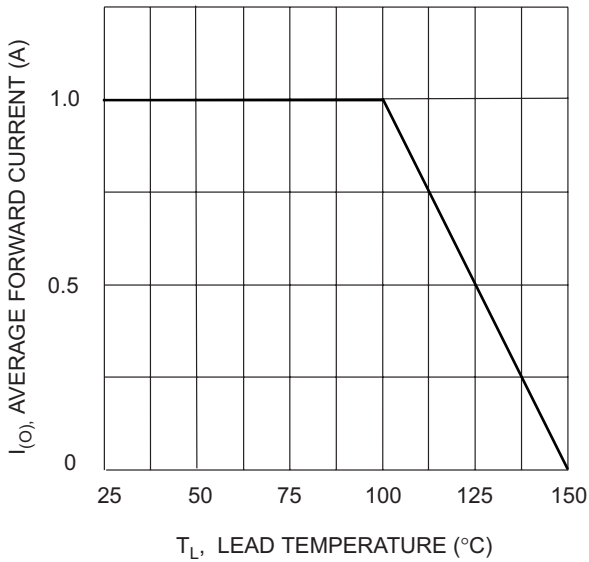


Fig. 1 Forward Current Derating Curve

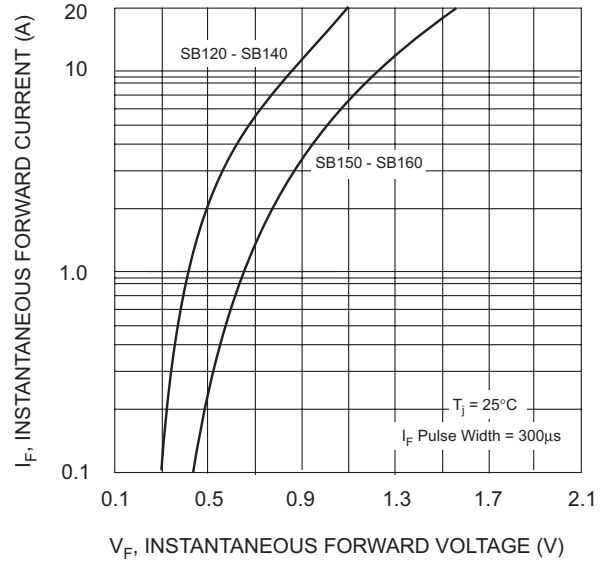


Fig. 2 Typical Forward Characteristics

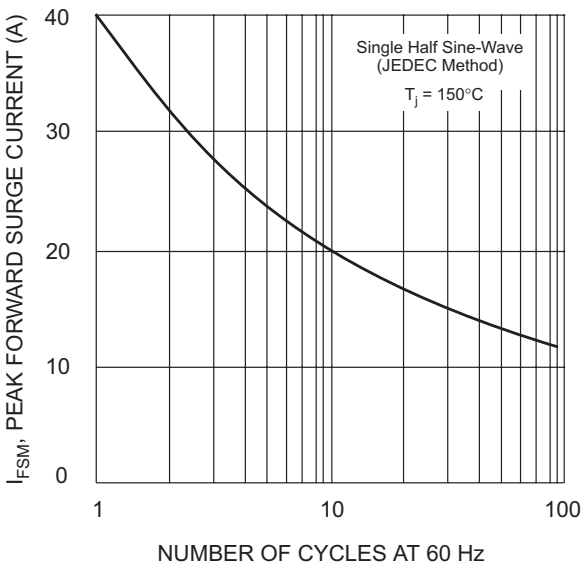


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

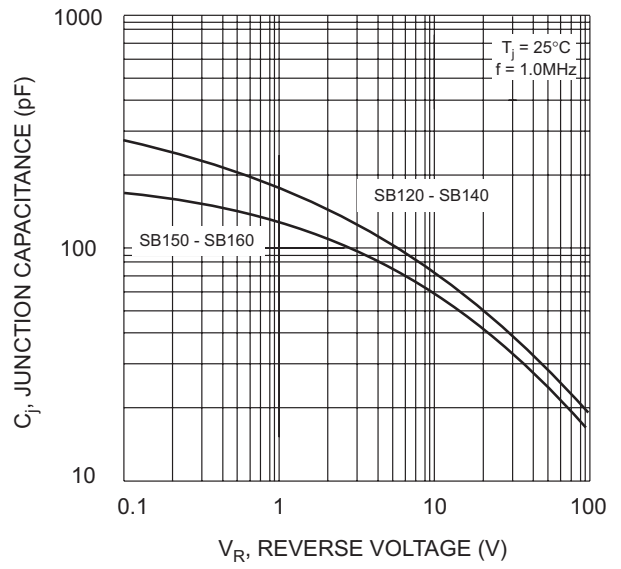


Fig. 4 Typical Junction Capacitance

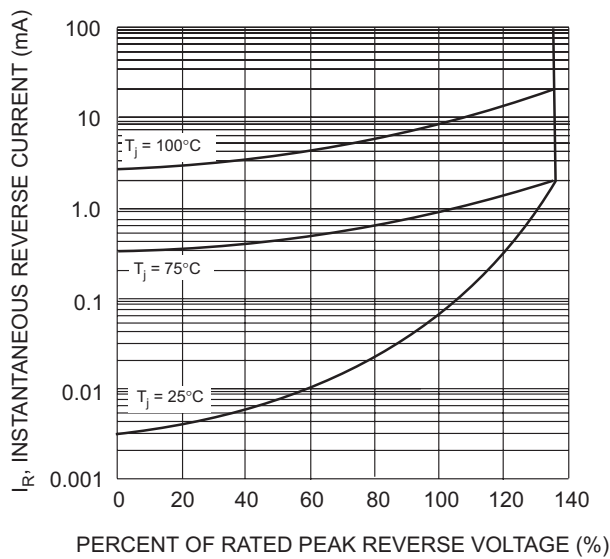


Fig. 5 Typical Reverse Characteristics

## 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

Products listed in **bold** are WTE **Preferred** devices.

♦T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, 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

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