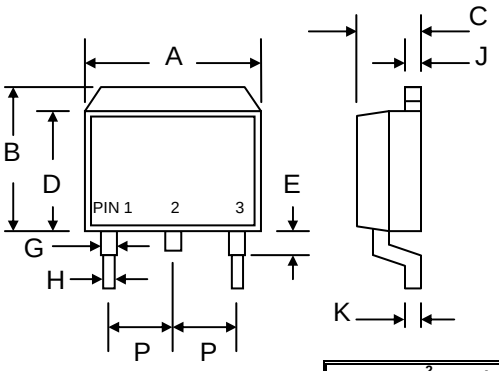
SB10150DC – SB10200DC

10A HIGH VOLTAGE SURFACE MOUNT DUAL SCHOTTKY BARRIER RECTIFIER

Features

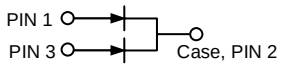
- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



D² PAK/TO-263		
Dim	**Min**	**Max**
A	9.80	10.40
B	9.60	10.60
C	4.40	4.80
D	8.50	9.10
E	2.80	—
G	1.00	1.40
H	—	0.90
J	1.20	1.40
K	0.30	0.70
P	2.35	2.75
All Dimensions in mm		

Mechanical Data

- Case: D²PAK/TO-263, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.7 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

Characteristic	Symbol	SB10150DC	SB10200DC	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	105	140	V
Average Rectified Output Current @T_C = 135°C	I_O	10		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150		A
Forward Voltage @I_F = 5.0A	V_{FM}	0.92		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	1.0 50		mA
Typical Junction Capacitance (Note 1)	C_j	550		pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.0		°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150		°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
2. Mounted on minimum recommended pad size on FR-4 board.

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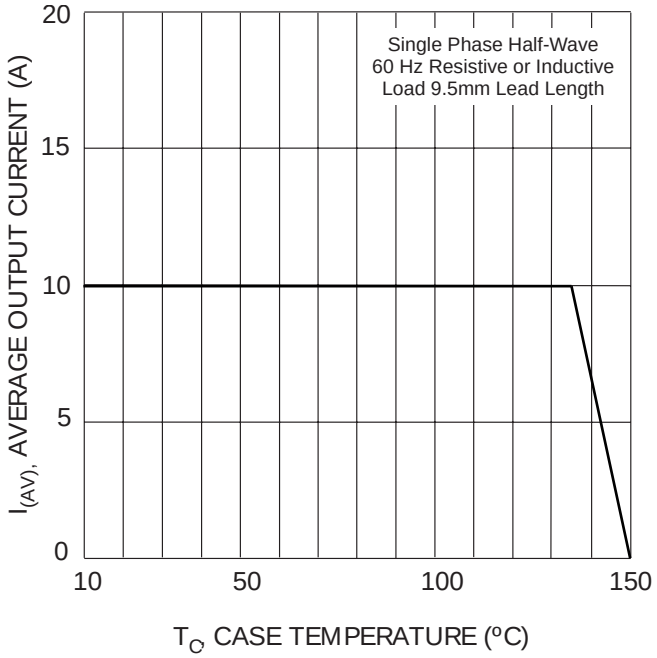

Fig. 1 Forward Current Derating Curve

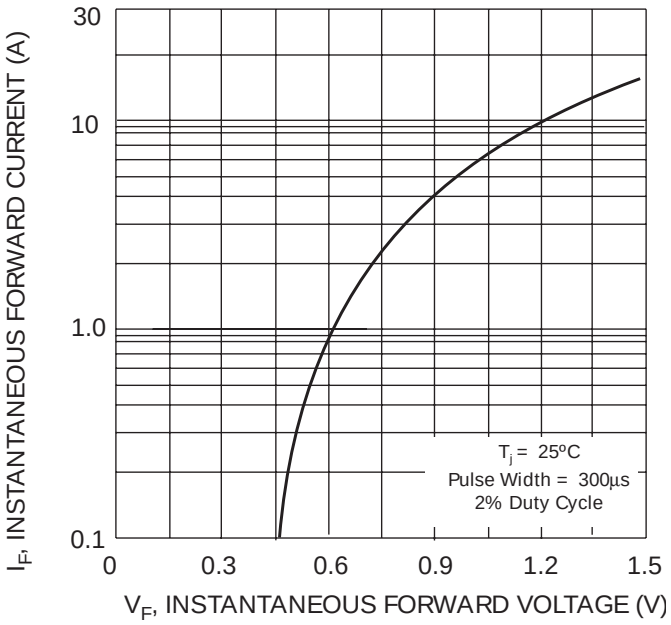

Fig. 2 Typical Forward Voltage Characteristics

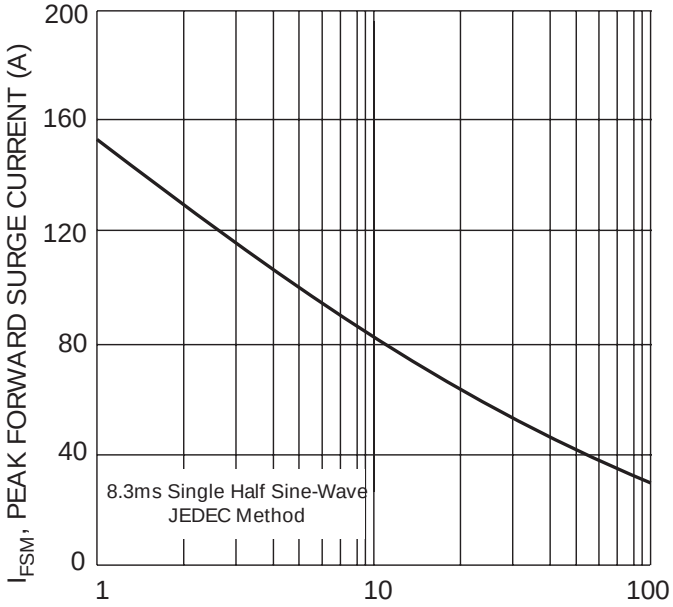

Fig. 3 Peak Forward Surge Current

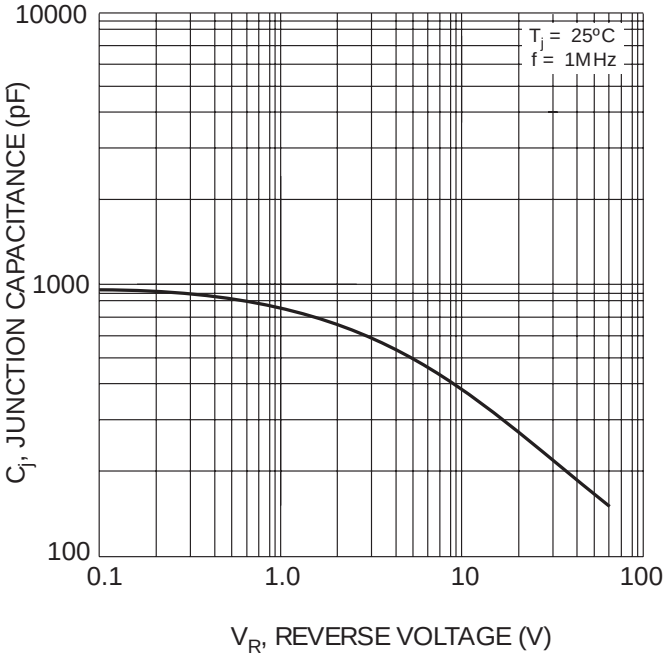

Fig. 4 Typical Junction Capacitance

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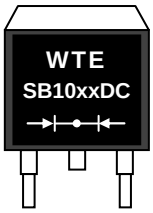
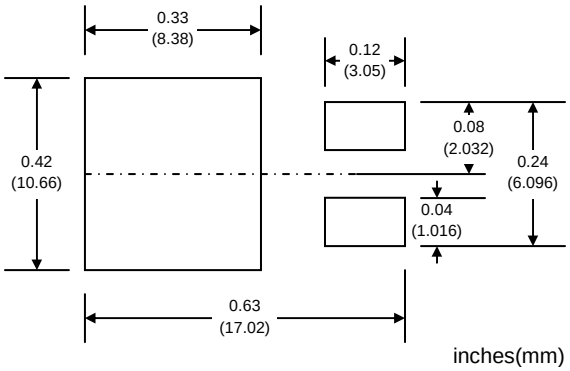
MARKING INFORMATION



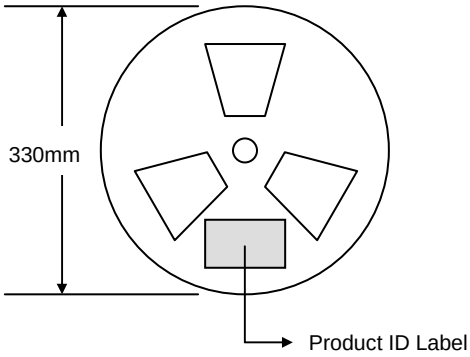
WTE	= Manufacturer's Logo
SB10xxDC	= Device Number
xx	= 150 or 200
Polarity	= As Marked on Body

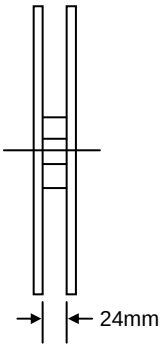
RECOMMENDED FOOTPRINT

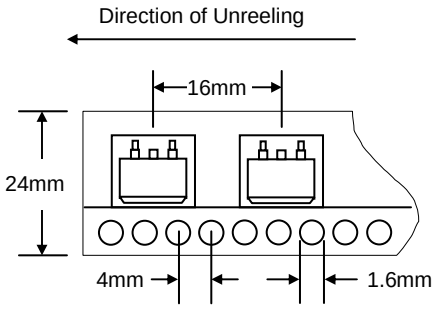


PACKAGING INFORMATION

TAPE & REEL







Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	800	340 x 337 x 45	800	370 x 370 x 420	6,400	15.0

Note: 1. Paper reel, white or gray color.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

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ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SB10150DC-T3	D^2PAK	800/Tape & Reel
SB10200DC-T3	D^2PAK	800/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SB10150DC-T3-LF**.

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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, 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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