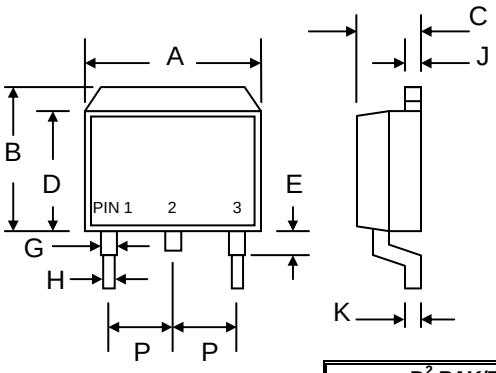
SB1020DC – SB10100DC

10A SURFACE MOUNT DUAL SCHOTTKY BARRIER RECTIFIER

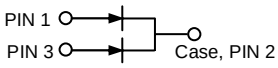
Features

- 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



Mechanical Data

- Case: D^{2}PAK/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**



D^2 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		

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	SB 1020DC	SB 1030DC	SB 1040DC	SB 1045DC	SB 1050DC	SB 1060DC	SB 1080DC	SB 10100DC	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	45	50	60	80	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	32	35	42	56	70	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}	0.55				0.75		0.85		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.

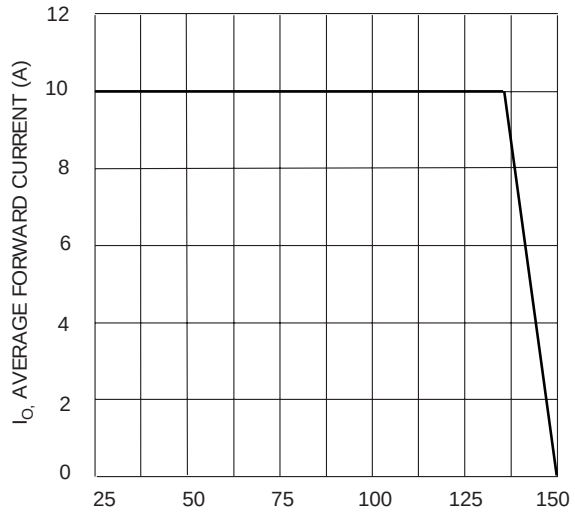


Fig. 1 Forward Current Derating Curve

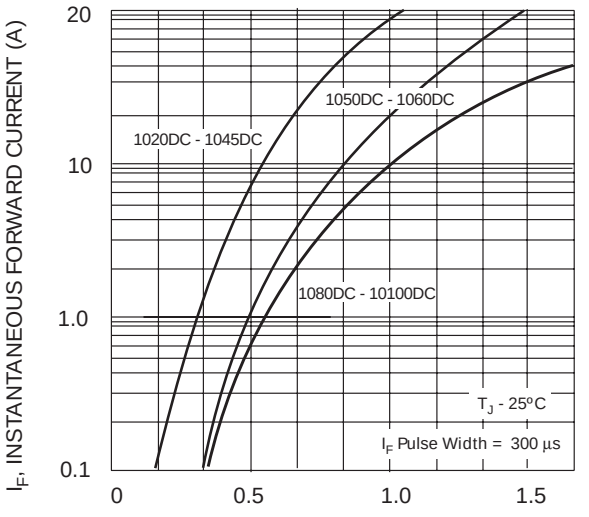


Fig. 2 Typical Forward Characteristics

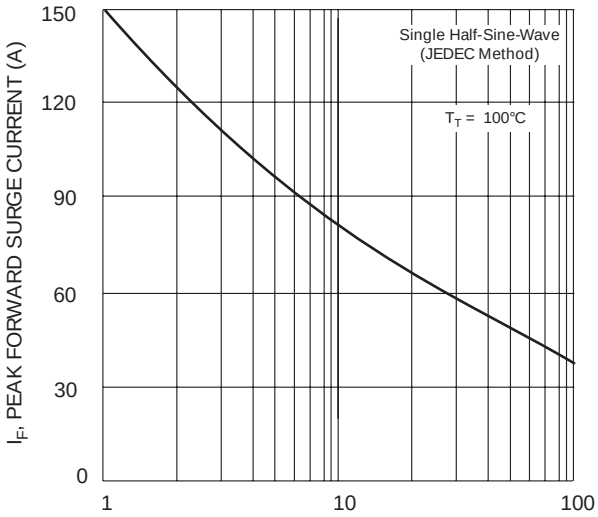


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

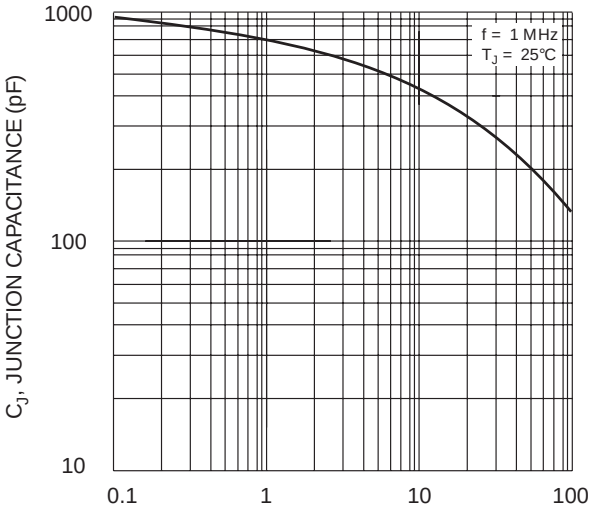


Fig. 4 Typical Junction Capacitance

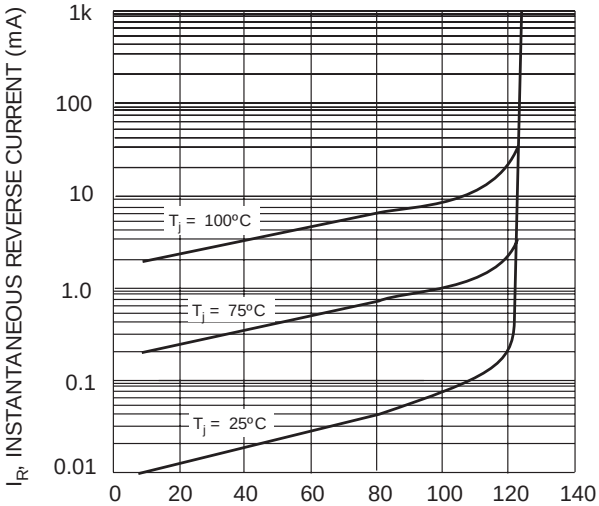
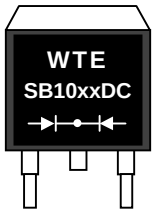


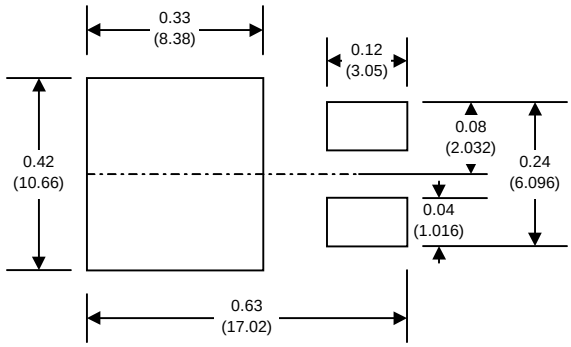
Fig. 5 Typical Reverse Characteristics

MARKING INFORMATION



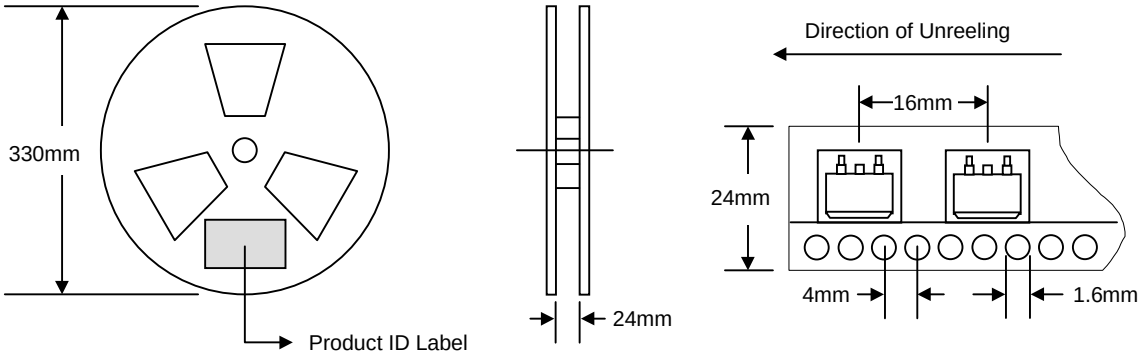
WTE	= Manufacturer's Logo
SB10xxDC	= Device Number
xx	= 20, 30, 40, 45, 50, 60, 80 or 100
Polarity	= As Marked on Body

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.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SB1020DC-T3	D^2PAK	800/Tape & Reel
SB1030DC-T3	D^2PAK	800/Tape & Reel
SB1040DC-T3	D^2PAK	800/Tape & Reel
SB1045DC-T3	D^2PAK	800/Tape & Reel
SB1050DC-T3	D^2PAK	800/Tape & Reel
SB1060DC-T3	D^2PAK	800/Tape & Reel
SB1080DC-T3	D^2PAK	800/Tape & Reel
SB10100DC-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, SB1020DC-T3-LF**.

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We power your everyday.

