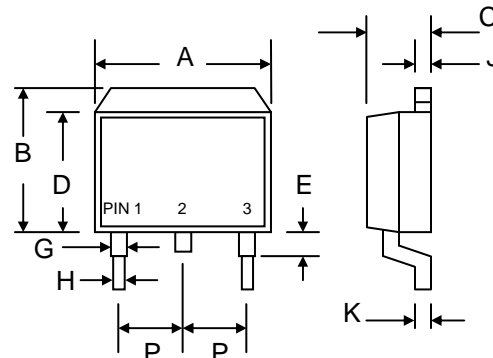


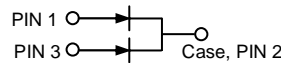
Features

- 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: 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**



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 1620DC	SB 1630DC	SB 1640DC	SB 1645DC	SB 1650DC	SB 1660DC	SB 1680DC	SB 16100DC	Unit	
Peak Repetitive Reverse Voltage	V _{RRM}	20	30	40	45	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	32	35	42	56	70	V	
Average Rectified Output Current @T _C = 105°C	I _O	16								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 = 8.0A	V _{FM}	0.55			0.75		0.85			V	
Peak Reverse Current @T _A = 25°C	I _{RM}					1.0					mA
At Rated DC Blocking Voltage @T _A = 100°C						50					
Typical Junction Capacitance (Note 1)	C _j					400					pF
Typical Thermal Resistance (Note 2)	R _{θJC}					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.

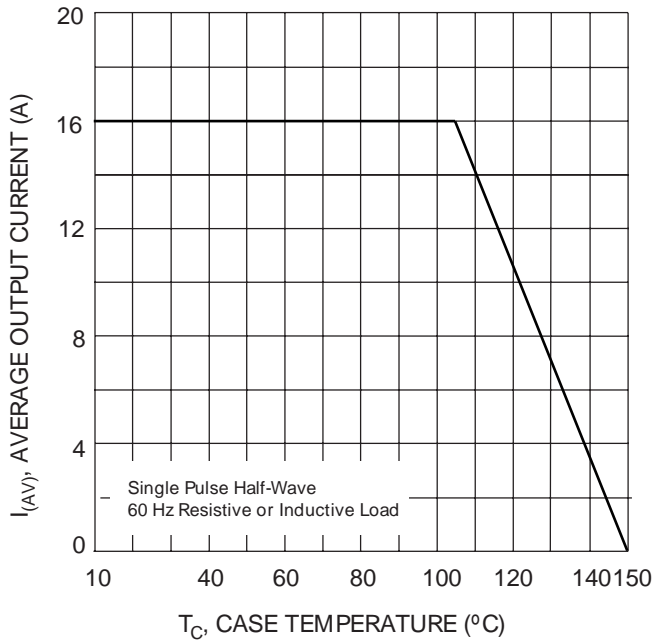


Fig. 1 Forward Current Derating Curve

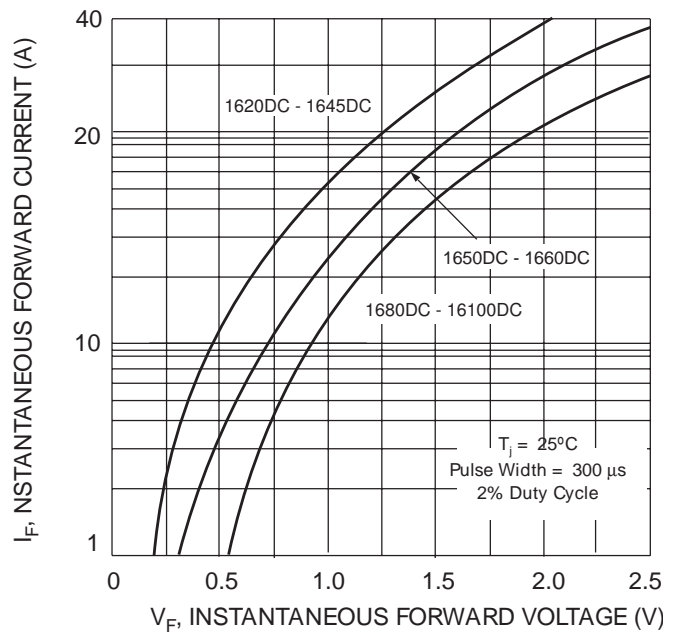


Fig. 2 Typical Forward Characteristics

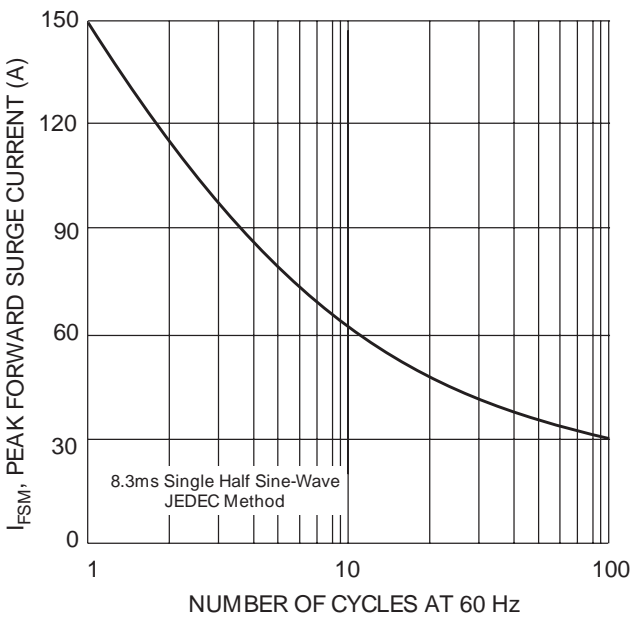


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

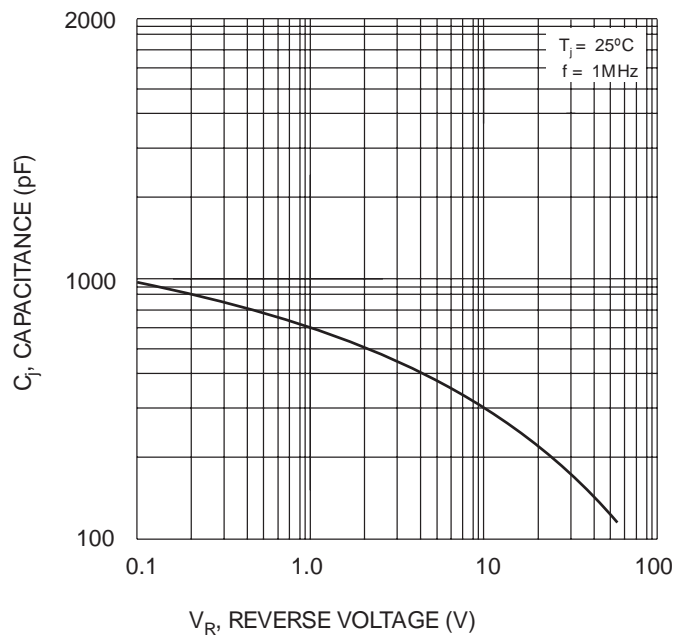
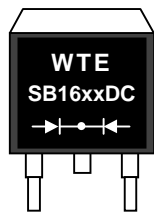


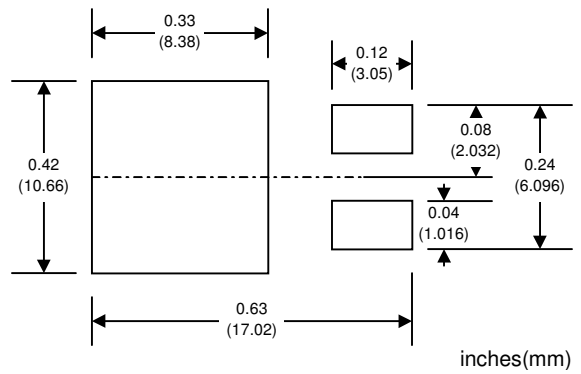
Fig. 4 Typical Junction Capacitance

MARKING INFORMATION



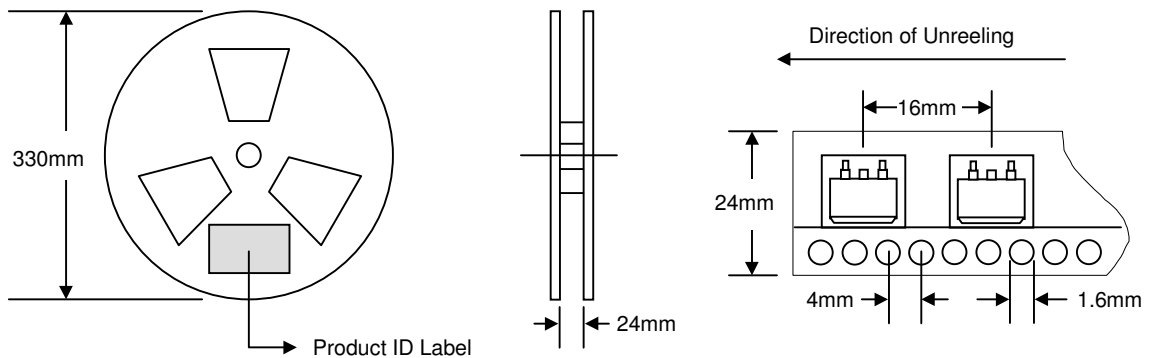
WTE = Manufacturer's Logo
SB16xxDC = Device Number
xx = 20, 30, 40, 45, 50, 60, 80 or 100
Polarity = As Marked on Body

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
SB1620DC-T3	D ² PAK	800/Tape & Reel
SB1630DC-T3	D ² PAK	800/Tape & Reel
SB1640DC-T3	D ² PAK	800/Tape & Reel
SB1645DC-T3	D ² PAK	800/Tape & Reel
SB1650DC-T3	D ² PAK	800/Tape & Reel
SB1660DC-T3	D ² PAK	800/Tape & Reel
SB1680DC-T3	D ² PAK	800/Tape & Reel
SB16100DC-T3	D ² PAK	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, SB1620DC-T3-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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We power your everyday.