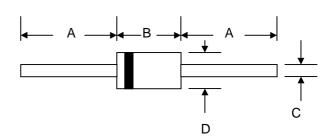


# SB120 - SB160

## 1.0A SCHOTTKY BARRIER RECTIFIER

### **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			
Α	25.4	_			
В	4.06	5.21			
С	0.71	0.864			
D	2.00	2.72			
All Dimensions in mm					

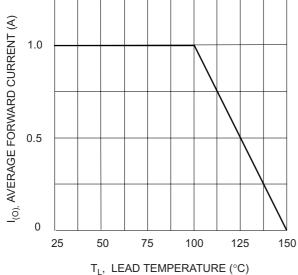
## Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

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

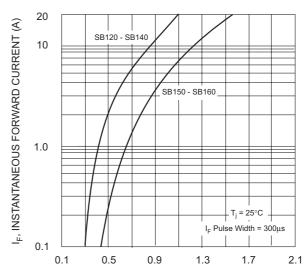
Characteristic	Symbol	SB120	SB130	SB140	SB150	SB160	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	20	30	40	50	60	V
RMS Reverse Voltage	VR(RMS)	14	21	28	35	42	٧
Average Rectified Output Current (Note 1) @T <sub>L</sub> = 100°0	C Io	1.0				Α	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	40				А	
Forward Voltage @I <sub>F</sub> = 1.0	A VFM	0.50 0.70			70	V	
Peak Reverse Current $@T_A = 25^{\circ}C$ At Rated DC Blocking Voltage $@T_A = 100^{\circ}C$	I IDM			0.5 10			mA
Typical Junction Capacitance (Note 2)	Cj	110			8	0	pF
Typical Thermal Resistance Junction to Lead	R⊕JL	15				K/W	
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{ heta}JA$	50					K/W
Operating and Storage Temperature Range	Тј, Тѕтс	-65 to +150					°C

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.

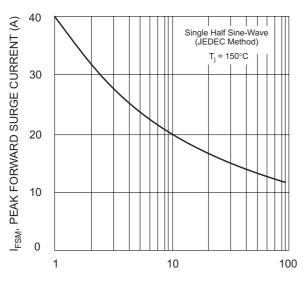
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



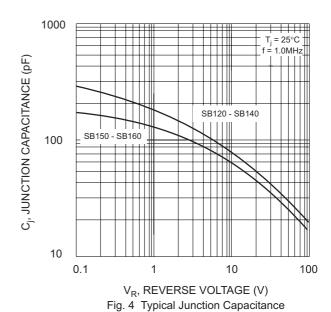
 $T_L$ , LEAD TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve



V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz Fig. 3 Max Non-Repetitive Peak Fwd Surge Current



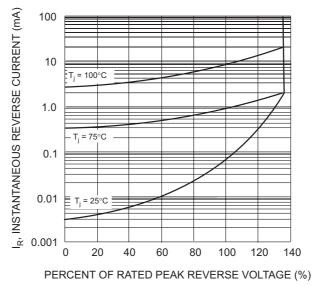


Fig. 5 Typical Reverse Characteristics

#### **ORDERING INFORMATION**

Product No.◆	Package Type	Shipping Quantity	
SB120-T3	DO-41	5000/Tape & Reel	
SB120-TB	DO-41	5000/Tape & Box	
SB120	DO-41	1000 Units/Box	
SB130-T3	DO-41	5000/Tape & Reel	
SB130-TB	DO-41	5000/Tape & Box	
SB130	DO-41	1000 Units/Box	
SB140-T3	DO-41	5000/Tape & Reel	
SB140-TB	DO-41	5000/Tape & Box	
SB140	DO-41	1000 Units/Box	
SB150-T3	DO-41	5000/Tape & Reel	
SB150-TB	DO-41	5000/Tape & Box	
SB150	DO-41	1000 Units/Box	
SB160-T3	DO-41	5000/Tape & Reel	
SB160-TB	DO-41	5000/Tape & Box	
SB160	DO-41	1000 Units/Box	

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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.

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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.