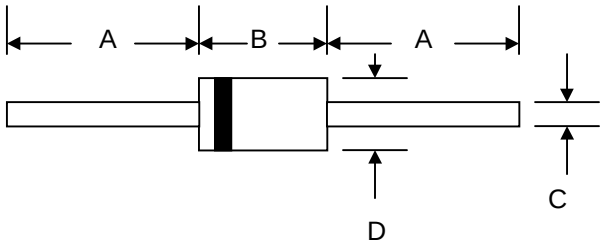
SB120 – SB160

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

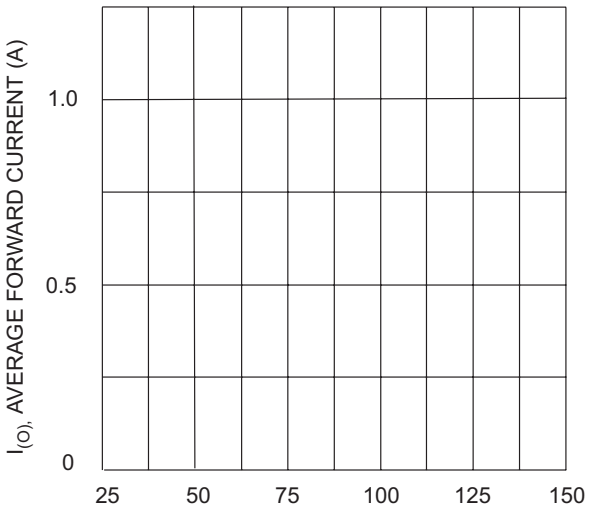
DO-41		
Dim	**Min**	**Max**
A	25.4	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

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

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

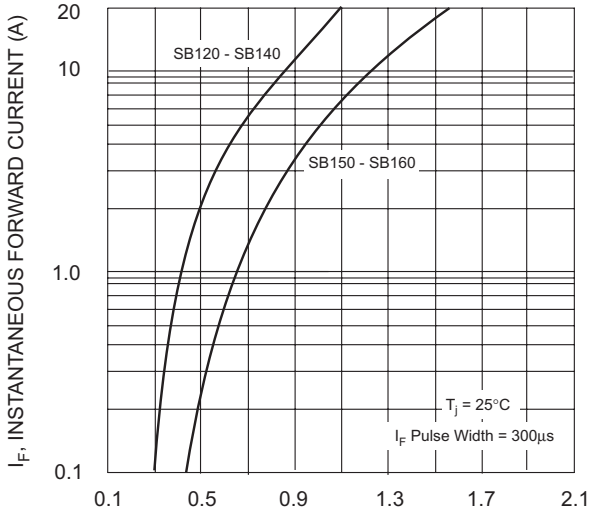
Characteristic	Symbol	SB120	SB130	SB140	SB150	SB160	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current (Note 1) @T_L = 100°C	I_O	1.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40					A
Forward Voltage @I_F = 1.0A	V_{FM}	0.50			0.70		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°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					°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.



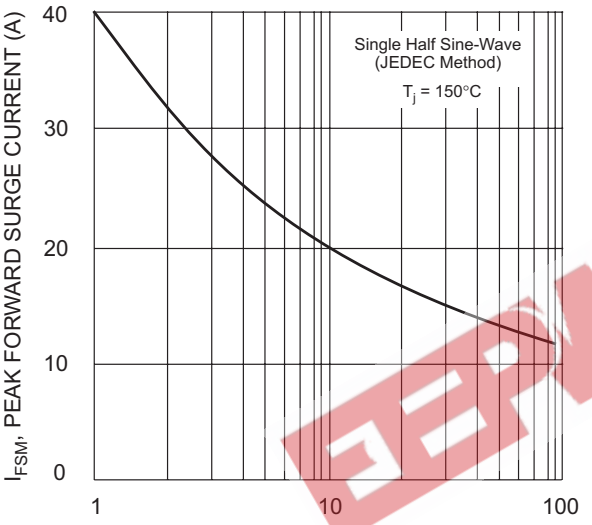
T_L, LEAD TEMPERATURE (°C)

Fig. 1 Forward Current Derating Curve



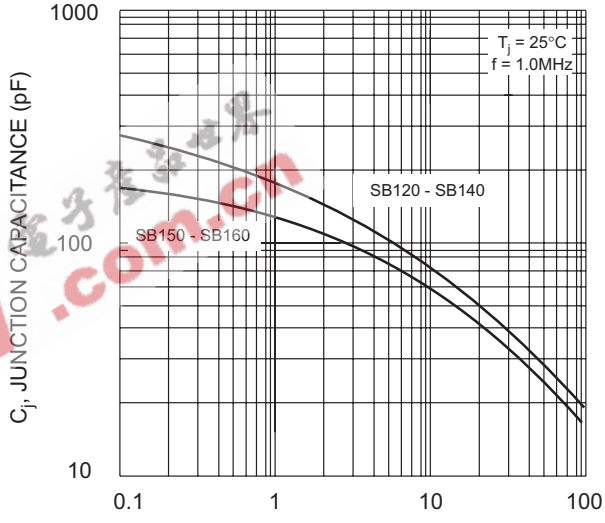
V_F, INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 2 Typical Forward Characteristics



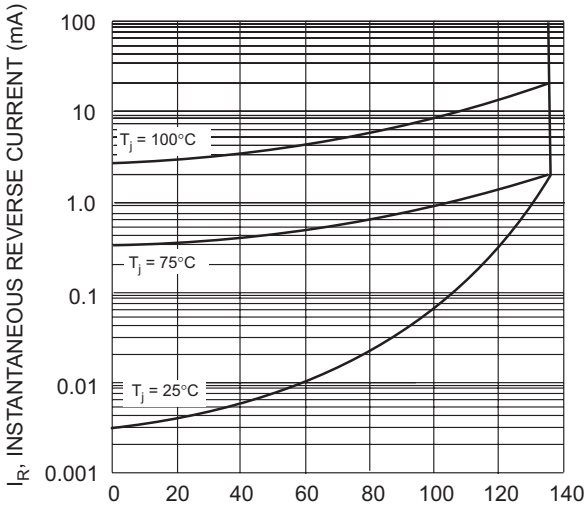
NUMBER OF CYCLES AT 60 Hz

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current



V_R, REVERSE VOLTAGE (V)

Fig. 4 Typical Junction Capacitance



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

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

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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We power your everyday.

