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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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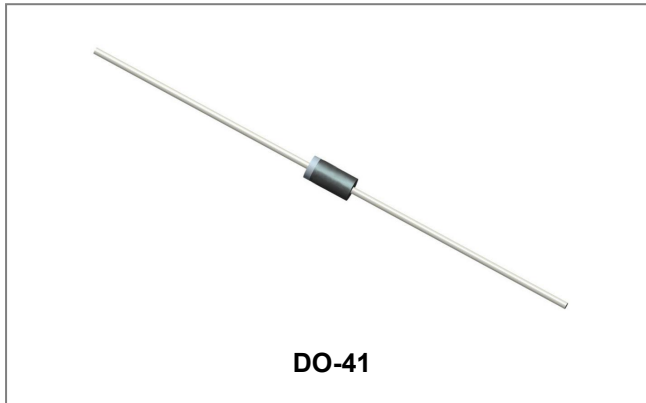
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SB120 THRU SB160 SCHOTTKY RECTIFIER



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
- Green Products in Compliance with the RoHS Directive
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012 ounce, 0.34 grams

Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

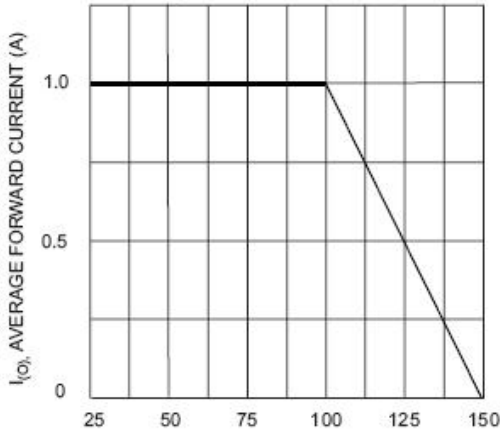
Characteristics	Symbol	SB120	SB130	SB140	SB150	SB160	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	V
Maximum DC blocking voltage	V_{DC}						
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=100^{\circ}\text{C}$	$I_{(AV)}$	1.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40					A
Maximum instantaneous forward voltage at 1.0A	V_F	0.55			0.70		V
Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=100^{\circ}\text{C}$	I_R	5.0			10		mA
Typical junction capacitance (Note 1)	C_J	110			80		pF
Typical thermal resistance junction to lead	$R_{\theta JL}$	15					$^{\circ}\text{C}/\text{W}$
Typical thermal resistance junction to ambient (Note 2)	$R_{\theta JA}$	50.0					$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +125					$^{\circ}\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

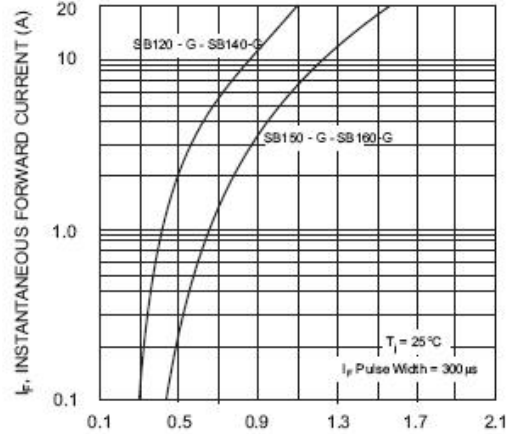
3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B mounted.

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

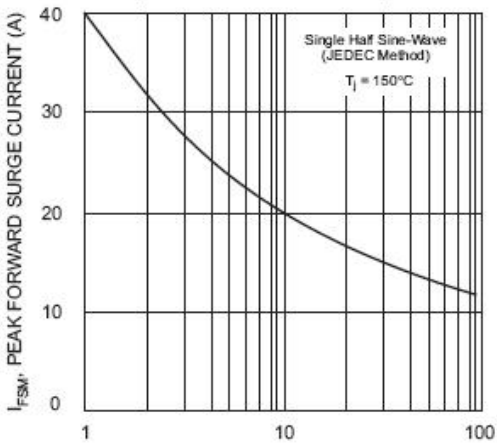
Ratings and Characteristics Curves



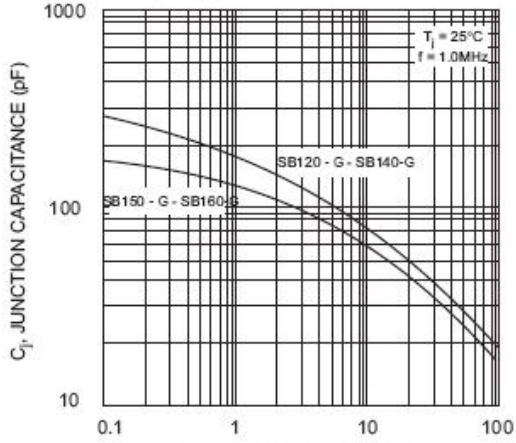
T_L , LEAD TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



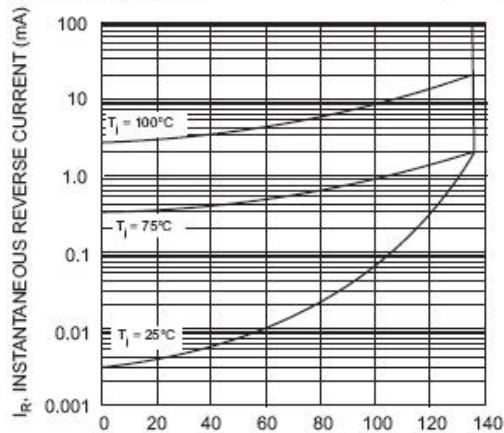
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



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

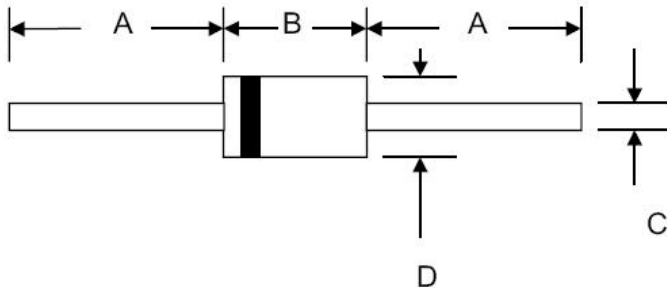


V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Junction Capacitance



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 5 Typical Reverse Characteristics

Mechanical Dimensions DO-41



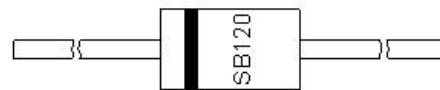
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	4.06	5.21	0.160	0.205
C	0.71	0.864	0.028	0.034
D	2.00	2.72	0.079	0.107

Ordering Information

Device	Package	Shipping
SB120 THRU SB160	DO-41(Pb-Free)	5000pcs / tape

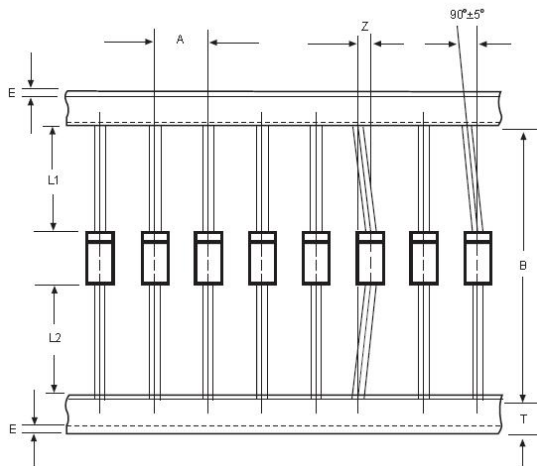
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



SB120 = Part Name

Carrier Tape Specification DO-41



SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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