

SB120 THRU SB1100

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage – 20 to 100 Volts

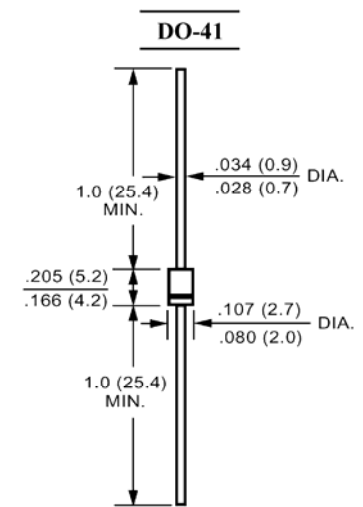
Forward Current – 1.0 Amperes

Features

- High current capability
- High surge current capability
- Low forward voltage drop
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling ,and polarity protection applications

Mechanical Data

- **Case:** Molded plastic, DO-41
- **Epoxy:** UL 94V-0 rate flame retardant
- **Lead:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



Dimensions in inches and (millimeter)

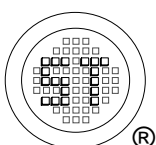
Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	SB 120	SB 130	SB 140	SB 150	SB 160	SB 180	SB 1100	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	80	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Length	$I_{(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40							A
Maximum Forward Voltage at 1 A and 25 °C	V_F	0.55		0.7		0.85		V	
Maximum Reverse Current $T_A = 25\text{ °C}$ at Rated DC Blocking Voltage $T_A = 100\text{ °C}$	I_R	0.5 10							mA
Typical Junction Capacitance ¹⁾	C_J	110							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	50							°C/W
Operating Junction Temperature Range	T_J	-55 to +125			-55 to +150			°C	
Operating and Storage Temperature Range	T_J, T_S	-55 to +150							°C

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 VDC.

²⁾ Thermal resistance from junction to ambient 0.375" (9.5 mm) lead length P.C.B mounted with 0.22 X 0.22" (5.5 X 5.5 mm) copper pads



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002 Certificate No. 05103
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 Dated: 28/02/2006

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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

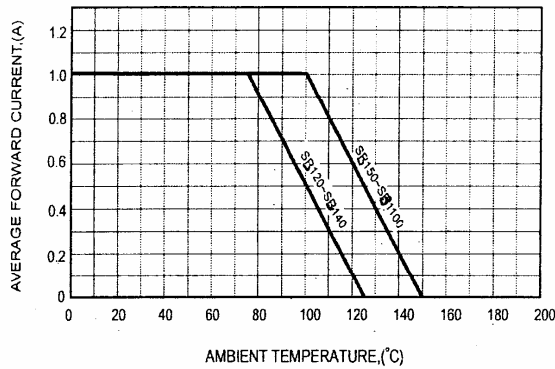


FIG.2-TYPICAL FORWARD CHARACTERISTICS

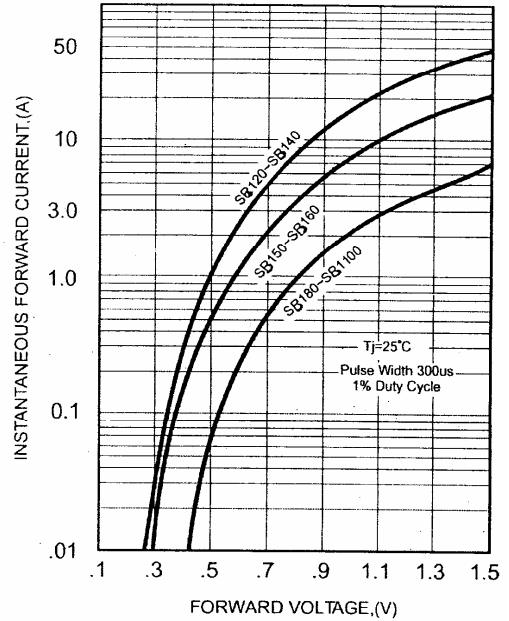


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

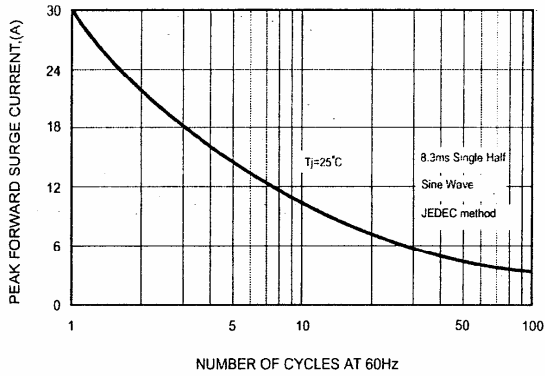


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

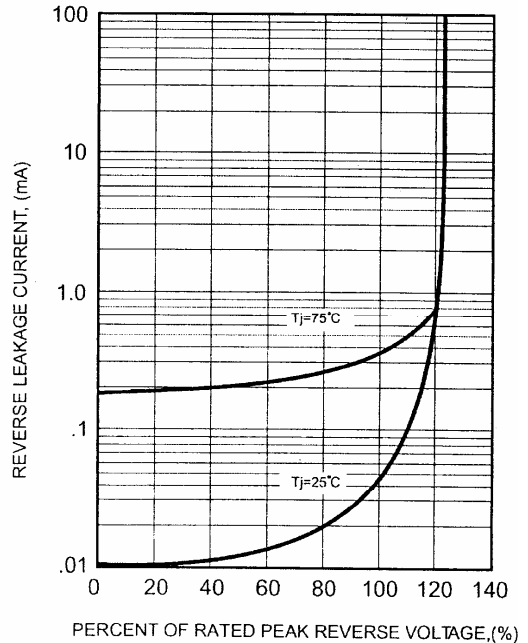
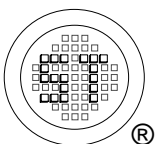
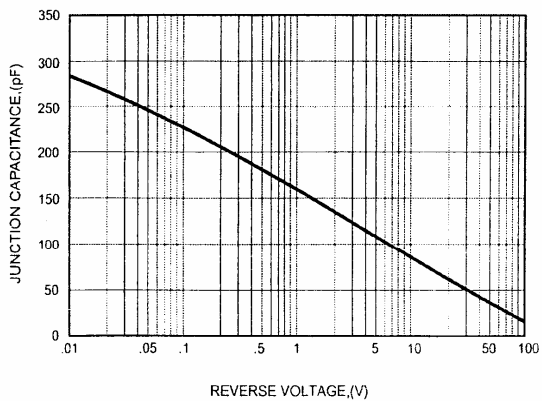


FIG.4-TYPICAL JUNCTION CAPACITANCE



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