

# SB220 THRU SB2100

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage – 20 to 100 V

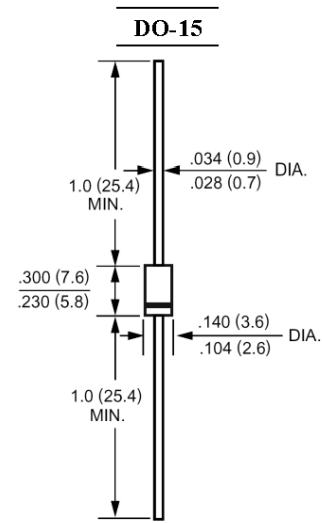
Forward Current – 2 A

### Features

- Low forward voltage drop
- High current capability
- High switching capability
- High surge capability
- High reliability

### Mechanical Data

- Case: Molded plastic, DO-15
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any



Dimensions in inches and (millimeters)

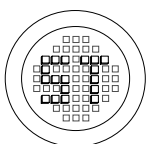
### Maximum Ratings and Electrical Characteristic

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

Parameter	Symbols	SB220	SB230	SB240	SB250	SB260	SB280	SB2100	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	70	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	$I_{F(AV)}$	2							A	
Peak Forward Surge Current, 8.3 ms Single half-Sine-Wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50							A	
Maximum Forward Voltage at 2 A	$V_F$	0.55			0.7		0.85		V	
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$	at $T_A = 25\text{ }^\circ\text{C}$			0.5		at $T_A = 100\text{ }^\circ\text{C}$			mA
Typical Junction Capacitance <sup>1)</sup>	$C_J$	180							pF	
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	45							$^\circ\text{C/W}$	
Operating Junction Temperature Range	$T_J$	- 55 to + 125				- 55 to + 150				$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150							$^\circ\text{C}$	

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V DC.

<sup>2)</sup> Thermal Resistance from Junction to Ambient 0.375" (9.5 mm) lead length P.C.B. mounted.



**SEMTECH ELECTRONICS LTD.**

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Dated : 31/08/2006 H

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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

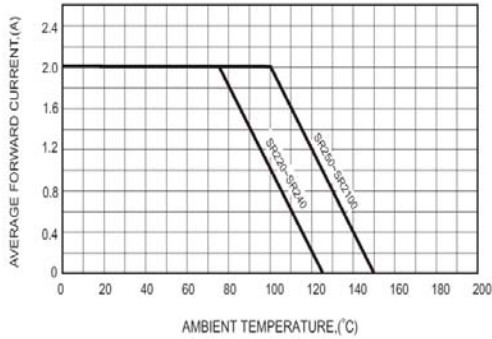


FIG.2-TYPICAL FORWARD CHARACTERISTICS

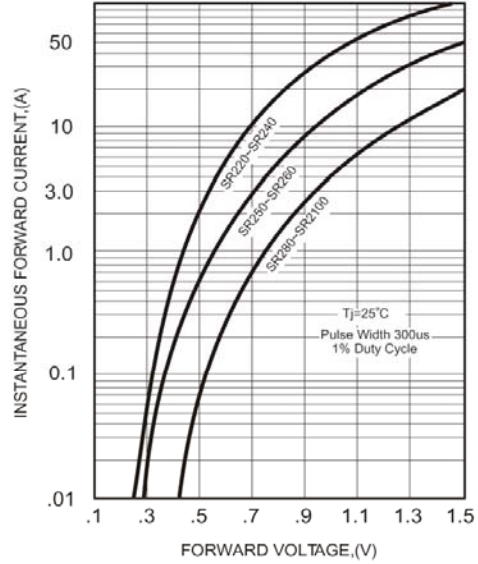


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

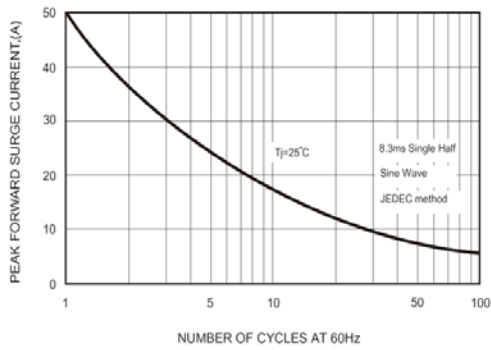


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

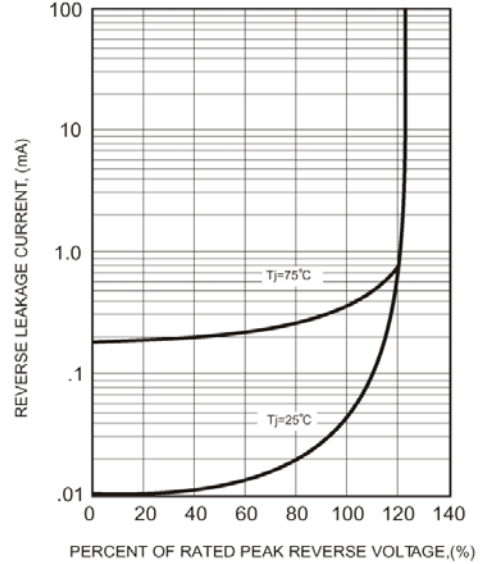
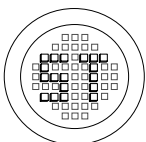
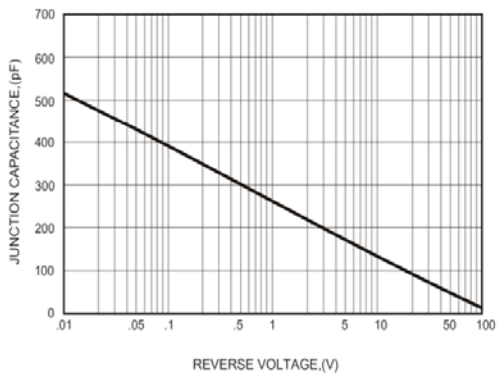


FIG.4-TYPICAL JUNCTION CAPACITANCE



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ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098

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