



SB220 THRU SB2B0

SCHOTTKY BARRIER RECTIFIER

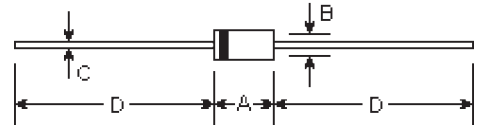
Reverse Voltage - 20 to 100 Volts

Forward Current - 2.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound
- 2.0 ampere operation at $T_A=75^\circ\text{C}$ with no thermal runaway
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

DO-15



Mechanical Data

- **Case:** Molded plastic, DO-15
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.014 ounce, 0.39 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.228	0.299	5.8	7.6	
B	0.102	0.142	2.6	3.6	ϕ
C	0.028	0.034	0.71	0.86	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	SB220	SB230	SB240	SB250	SB260	SB270	SB280	SB290	SB2B0	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	Volts	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	Volts	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	Volts	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	2.0									Amps	
Peak forward surge current, I_{FSM} (surge): 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	50.0									Amps	
Maximum forward voltage at 2.0A	V_F	0.55		0.70			0.85			Volts		
Maximum full load reverse current, full cycle average at $T_A=75^\circ\text{C}$	$I_{R(AV)}$	30.0									mA	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R					2.0 20.0						mA
Typical junction capacitance (Note 1)	C_J						170.0				pF	
Typical thermal resistance (Note 2)	$R_{\theta JA}$						35.0				$^\circ\text{C/W}$	
Operating and storage temperature range	T_J, T_{STG}						-50 to +125				$^\circ\text{C}$	

Notes:

(1) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC

(2) Thermal resistance junction to ambient

RATINGS AND CHARACTERISTIC CURVES

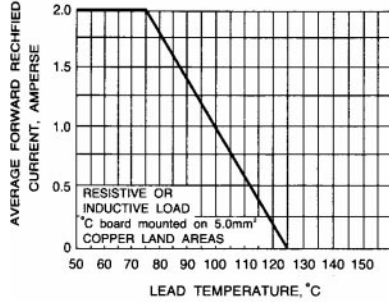


Fig. 1 - FORWARD CURRENT DERATING CURVE.

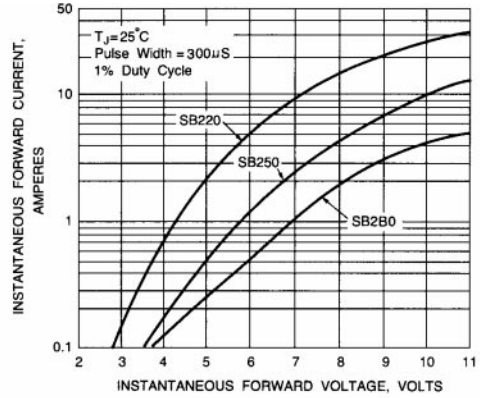


Fig. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

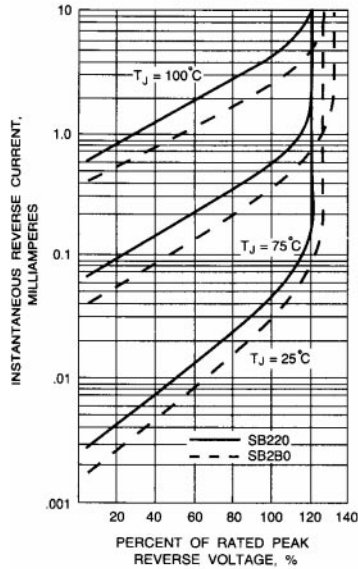


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

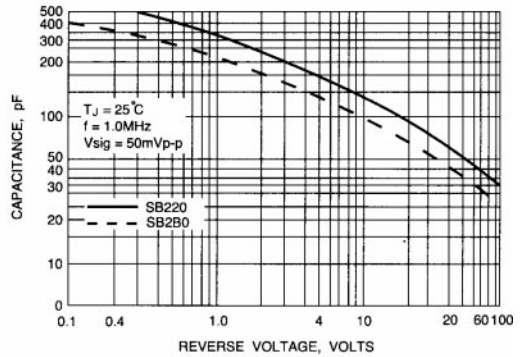


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

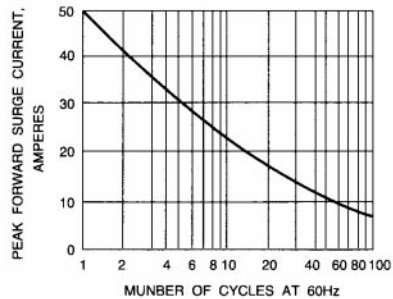


Fig. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT