



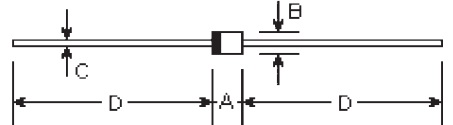
SBO20 THRU SBOB0

SCHOTTKY BARRIER RECTIFIER
Reverse Voltage - 20 to 100 Volts
Forward Current - 1.0 Ampere

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound
- 1.0 ampere operation at $T_A=90^\circ\text{C}$ with no thermal runaway
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

R-1



Mechanical Data

- **Case:** Molded plastic, R-1
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.007 ounce, 0.20 gram

DIMENSIONS					Note
DIM	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.114	0.138	2.9	3.5	
B	0.095	0.099	2.42	2.51	φ
C	0.020	0.024	0.5	0.6	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	SB O20	SB O30	SB O40	SB O50	SB O60	SB O70	SB O80	SB O90	SB OB0	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 $T_A=90^\circ\text{C}$	$I_{(AV)}$	1.0									Amp	
Peak forward surge current, I_{FM} (surge): 8.3ms single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	30.0									Amps	
Maximum forward voltage at 1.0A	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	1.0					10.0					mA
Typical junction capacitance (Note 1)	C_j	110.0									pF	
Typical thermal resistance (Note 2)	$R_{\theta JA}$	80.0									$^\circ\text{C/W}$	
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

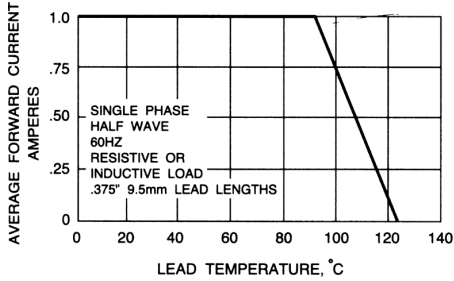


Fig. 1 – FORWARD CURRENT DERATING CURVE

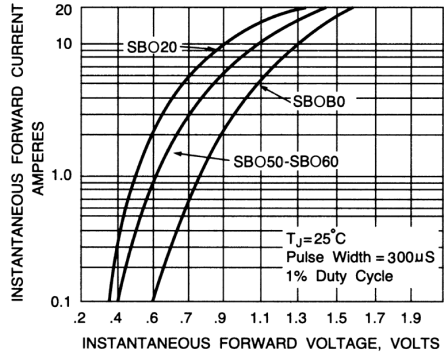


Fig. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

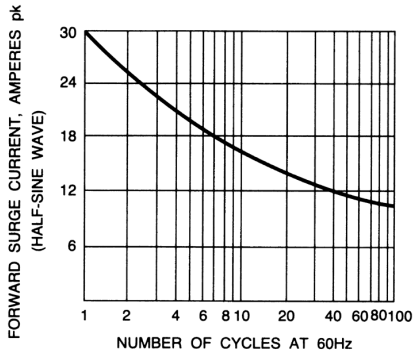


Fig. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

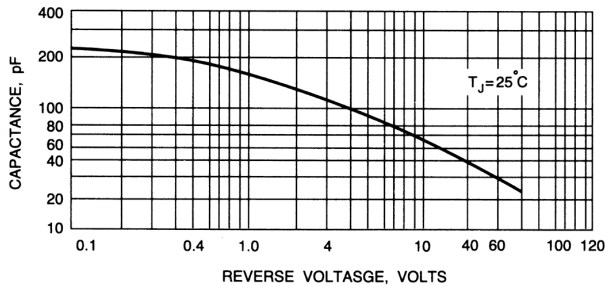


Fig. 4 – TYPICAL JUNCTION CAPACITANCE