

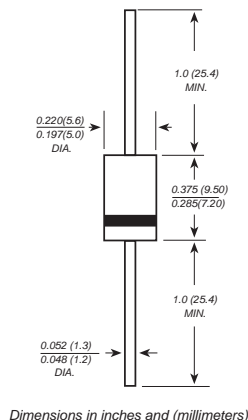


SB320 THRU SB3200

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 3.0 Amperes

DO-201AD



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.04 ounce, 1.10 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	SYMBOLS	SB 320	SB 330	SB 340	SB 350	SB 360	SB 370	SB 380	SB 390	SB 3B0	SB 3150	SB 3200	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	150	200	VOLTS
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	105	140	VOLTS
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	150	200	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig. 1)	$I_{(AV)}$	3.0											Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80.0											Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.55		0.70		0.85			0.95				Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	0.5					0.2			2.0		mA	
Typical junction capacitance (NOTE 1)	C_J	250			160								pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	40.0											°C/W
Operating junction temperature range	T_J	-65 to +125					-65 to +150						°C
Storage temperature range	T_{STG}	-65 to +150											°C

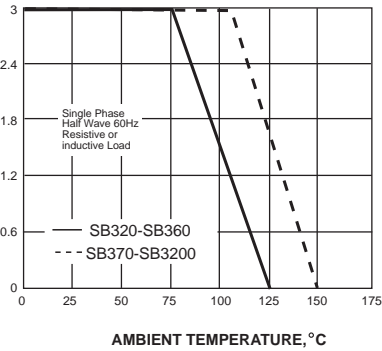
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

RATINGS AND CHARACTERISTIC CURVES SB320 THRU SB3200

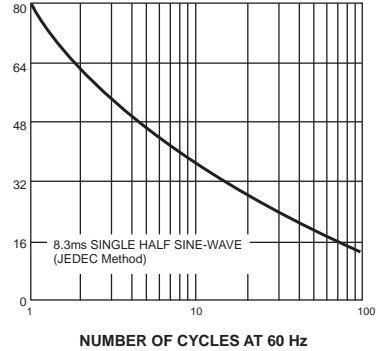
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



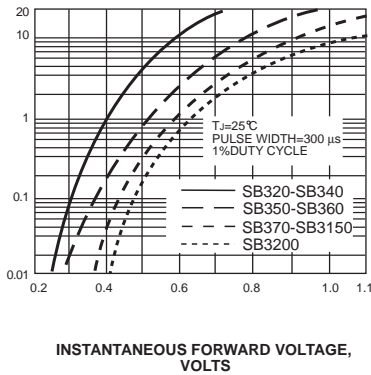
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



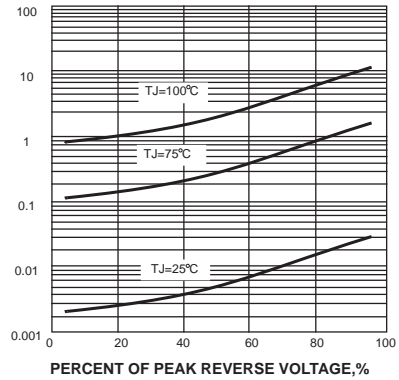
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



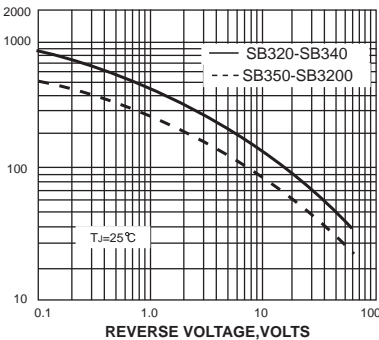
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

