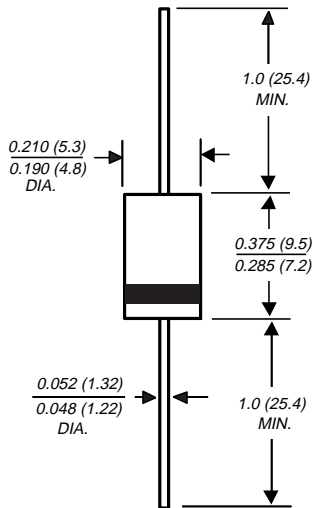


SB320 THRU SB360

MEDIUM CURRENT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 60 Volts Forward Current - 3.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal to silicon rectifier, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low V_F
- ◆ High surge capacity
- ◆ Epitaxial construction
- ◆ Guardring for transient protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 kg) 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

Mounting Position: Any

Weight: 0.04 ounces, 1.12 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SB320	SB330	SB340	SB350	SB360	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	Volts
Maximum average forward rectified current at 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 (NOTE 1)	V_F	0.50			0.74		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 1) $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	0.5					mA
		20.0			10.0		
Typical thermal resistance (NOTE 1)	$R_{\theta JA}$	40.0					°C/W
	$R_{\theta JL}$	10.0					
Operating junction temperature range	T_J	-65 to +125			-65 to +150		°C
Storage temperature range	T_{STG}	-65 to +150					°C

NOTES:

(1) Pulse test: 300µs pulse width, 1% duty cycle

(2) Thermal resistance from junction to lead vertical P.C.B. mounting, 0.500" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad

RATINGS AND CHARACTERISTIC CURVES SB320 THRU SB360

FIG. 1 - FORWARD CURRENT DERATING CURVE

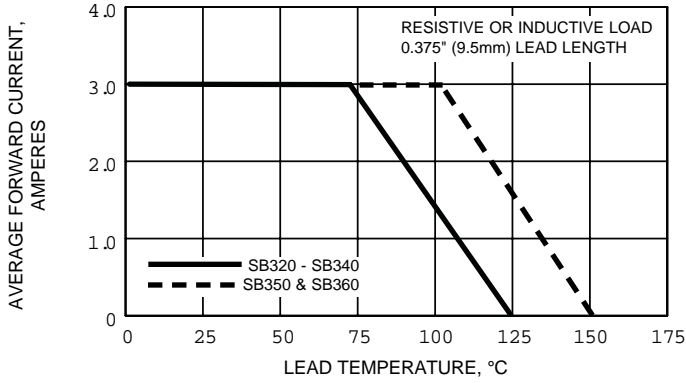


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

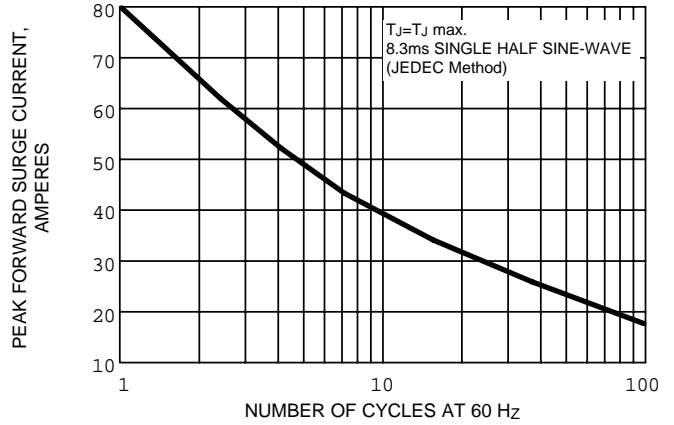


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

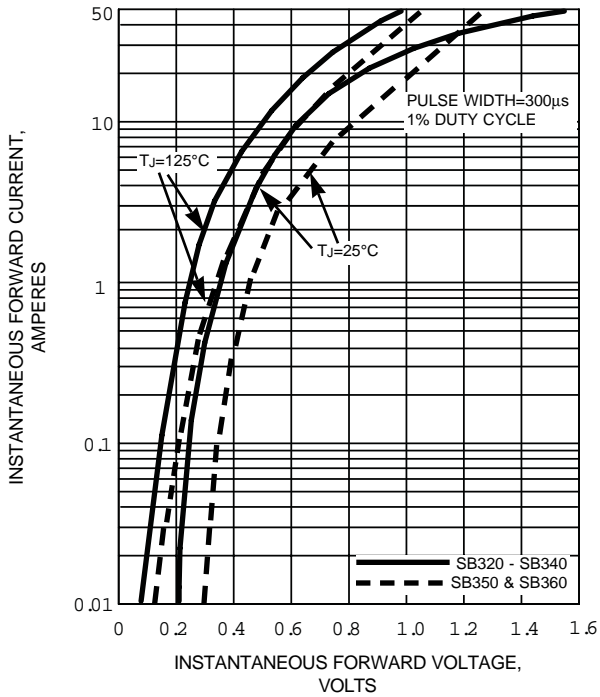


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

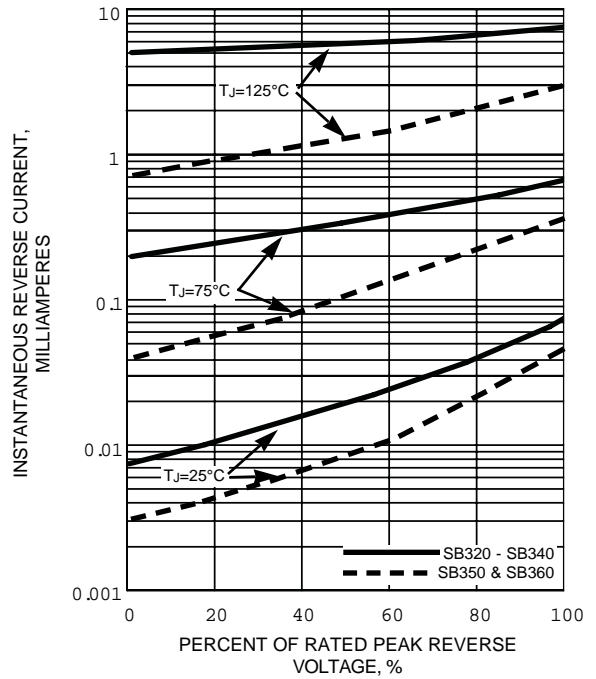


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

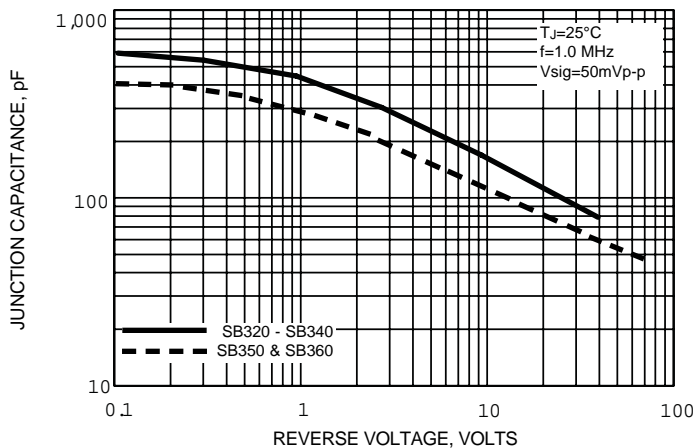


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

