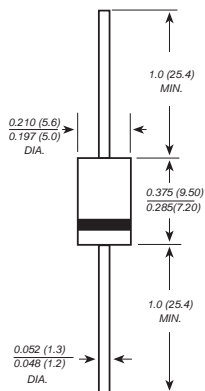


SB520L THRU SB5100L

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 5.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

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:
260°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%.

	SYMBOLS	SB520L	SB530L	SB540L	SB550L	SB560L	SB580L	SB5100L	UNITS
Maximum repetitive 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" (9.5mm) lead length (see fig. 1)	$I_{(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							A
Maximum instantaneous forward voltage at 5.0A	V_F	0.45		0.50		0.70		V	
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			20		10		mA
Typical junction capacitance (NOTE 1)	C_J	500			400			pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	25.0							°C/W
Operating junction temperature range	T_J	-55 to +125				-55 to +150			°C
Storage temperature range	T_{STG}	-55 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 SB520L THRU SB5100L

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

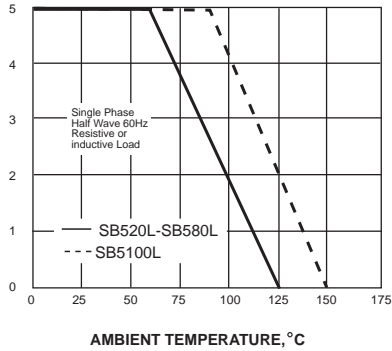


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT,
AMPERES

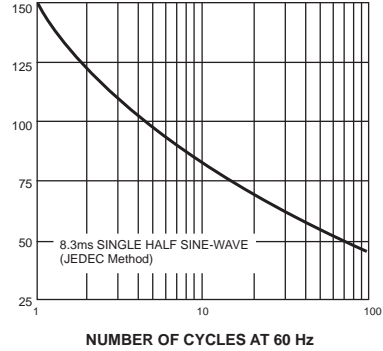


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

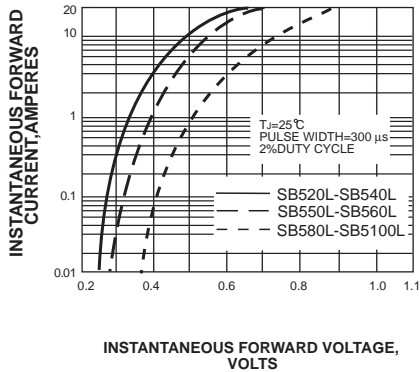


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

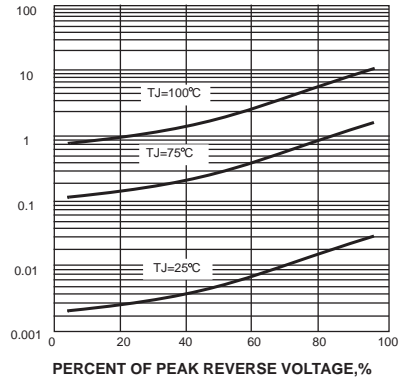


FIG. 5-TYPICAL JUNCTION CAPACITANCE

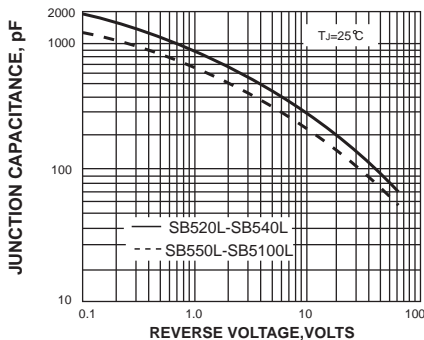


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

TRANSIENT THERMAL IMPEDANCE,
°C/W

