Low forward voltage Schottky Barrier Rectifier

SB520L THRU SB5100L 20 to 100 V 5.0A

RoHS COMPLIANT

FEATURES

The plastic package carries Underwriters Laboratory Flammability Classification 94V-0

Fast switching for high efficiency

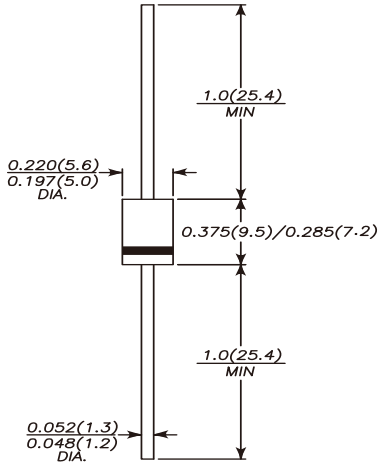
Low reverse leakage

High forward surge current capability

High temperature soldering guaranteed:

260°C/10 seconds,0.375″(9.5mm) lead length, 5 lbs. (2.3kg) tension

DO-201AD



Dimensions in inches and (millimeters)

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℃ ambient temperature unless otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

	SYMBOLS	SB520L	SB540L	SB560L	SB580L	SB5100L	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	40	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}	125.0					A
Maximum instantaneous forward voltage at 5.0A	V_F	0.45		0.50	0.60		V
Maximum DC reverse current T_A=25℃	I_R	0.5			0.2		mA
at rated DC blocking voltage T_A=100℃		20			10		
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 +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

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RATINGS AND CHARACTERISTIV CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

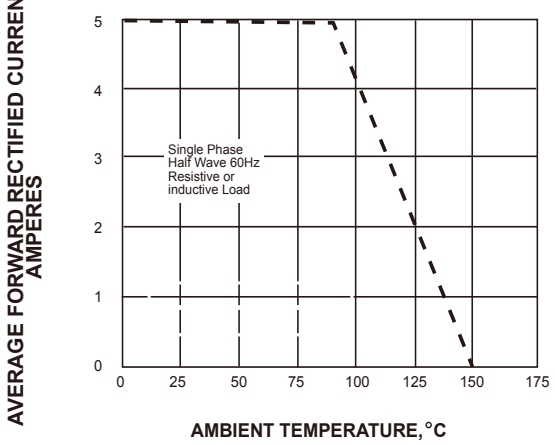


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

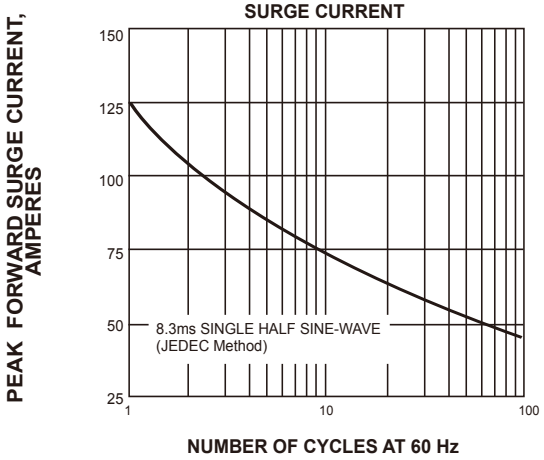


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

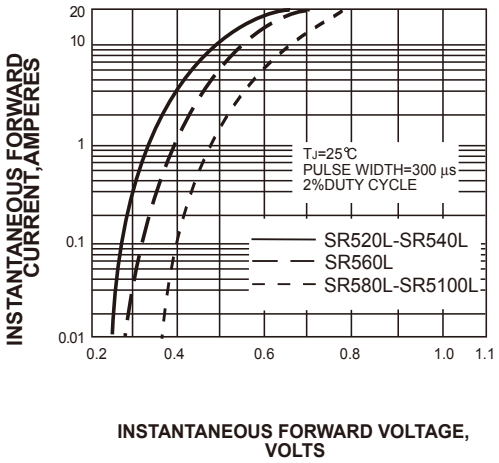


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

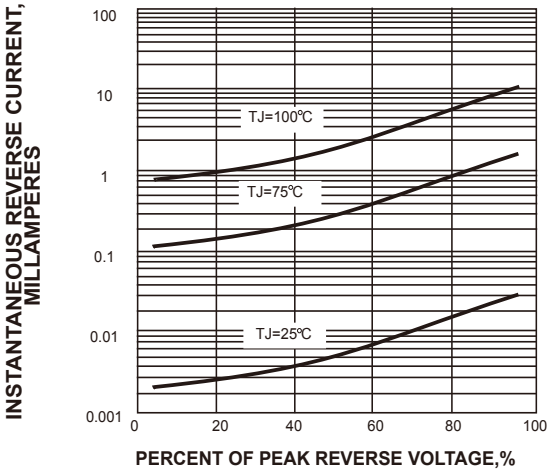


FIG. 5-TYPICAL JUNCTION CAPACITANCE

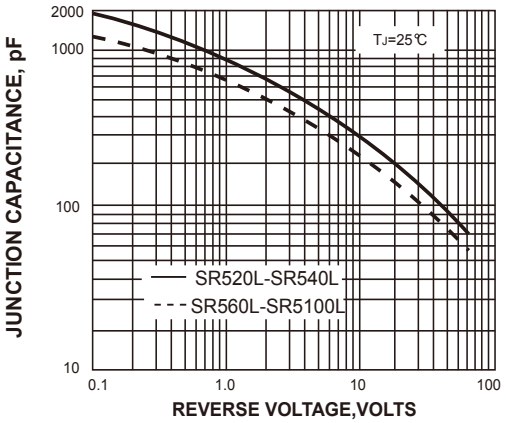


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

