



SB520 THRU SB5100

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts

Forward Current - 5.0 Ampere

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- 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

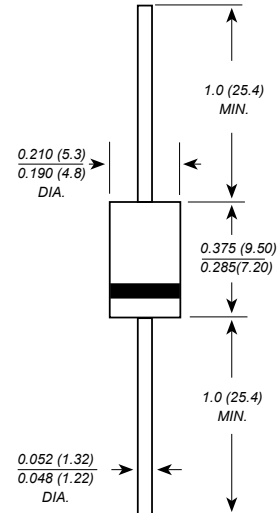
Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.10 grams



DO-201AD



Dimensions in inches and (millimeters)

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%.

Characteristic	SYMBOLS	SB520	SB540	SB560	SB580	SB5100	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}	150.0					A
Maximum instantaneous forward voltage at 5.0A	V _F	0.55		0.70	0.85		V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	0.5					mA
		50.0		25.0			
Typical junction capacitance (NOTE 1)	C _J	500		400			pF
Typical thermal resistance (NOTE 2)	R _{θJA}	25.0					°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

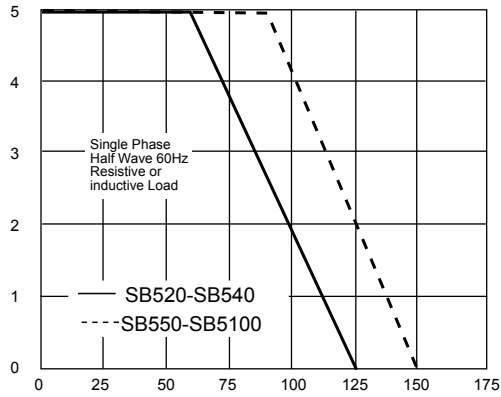


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RATINGS AND CHARACTERISTIC CURVES

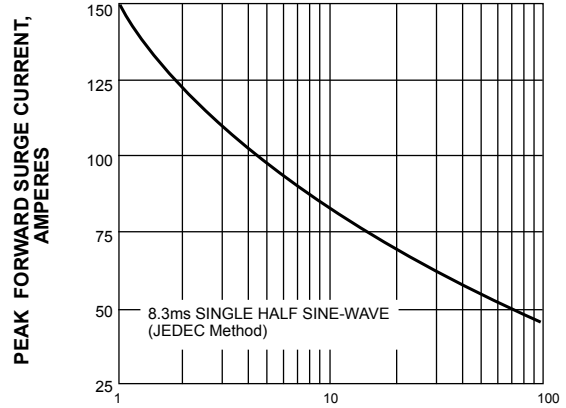
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



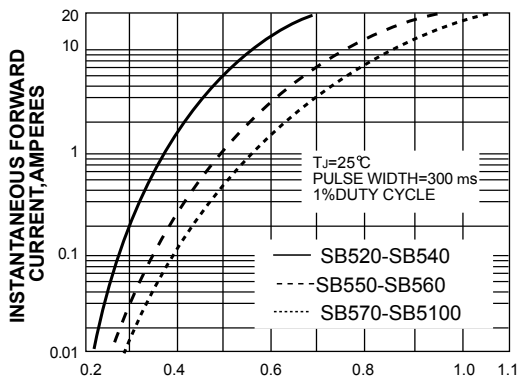
AMBIENT TEMPERATURE, °C

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



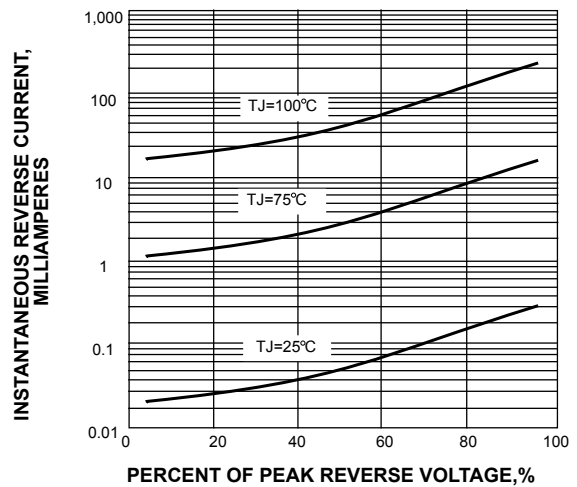
NUMBER OF CYCLES AT 60 Hz

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



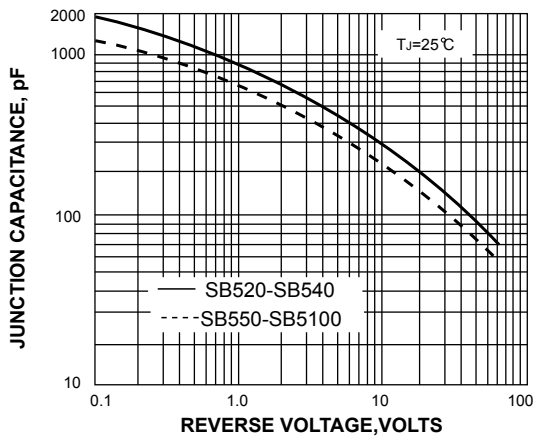
INSTANTANEOUS FORWARD VOLEAGE,
VOLTS

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



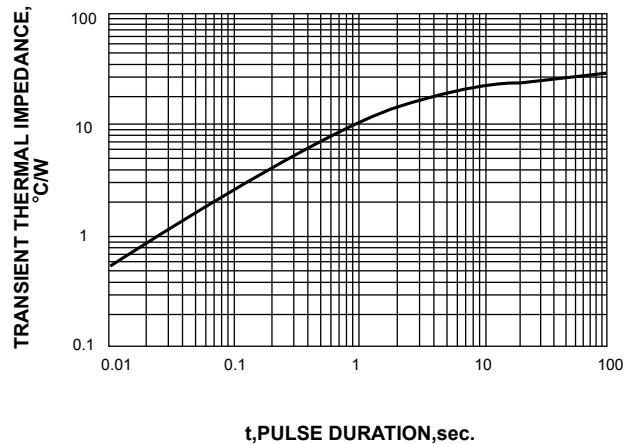
PERCENT OF PEAK REVERSE VOLTAGE, %

FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.