

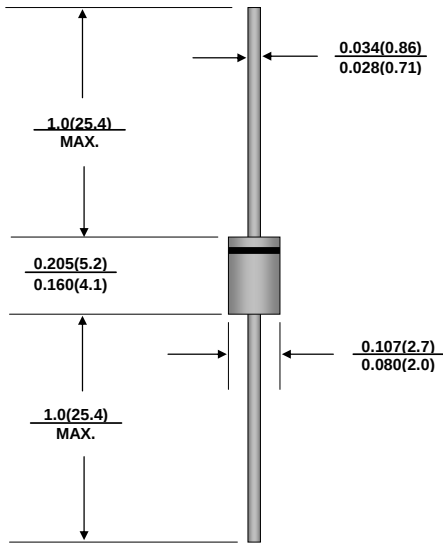


SB120 THRU SB1200

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

DO-41



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:
250 °C/10 seconds, 0.375"(9.5mm) lead length,

MECHANICAL DATA

Case: JEDEC DO-41 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.33 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%.

PARAMETER	SYMBOLS	SB 120	SB 130	SB 140	SB 150	SB 160	SB 170	SB 180	SB 190	SB 1100	SB 1120	SB 1150	SB 1200	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	70	80	90	100	120	150	200	Volts
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	49	56	63	70	84	105	140	Volts
Maximum DC blocking voltage	V _R	20	30	40	50	60	70	80	90	100	120	150	200	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	I _{F(AV)}	1.0												Amp
Peak forward surge current at 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40.0												Amps
Maximum Forward Voltage at IF=1.0A	V _F	0.50		0.70		0.85			0.88		0.92		Volts	
Maximum DC reverse current at rated DC blocking voltage	I _R	0.5												mA
		10.0				5.0								
Typical Junction Capacitance (NOTE 1)	C _J	110		80										pF
Typical Thermal Resistance (NOTE 2)	R _{θJA}	50												℃/W
Operating Junction Temperature Range	T _J	-65 to +125				-65 to +150								℃
Storage Temperature Range	T _{STG}	-65 ~ +150												℃

- Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Mounted with minimum recommended padsize, PCBoard FR4.
3. $T_J=25^\circ\text{C}$ unless otherwise specified.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

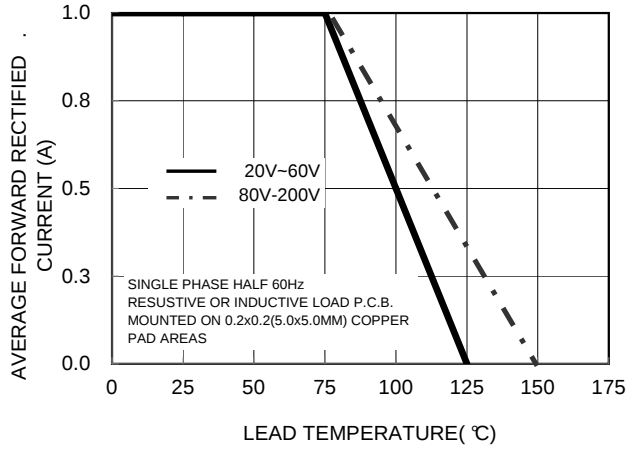


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

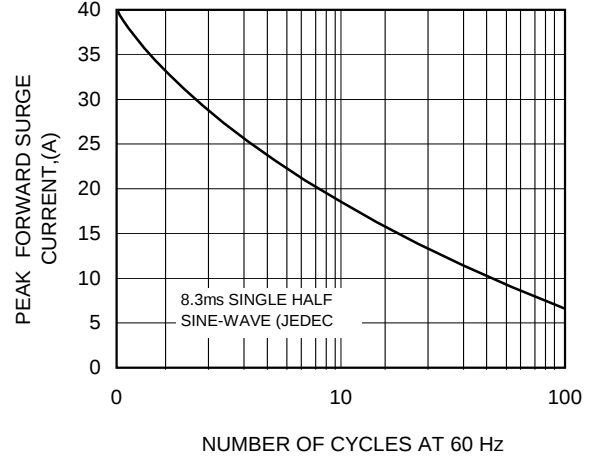


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

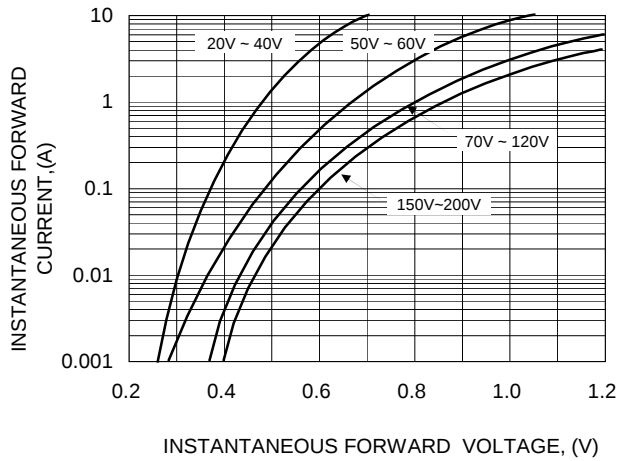


FIG. 4-TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

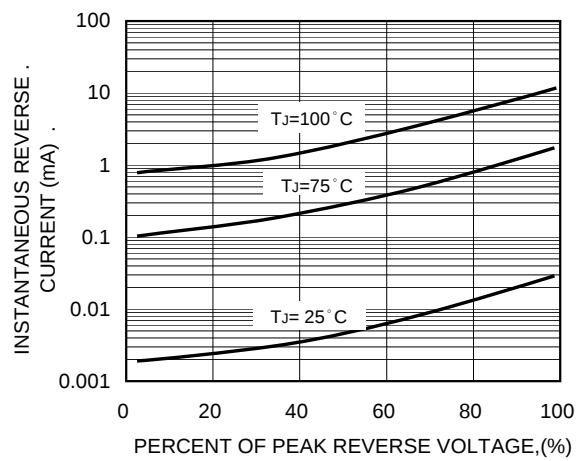


FIG. 5-TYPICAL JUNCTION CAPACITANCE

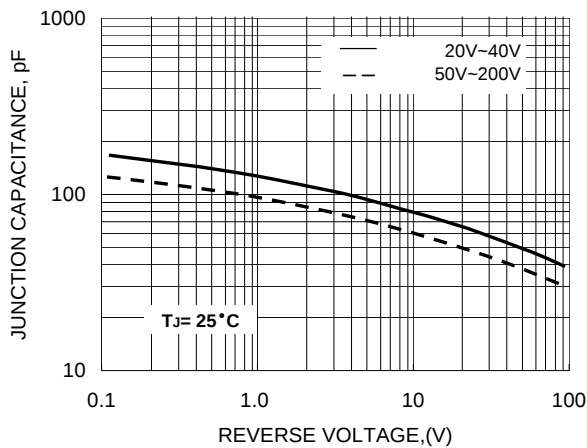


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

