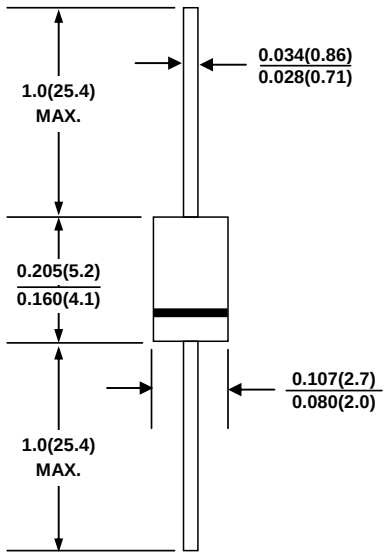
SB120E THRU SB1200E

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, 5 lbs. (2.3kg) tension
- ESD Passed devices : Air mode 15KV ,human body mode 8KV

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℃ ambient temperature unless otherwis e specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

PARAMETER	SYMBOLS	SB 120E	SB 140E	SB 160E	SB 180E	SB 190E	SB 1100E	SB 1150E	SB 1200E	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	90	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	14	28	42	56	63	70	105	140	Volts
Maximum DC blocking voltage	V_R	20	40	60	80	90	100	150	200	Volts
Maximum average forward rectified current 0.375”(9.5mm) lead length(see fig.1)	$I_{(AV)}$	1.0								Amp
Peak forward surge current 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	0.5		0.70	0.85			0.92		Volts
Maximum DC reverse current TA=25℃	I_R	0.5								*m* A
at rated DC blocking voltage TA=100℃		10.0			5.0					
Typical Junction Capacitance (NOTE 1)	C_J	110		80						pF
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	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℃ unless otherwise specified.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

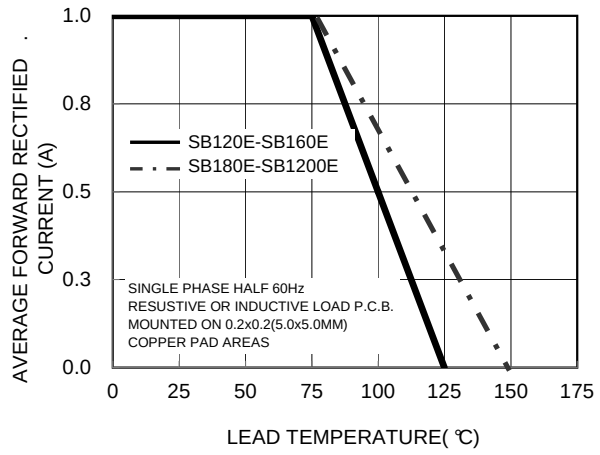

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

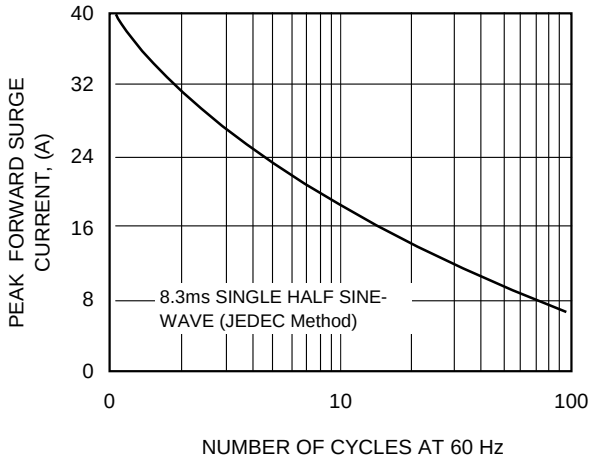

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

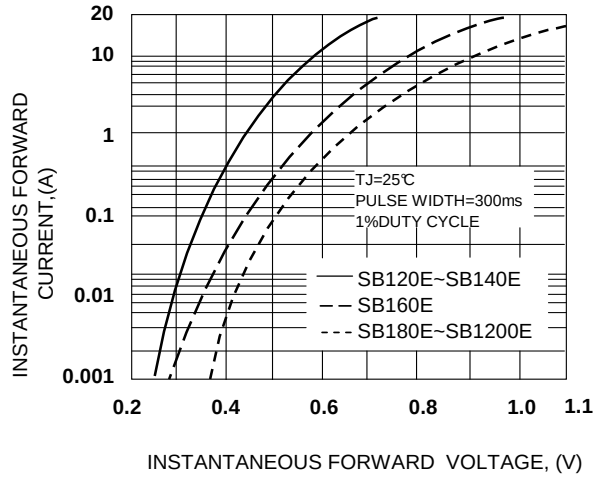

FIG. 4-TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

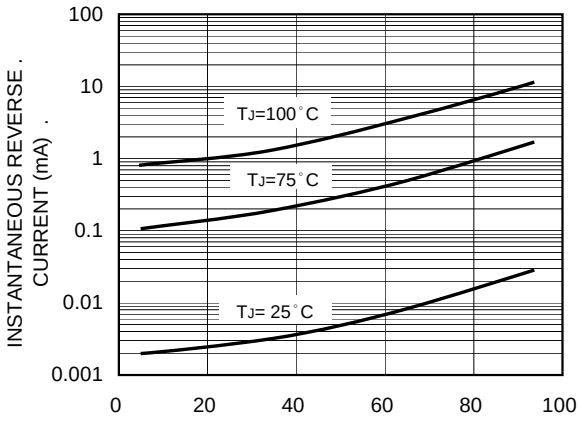

FIG. 5-TYPICAL JUNCTION CAPACITANCE

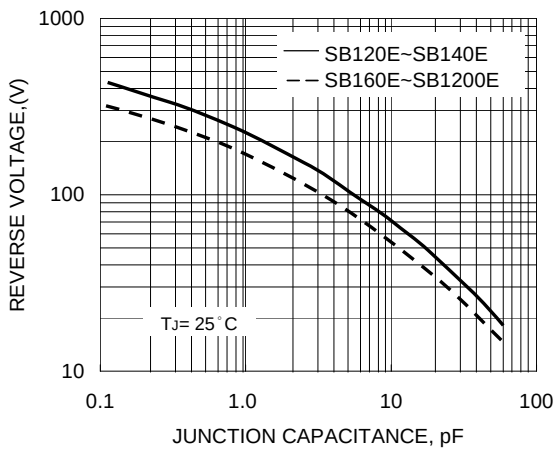

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE