SAMYANG ELECTRONICS

SB120 --- SB1200

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20 --- 100 V
CURRENT: 1.0A

FEATURES

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop,low switching losses
- ◇ High surge capability
- ◇ For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case:JEDEC DO--41,molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces,0.34 grams
- ◇ Mounting position: Any

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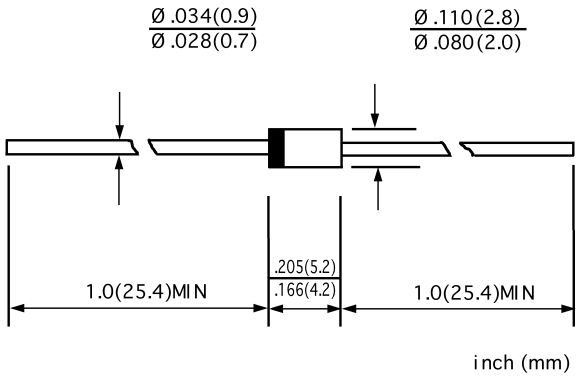

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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

	Symbols	SB 120	SB 130	SB 140	SB 150	SB 160	SB 180	SB 1A0	SB 1150	SB 1200	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	57	71	105	140	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	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 instantaneous forward voltage at 1.0 A(Note 1)	V_F	0.55			0.70		0. 85		0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=25℃	I_R	0.2									mA
T_A=100℃		10									
Typical junction capacitance(Note 3)	C_J	110									pF
Typical thermal resistance(Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0									˚C/W
Operating junction temperature range	T_J	-65 to+150									˚C
Storage temperature range	T_{STG}	-65 to+150									˚C

NOTE: 1. Pulse test : 300 μs pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to ambient

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FIG.1-FORWARD CURRENT DERATING CURVE

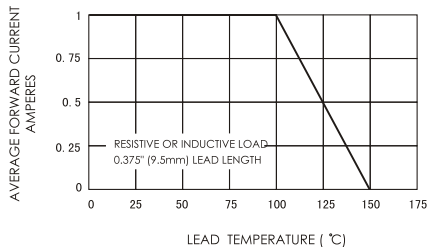

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

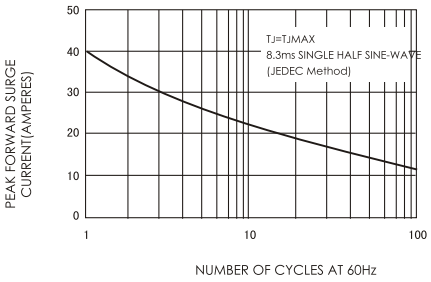

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

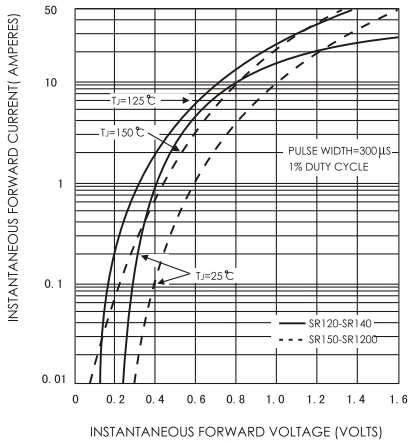

FIG.4-TYPICAL REVERSE CHARACTERISTICS

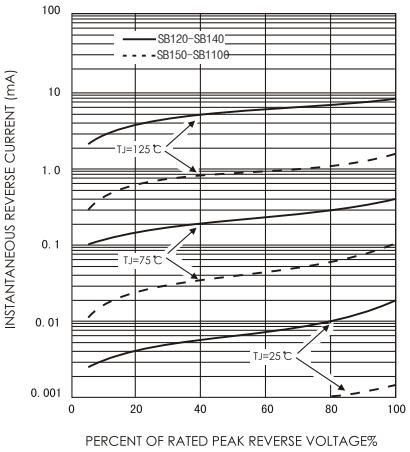

FIG.5-TYPICAL JUNCTION CAPACITANCE

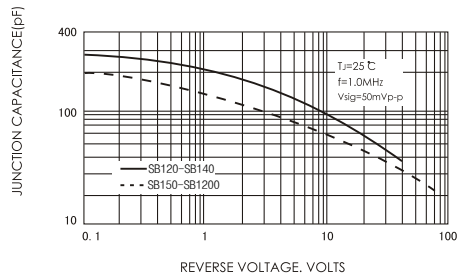

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE