



# DATA SHEET

## SB820~SB8100

### SCHOTTKY BARRIER RECTIFIERS

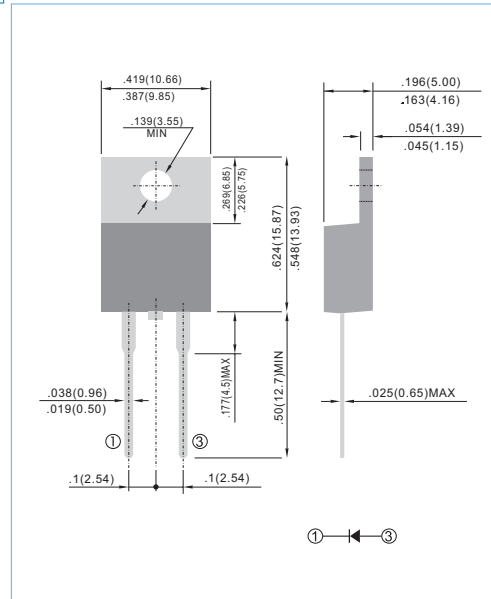
**VOLTAGE** 20 to 100 Volts    **CURRENT** 8 Ampere    **TO-220AC**    Unit : inch (mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: TO-220AC full molded plastic package  
 Terminals: Lead solderable per MIL-STD-202G, Method 208  
 Polarity: As marked.  
 Mounting Position: Any  
 Weight: 0.08 ounces, 2.24grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

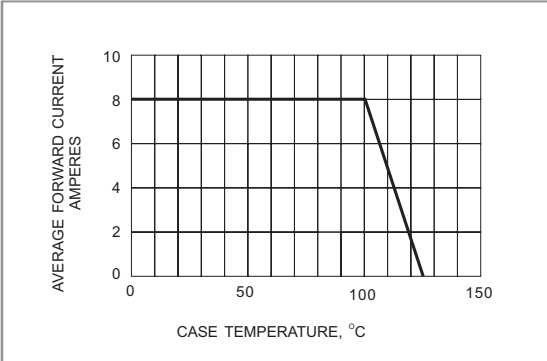
PARAMETER	SYMBOL	SB 820	SB 830	SB 840	SB 850	SB 860	SB 880	SB 8100	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum Average Forward Current .375" (9.5mm) lead length at $T_c = 100^\circ C$	$I_A$	8							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150							A
Maximum Forward Voltage at 8.0A	$V_F$	0.55		0.75		0.85		V	
Maximum DC Reverse Current $T_A = 25^\circ C$ at Rated DC Blocking Voltage $T_A = 100^\circ C$	$I_R$	0.5 50							mA
Typical Thermal Resistance	$R_{\theta JC}$	6							$^\circ C / W$
Operating Junction Temperature Rang	$T_J$	-50 to +125							$^\circ C$
Storage Temperature Rang	$T_J, T_{STG}$	-50 to +150							$^\circ C$

#### NOTES:

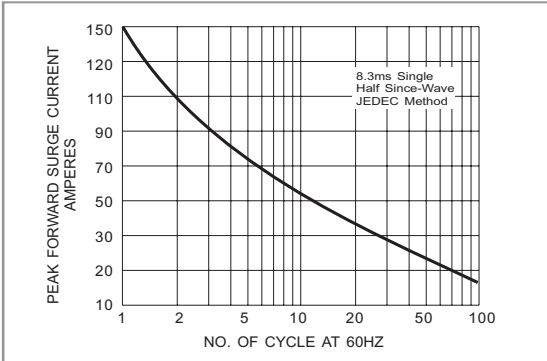
Both Bonding and Chip structure are available.



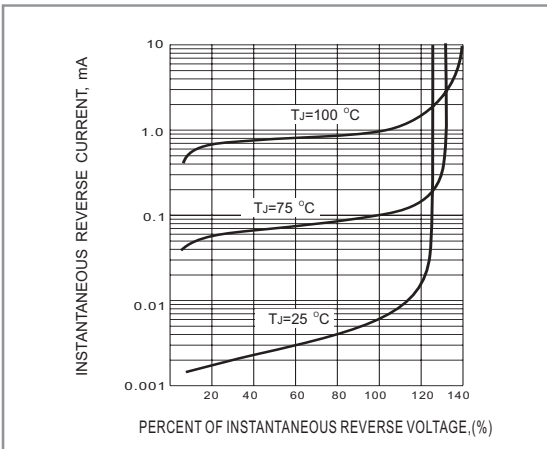
**RATING AND CHARACTERISTIC CURVES**



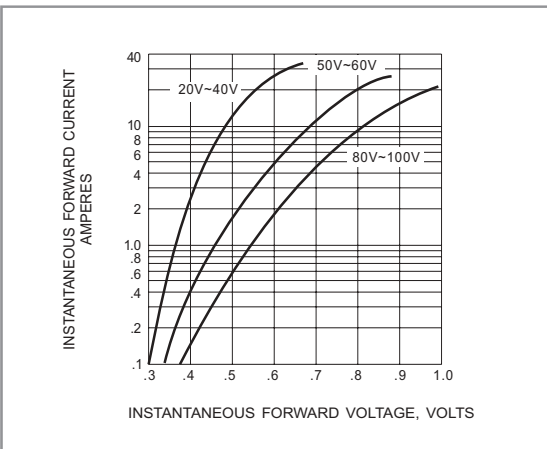
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**