

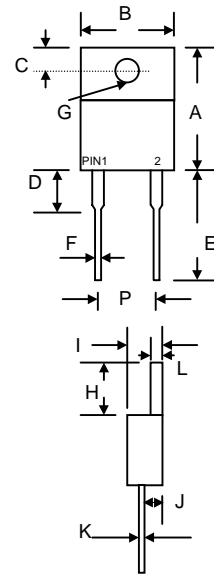
VOLTAGE RANGE: 20 - 100V
CURRENT: 8.0 A

Features

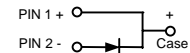
- Schottky Barrier Chip
- Guard Ring for Transient Protection
- High Current Capability, Low Forward
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

Mechanical Data

- Case: TO-220AC Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-220AC		
Dim	Min	Max
A	14.9	15.1
B	—	10.5
C	2.62	2.87
D	3.56	4.06
E	13.46	14.22
F	0.68	0.94
G	3.74 Ø	3.91 Ø
H	5.84	6.86
I	4.44	4.70
J	2.54	2.79
K	0.35	0.64
L	1.14	1.40
P	4.95	5.20
All Dimensions in mm		



Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	SB820	SB830	SB840	SB845	SB850	SB860	SB870	SB880	SB890	SB8100	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	50	60	70	80	90	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	32	35	42	49	56	63	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	45	50	60	70	80	90	100	V
Maximum average forward rectified current (see fig.1)	$I_{(AV)}$	8.0										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 8.0A	V_F	0.65			0.75		0.85				V	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	1.0					50.0					mA
Typical junction capacitance (NOTE 1)	C_J	300					250					pF
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	3.0										$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-65 to +125					-65 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150										$^\circ\text{C}$

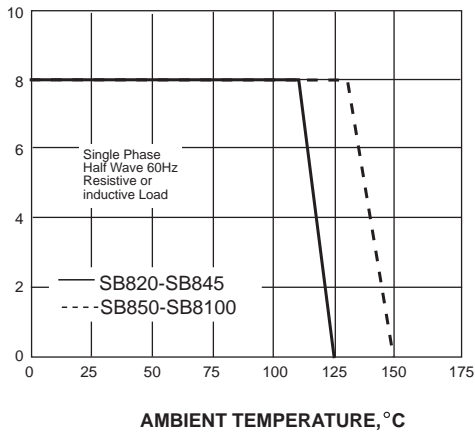
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES SB820 THRU SB8100

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

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

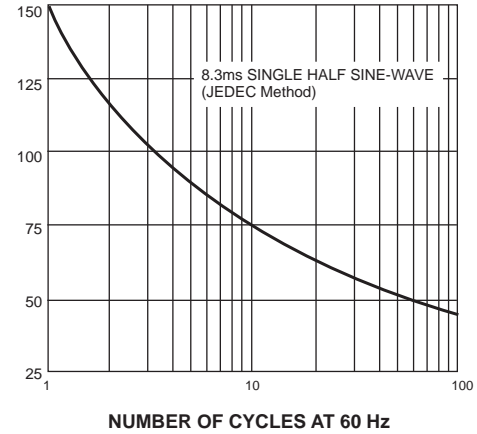
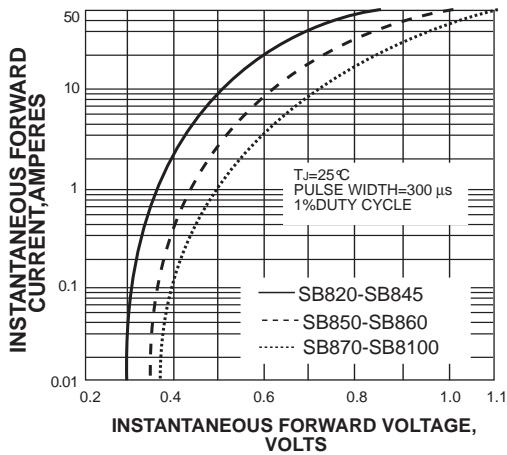


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

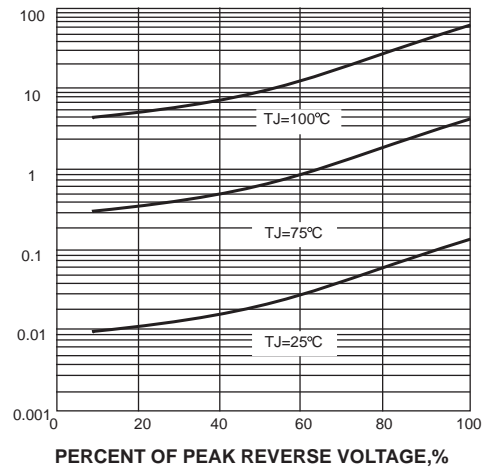
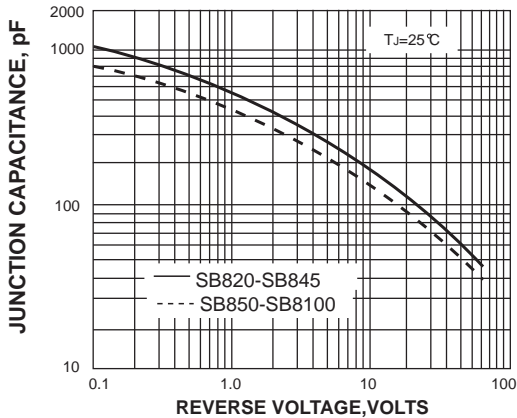


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

