

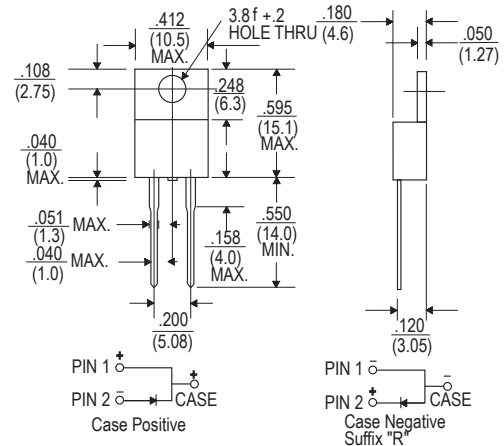
SBR820 THRU SBR8100

CURRENT 8.0Amperes
VOLTAGE 20 to 100 Volts

Features

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed : 250°C/10 seconds, 0.25" (6.35mm) from case

TO-220A



Mechanical Data

- Case : JEDEC TO-220A molded plastic body
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08ounce, 2.24 grams

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	SBR 820	SBR 830	SBR 840	SBR 850	SBR 860	SBR 880	SBR 8100	Units
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current (see Fig. 1)	I(AV)	8.0							Amps
Repetitive peak forward current(square wavr, 20KHZ) at Tc=105°C	I _{FRM}	16.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 8.0A (Note 1)	V _F	0.65		0.75		0.80	0.85	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	T _A =25°C	1.0							mA
	T _A =125°C	15		50					
Typical thermal resistance (Note 2)	R _{θJC}	2.5							°C/W
Operating junction temperature range	T _J	-65 to +125			-65 to +150				°C
Storage temperature range	T _{STG}	-65 to +150							°C

Notes:

- (1) Pulse test: 300µS pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case



RATINGS AND CHARACTERISTIC CURVES SBR820-SBR8100

FIG.1-FORWARD CURRENT DERATING CURVE

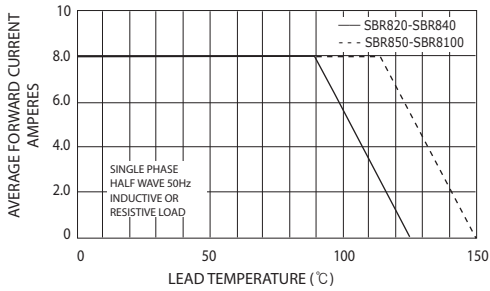


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

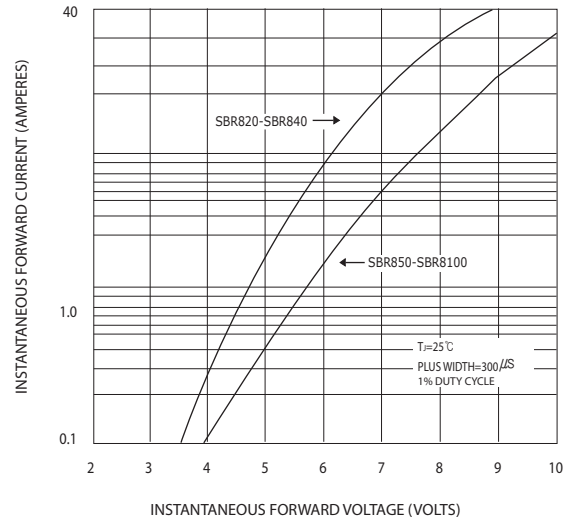


FIG.4-TYPICAL JUNCTION CAPACITANCE

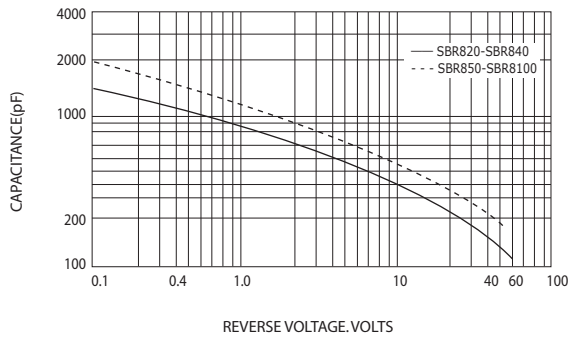


FIG.3-TYPICAL REVERSE CHARACTERISTICS

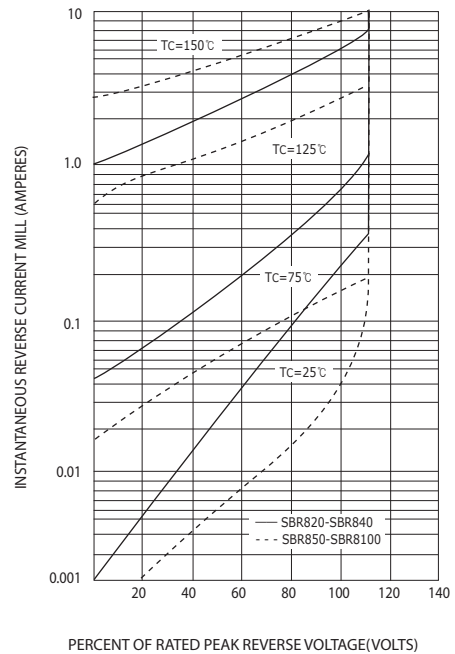


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

