

# DEC

## SBR520 THRU SBR5100

CURRENT 5.0Amperes  
VOLTAGE 20 to 100 Volts

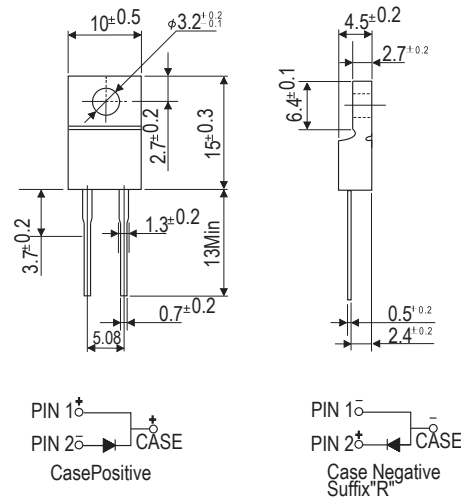
### Features

- 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

### Mechanical Data

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

### ITO-220A



Dimensions in inches and (millimeters)

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### 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 520	SBR 530	SBR 540	SBR 560	SBR 580	SBR 590	SBR 5100	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	60	80	90	100	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	42	56	63	70	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	60	80	90	100	Volts
Maximum average forward rectified current (see Fig. 1)	$I(AV)$	5.0							Amps
Repetitive peak forward current(square wavr, 20KHZ) at $T_c=105^\circ C$	$I_{FRM}$	10.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100.0							Amps
Maximum instantaneous forward voltage at 5.0A (Note 1)	$V_F$	0.55		0.70		0.85			Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25^\circ C$	1.0							mA
	$T_A=125^\circ C$	15			50				
Typical thermal resistance (Note 2)	$R\theta_{JC}$	5.0							°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: 300  $\mu$ S pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case

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# RATINGS AND CHARACTERISTIC CURVES SBR520-SBR5100

FIG. 1 - FORWARD CURRENT DERATING CURVE

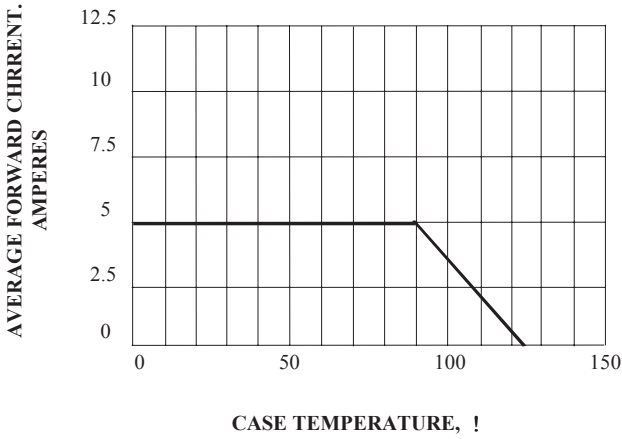


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

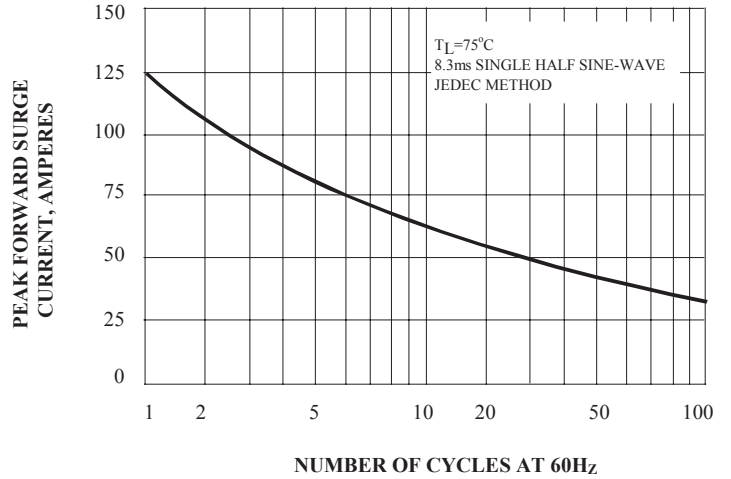


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

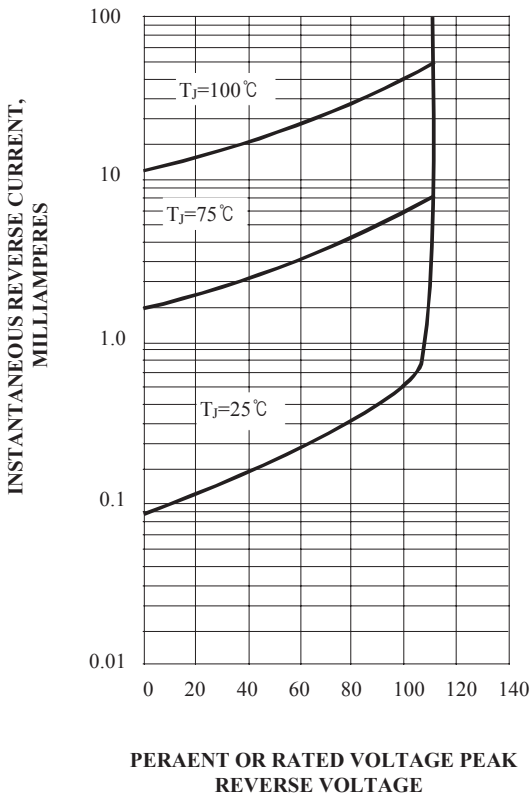


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

