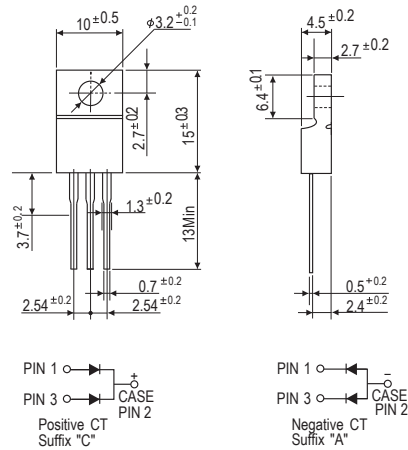


### Features

- 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
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed: 250 °C/10 seconds, 0.25" (6.35mm) from case

### ITO-220



Dimensions in inches and (millimeters)

### Mechanical Data

- Case : JEDEC TO-220 molded plastic body
- Terminals : Lead solderable per MIL-STD-750, Method 2026
- Polarity : As marked. No suffix indicates Common Cathode, suffix "A" indicates Common Anode
- Mounting Position : Any
- Weight : 0.08ounce, 2.24 grams

### 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	SBP 2020	SBP 2030	SBP 2040	SBP 2050	SBP 2060	SBP 2080	SBP 20100	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current at T <sub>c</sub> =105 °C	I <sub>(AV)</sub>	20.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150.0				125.0			Amps
Maximum instantaneous forward voltage at 10A (Note 1)	V <sub>F</sub>	0.60		0.75		0.90		Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	T <sub>A</sub> =25 °C	1.0							mA
	T <sub>A</sub> =100 °C	100.0							
Typical thermal resistance (Note 2)	R <sub>θJC</sub>	3.5							°C/W
Operating junction temperature range	T <sub>J</sub>	-50 to +125							°C
Storage temperature range	T <sub>STG</sub>	-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 SBP2020 THRU SBP20100

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

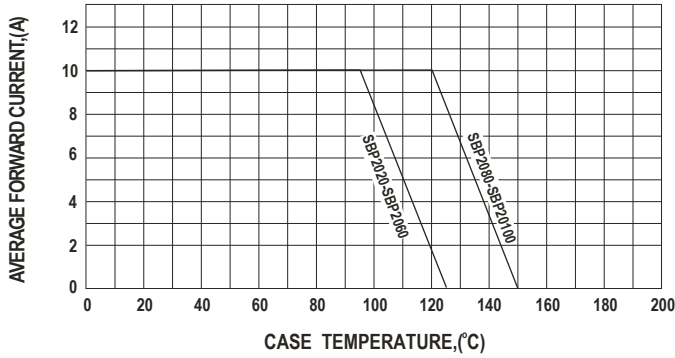


FIG.2-TYPICAL FORWARD CHARACTERISTICS

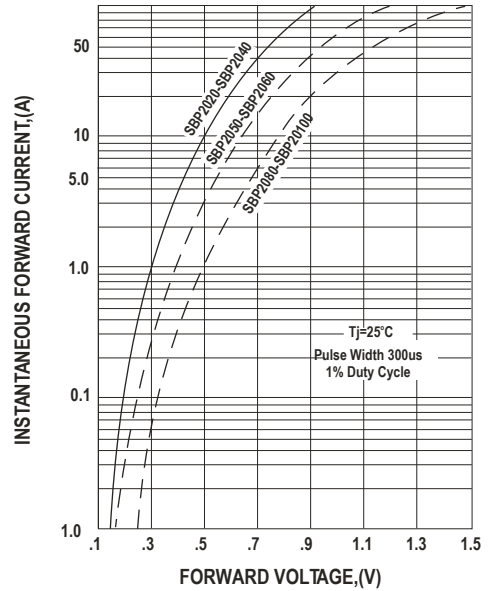


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

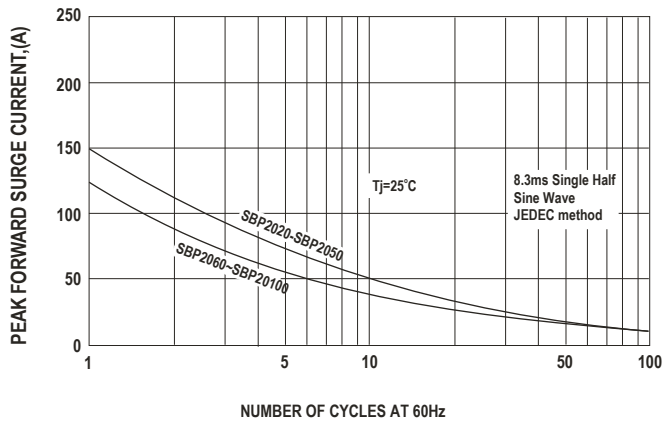


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

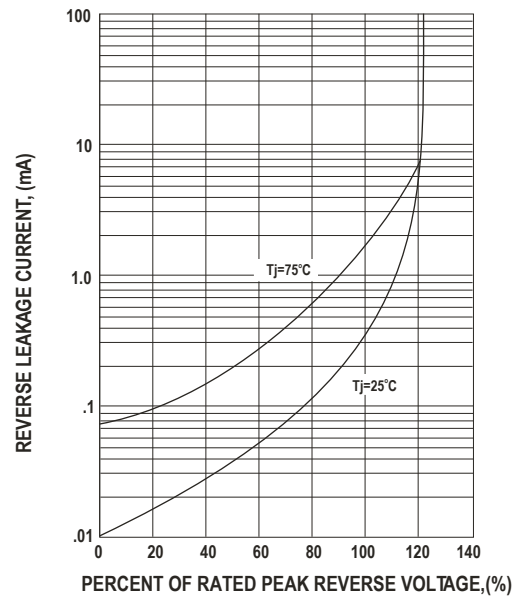


FIG.4-TYPICAL JUNCTION CAPACITANCE

