

SBP1020 THRU SBP10100

CURRENT 10.0Amperes
VOLTAGE 20 to 100 Volts

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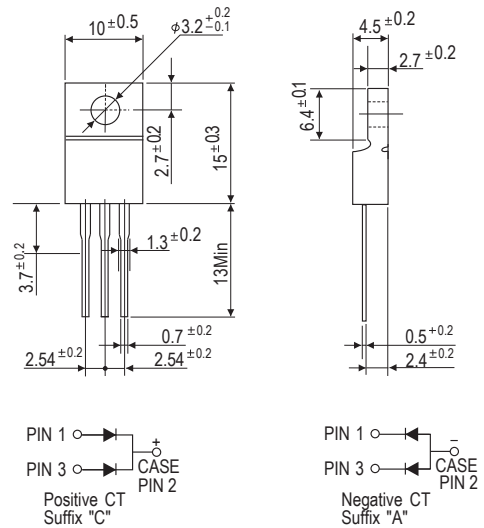
Features

- 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

Mechanical Data

- Case : JEDEC ITO-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 : 0.08 ounce, 2.24 gram

ITO-220



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	SBP 1020	SBP 1030	SBP 1040	SBP 1050	SBP 1060	SBP 1080	SBP 10100	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)	$I_{(AV)}$	10.0							Amps
Repetitive peak forward current(square wavr, 20KHZ) at $T_c=105^\circ C$	I_{FRM}	20.0							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 5.0A (Note 1)	V_F	0.65		0.75		0.80	0.85	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25^\circ C$	1.0							mA
	$T_A=100^\circ C$	50		25					
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: 300µs pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES SBP1020 THRU SBP10100

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FIG.1-FORWARD CURRENT DERATING CURVE

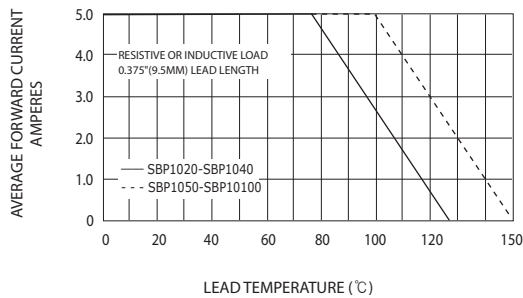


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

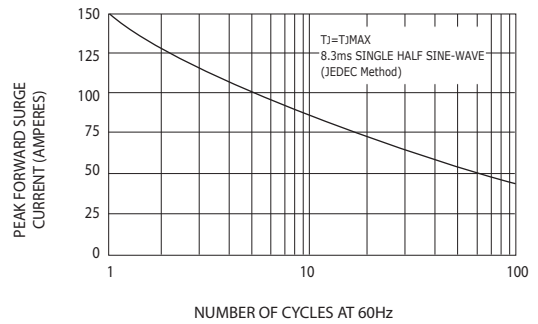


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

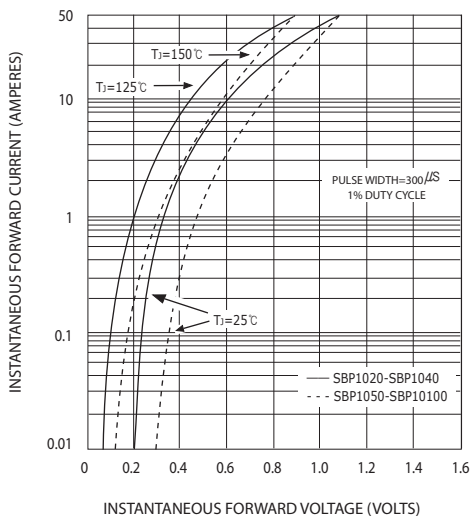


FIG.4-TYPICAL REVERSE CHARACTERISTICS

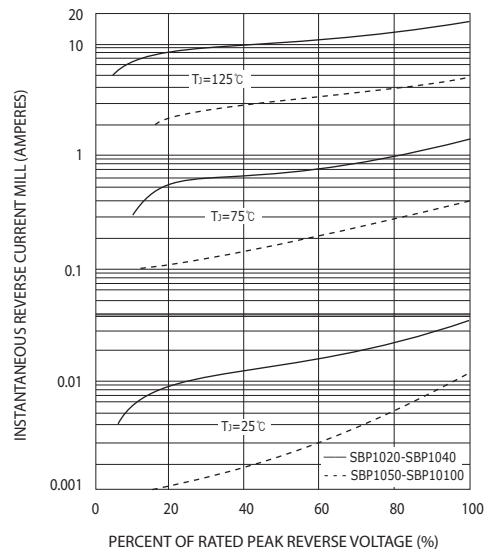


FIG.5-TYPICAL JUNCTION CAPACITANCE

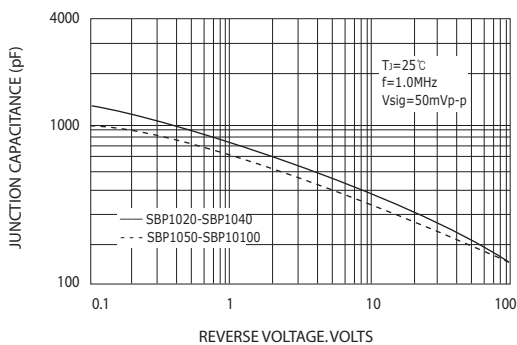


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

