

SBR1020 THRU SBR1060

CURRENT 10.0Amperes
VOLTAGE 20 to 60 Volts

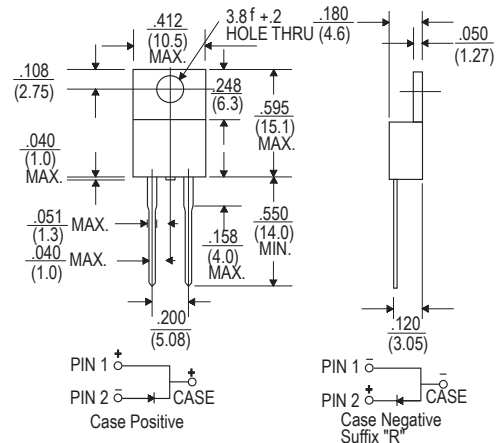
Features

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

TO-220A



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	SBR1020	SBR1030	SBR1040	SBR1050	SBR1060	Units
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	Volts
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	Volts
Maximum DC blocking Voltage	V _{DC}	20	30	40	50	60	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°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 10A (Note 1)	V _F	0.70			0.80		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	T _A =25°C	1.0					mA
	T _A =125°C	30					
Typical thermal resistance (Note 2)	R _{θ JC}	2.5					°C/W
Operating junction temperature range	T _J	-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 SBR1020 THRU SBR1060

FIG.1-FORWARD CURRENT DERATING CURVE

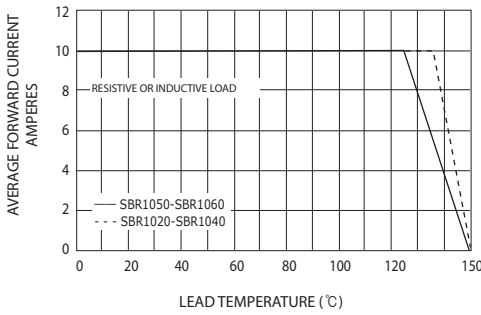


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

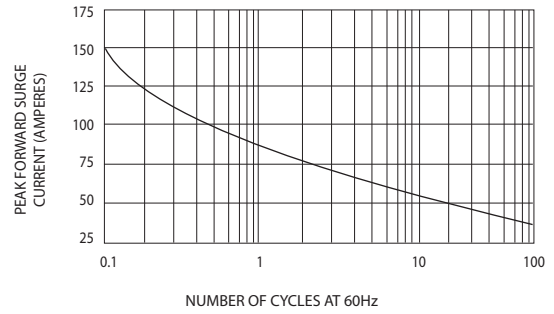


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

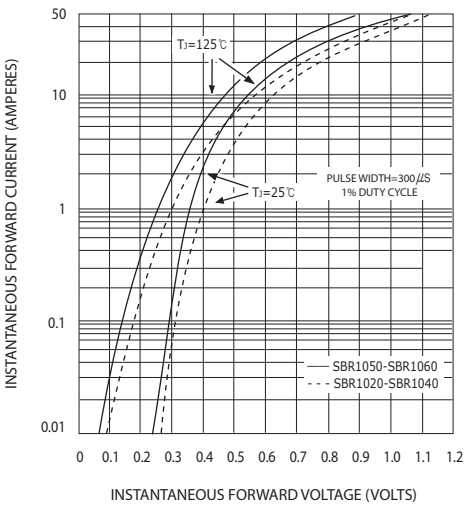


FIG.4-TYPICAL REVERSE CHARACTERISTICS

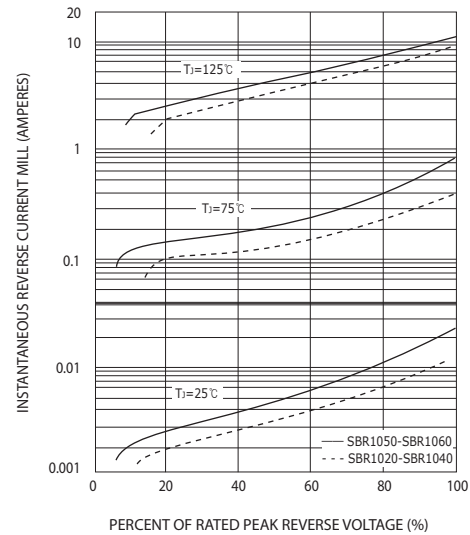


FIG.5-TYPICAL JUNCTION CAPACITANCE

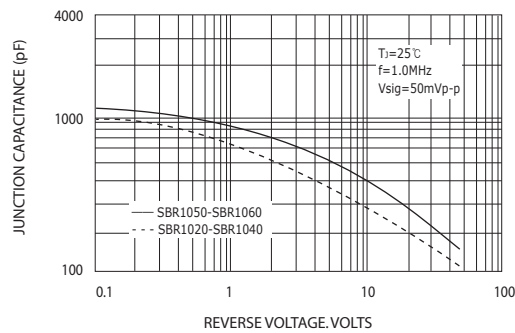


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

