



# SB1020 SERIES

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volt **CURRENT** 10 Ampere

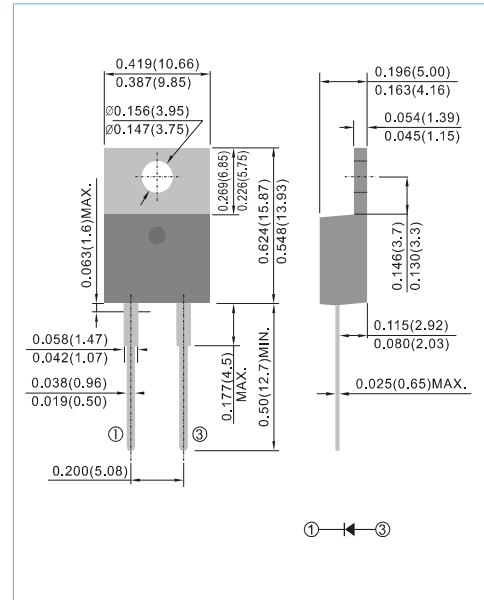
**TO-220AC** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling , and polarity protection applications.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: TO-220AC Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.067 ounces, 1.89 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

PARAMETER	SYMBOL	SB1020	SB1030	SB1040	SB1045	SB1050	SB1060	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	31.5	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	45	50	60	V
Maximum Average Forward Current	$I_{F(AV)}$	10						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150						A
Maximum Forward Voltage at 10A	$V_F$	0.55				0.75		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=100^{\circ}C$	$I_R$	0.2				50		mA
Typical Thermal Resistance	$R_{\theta JC}$	3						$^{\circ}C / W$
Operating Junction Temperature Range	$T_J$	-55 to +125			-55 to +150			$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150						$^{\circ}C$

NOTE : Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

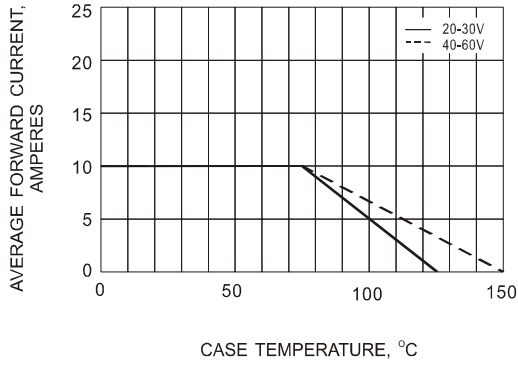


Fig.1- FORWARD CURRENT DERATING CURVE

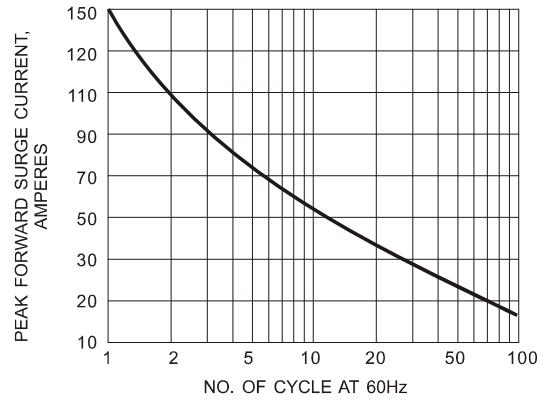


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

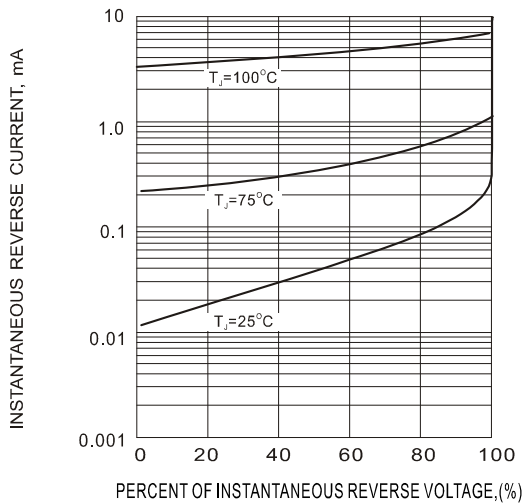


Fig.3- TYPICAL REVERSE CHARACTERISTIC

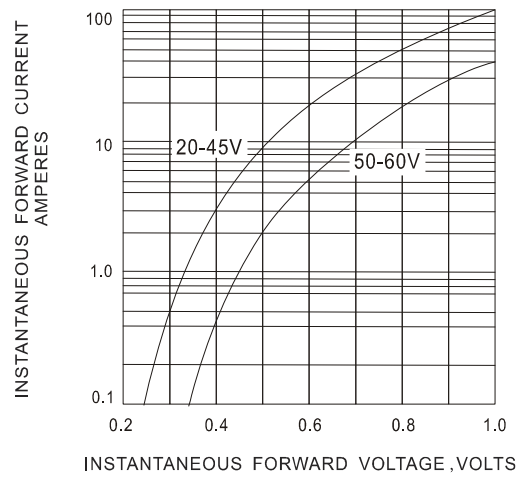


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



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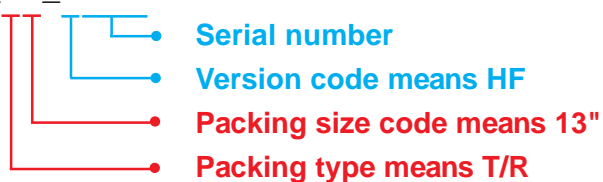
Part No\_packing code\_Version

SB1020\_T0\_00001

For example :

RB500V-40\_R2\_00001

Part No.



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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