



# SB4020ST SERIES

## SCHOTTKY BARRIER RECTIFIERS

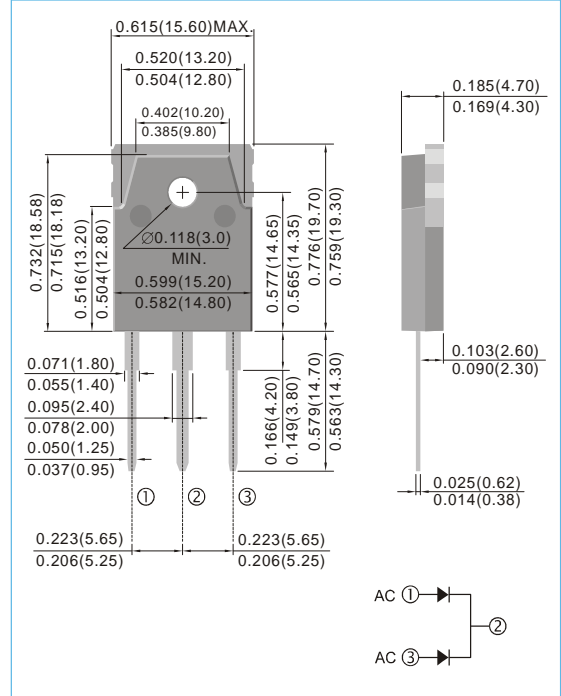
**VOLTAGE** 20 to 60 Volts **CURRENT** 40 Amperes **TO-247S / TO-3PS** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- 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.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: TO-247S/TO-3PS Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.1932 ounces, 5.4803 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	SB4020ST	SB4030ST	SB4040ST	SB4045ST	SB4050ST	SB4060ST	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	40	50	60	V
Maximum Average Forward Current at $T_c = 90^\circ C$	$I_{F(AV)}$	40						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	350						A
Maximum Forward Voltage at 20A per leg	$V_F$	0.55				0.70		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	$R_{\theta JC}$	1.5						$^\circ C / W$
Operating Junction and Storage Temperature Range	$T_j, T_{STG}$	-55 to +125			-55 to +150			$^\circ C$

NOTE:  
Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

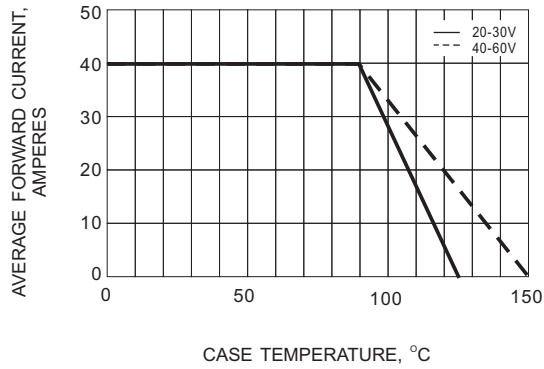


Fig.1- FORWARD CURRENT DERATING CURVE

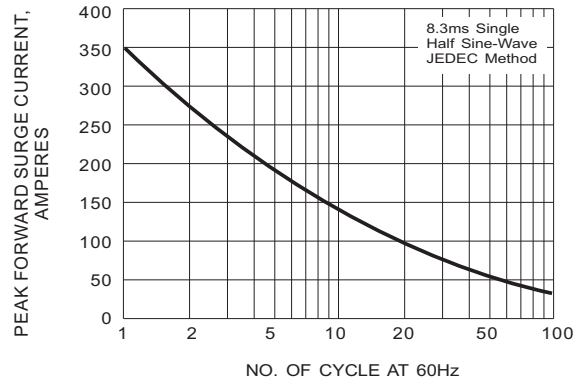


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

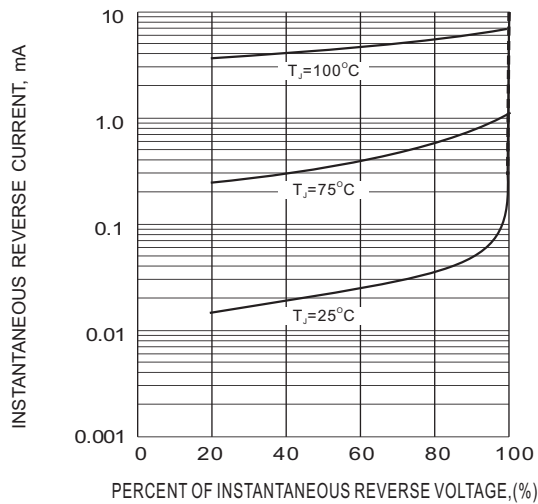


Fig.3- TYPICAL REVERSE CHARACTERISTIC

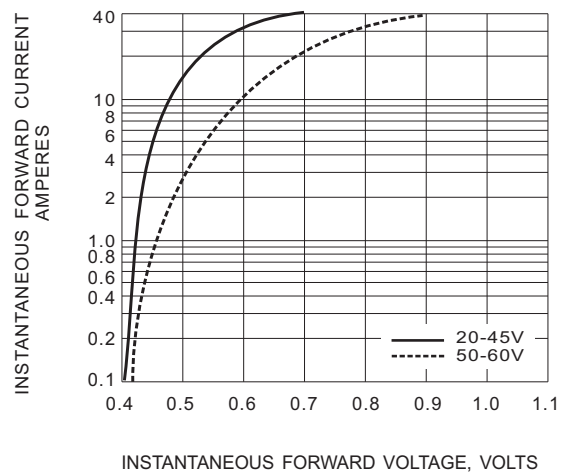


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC