



# SB3020PT SERIES

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volts **CURRENT** 30 Amperes

**TO-247AD / TO-3P**

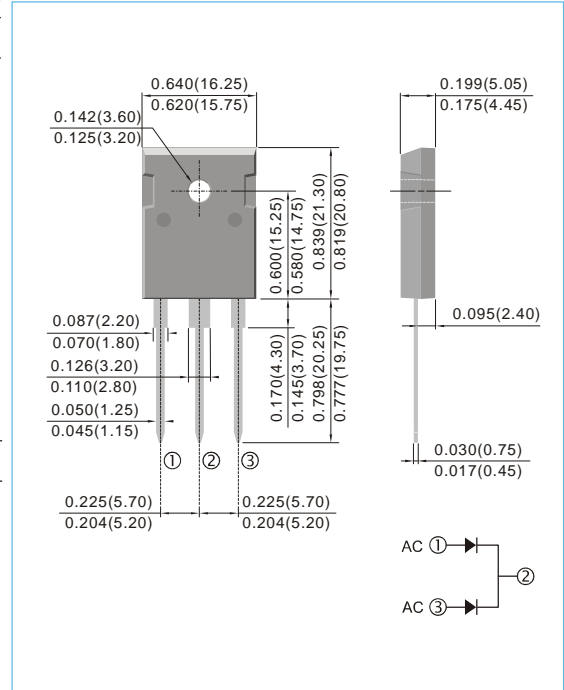
Unit : inch(mm)

### 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-3P Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.2245 ounces, 6.3673 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	SB3020PT	SB3030PT	SB3040PT	SB3045PT	SB3050PT	SB3060PT	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 at $T_c = 75^\circ\text{C}$	$I_{F(AV)}$	30						A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	275						A
Maximum Forward Voltage at 15A per leg	$V_F$	0.55				0.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	$I_R$	0.2				50		mA
Typical Thermal Resistance	$R_{\theta JC}$	1.5						$^\circ\text{C} / \text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +125			-55 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150						$^\circ\text{C}$

**NOTE:**

Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

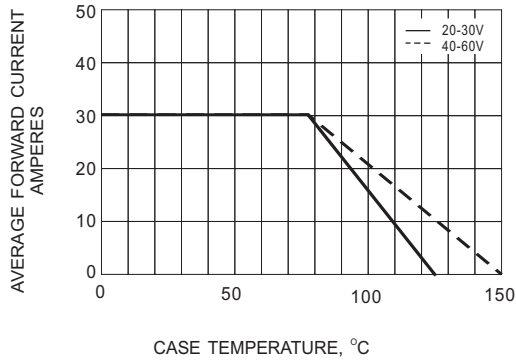


Fig.1- FORWARD CURRENT DERATING CURVE

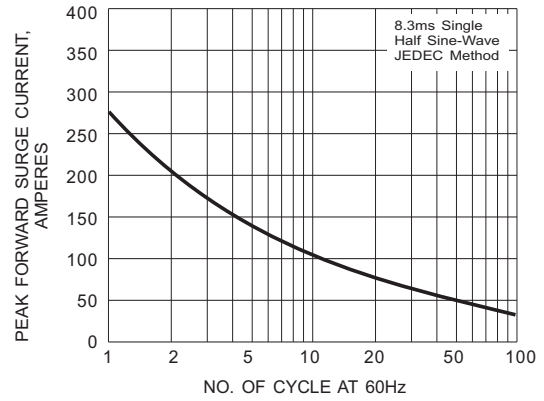


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

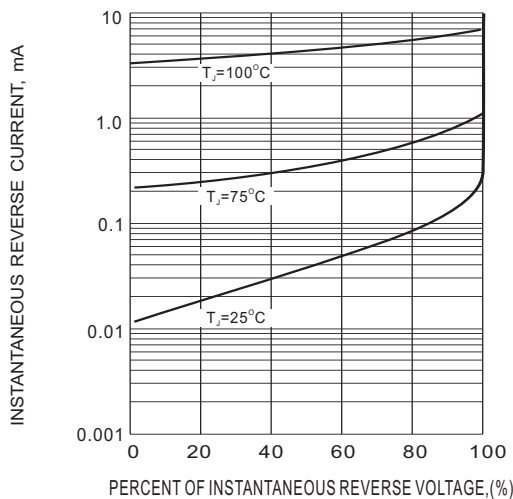


Fig.3- TYPICAL REVERSE CHARACTERISTIC

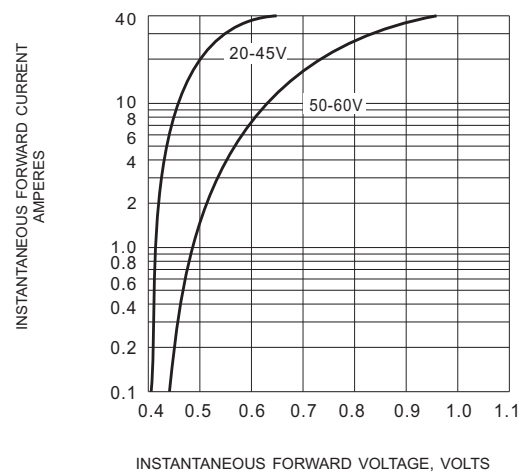


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

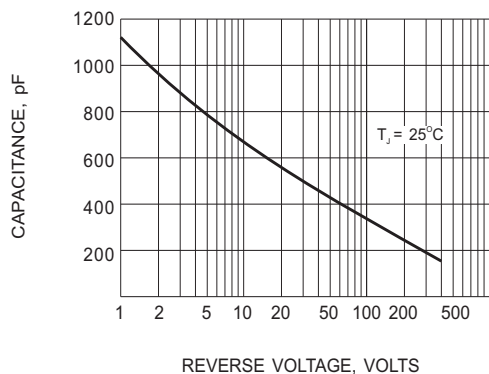


Fig.5- TYPICAL JUNCTION CAPACITANCE