



# DATA SHEET

## SB4020PT~SB4060PT

### ISOLATION SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volts **CURRENT** 40 Amperes

TO-3P

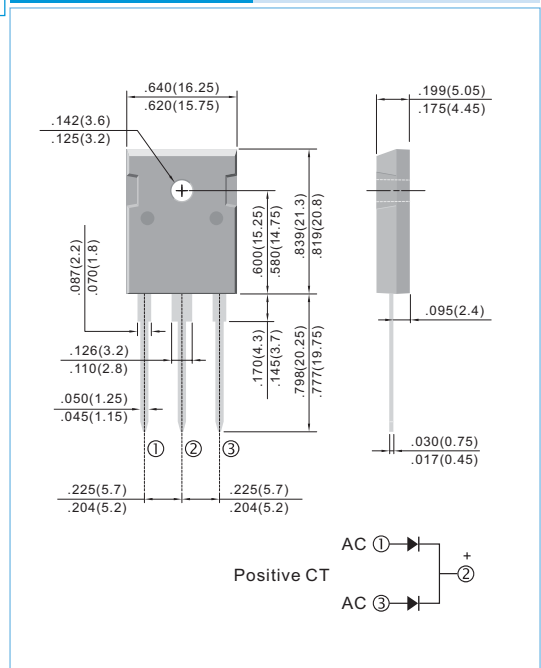
Unit: inch (mm)

#### 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.
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: TO-3P Molded plastic  
Terminals: Solder plated, solderable per MIL-STD-202G, Method 208  
Polarity: As marked.  
Standard packaging: Any  
Weight: 0.2 ounces, 5.6grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

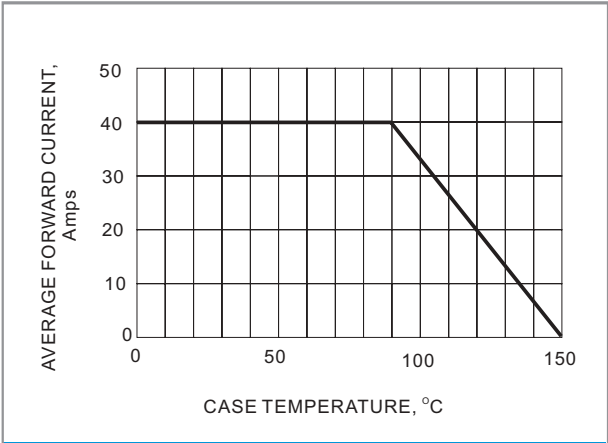
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	SB40 20PT	SB40 30PT	SB40 35PT	SB40 40PT	SB40 45PT	SB40 50PT	SB40 60PT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	35	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	35	40	45	50	60	V
Maximum Average Forward Current .375"(9.5mm) lead length at $T_c = 100$	$I_{AV}$	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	$V_F$	0.55					0.70		V
Maximum DC Reverse Current $T_A = 25$ at Rated DC Blocking Voltage $T_A = 100$	$I_R$	1.0					100		mA
Maximum Thermal Resistance	$R_{\theta JC}$	1.5							/W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 50 to + 150							

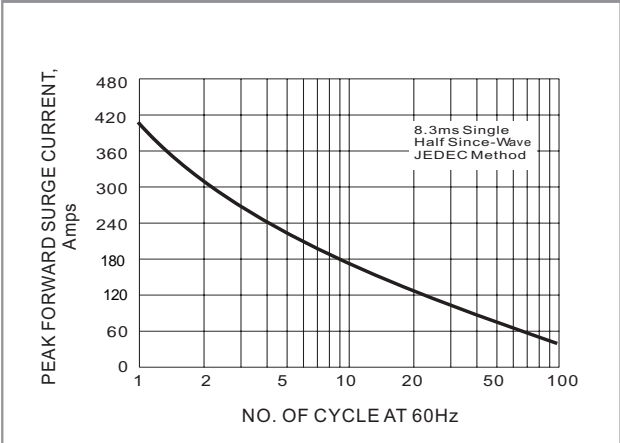
Note.  
Both Bonding and Chip structure are available.



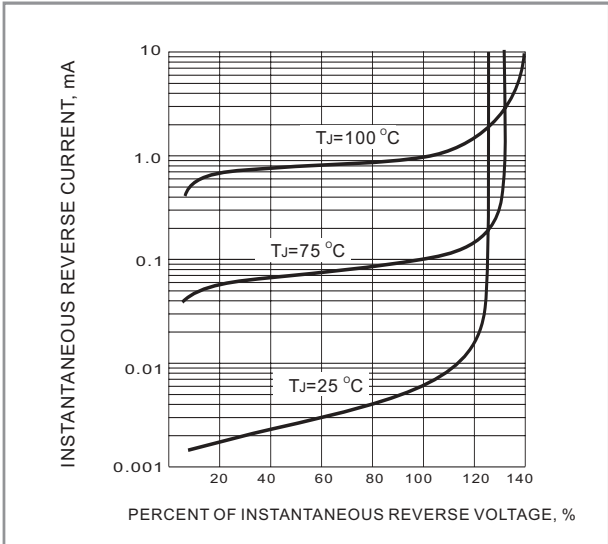
**RATING AND CHARACTERISTIC CURVES**



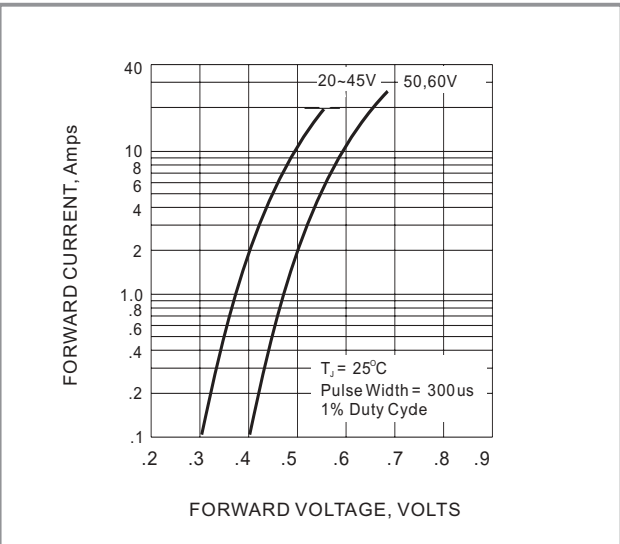
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**