

# SBL3030PT thru SBL3060PT

## 30 AMP SCHOTTKY BARRIER RECTIFIERS



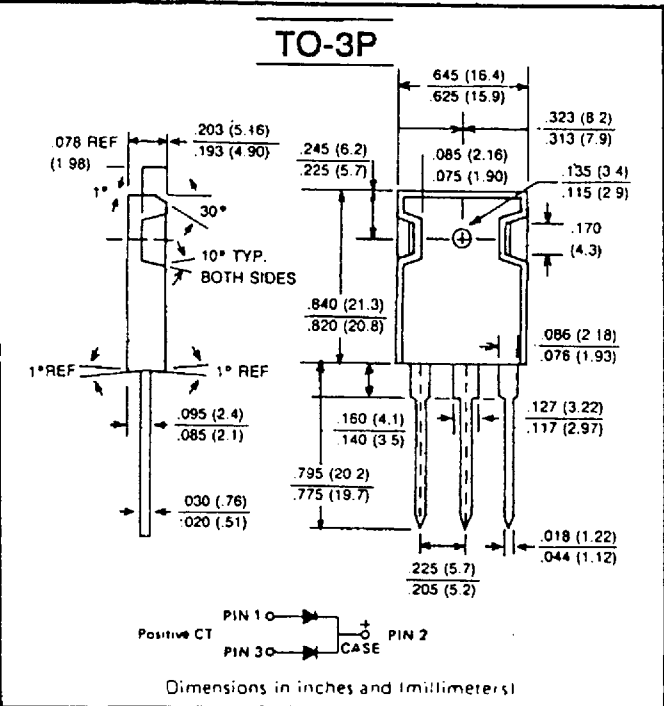
**VOLTAGE RANGE**  
30 to 60 Volts  
**CURRENT**  
30 Amperes

### FEATURES

- Plastic package has U/L Flammability Classification 94V-0
- Exceeds environmental standards of MIL-PRF-19500
- Metal-to-Silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low  $V_F$
- High surge capacity
- Guard ring for transient protection
- For use in low voltage, high frequency inverters, free-wheeling, and polarity protection applications
- Dual rectifier construction, positive center-tap
- High temperature soldering guaranteed:  
250°C for 10 seconds, 0.375" (9.5mm) lead lengths at 5 lbs. (2.3Kg) tension

### MECHANICAL DATA

Case: TO-3P molded plastic  
Terminals: Lead solderable per MIL-STD-202 Method 208  
Polarity: As Marked  
Mounting Position: Any  
Weight: 0.198 ounces (5.6 grams)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		SBL 3030PT	SBL 3035PT	SBL 3040PT	SBL 3045PT	SBL 3050PT	SBL 3060PT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	30	35	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current see Fig. 1	$I_{(AV)}$	30						A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	275						A
Maximum Instantaneous Forward Voltage Per Leg $I_F = 15$ A, $T_C = 25^\circ\text{C}$ (Note 3)	$V_F$	0.55			0.70			V
Maximum Average Reverse Current at $T_A = 25^\circ\text{C}$ Rated DC Blocking Voltage per element $T_A = 100^\circ\text{C}$	$I_R$	1						mA
Typical Thermal Resistance, (Note 1)	$R_{\theta JC}$	2						°C/W
Typical Junction Capacitance (Note 2)	$C_J$	1100						pF
Operating Temperature Range	$T_J$	-65 to +150						°C
Storage Temperature Range	$T_{STG}$	-65 to +150						°C

- NOTES: 1. Thermal Resistance Junction to CASE.  
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.  
3. 300µs Pulse Width, Duty cycle 2%

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FIG. 1—FORWARD CURRENT DERATING CURVE

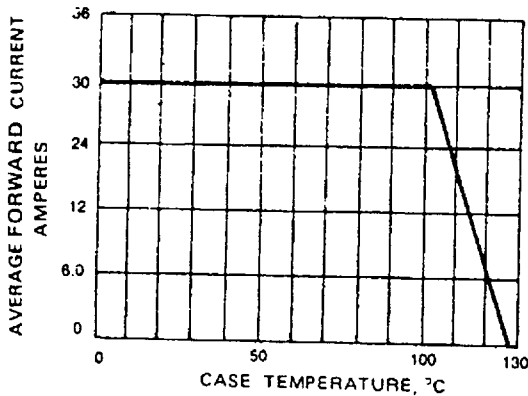


FIG. 2 — TYPICAL REVERSE CHARACTERISTICS

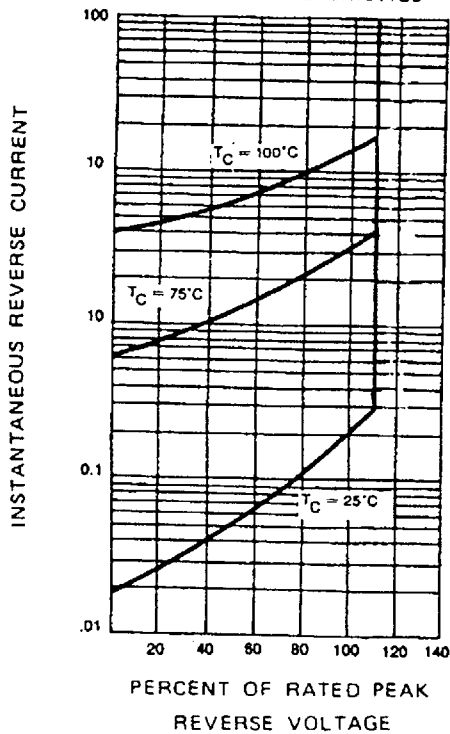


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

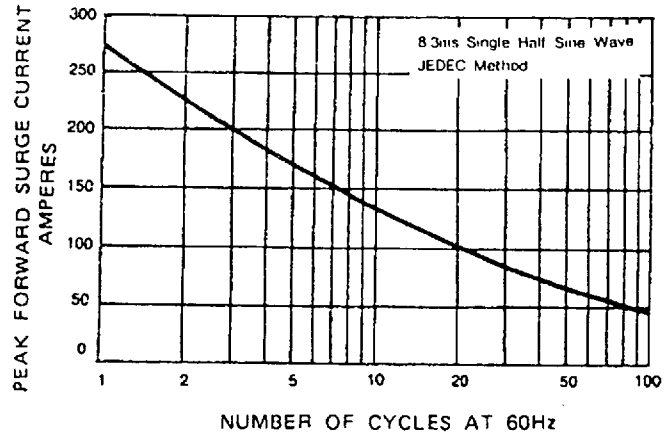


FIG. 4 — TYPICAL FORWARD CHARACTERISTICS PER ELEMENT

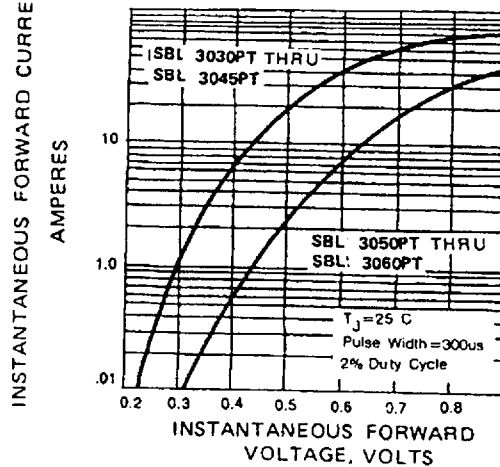


FIG. 5 — TYPICAL JUNCTION CAPACITANCE PER ELEMENT

