

T-23-07

# SBP30-P SERIES

SCHOTTKY RECTIFIER

**GENERAL INSTRUMENT**



**FEATURES**

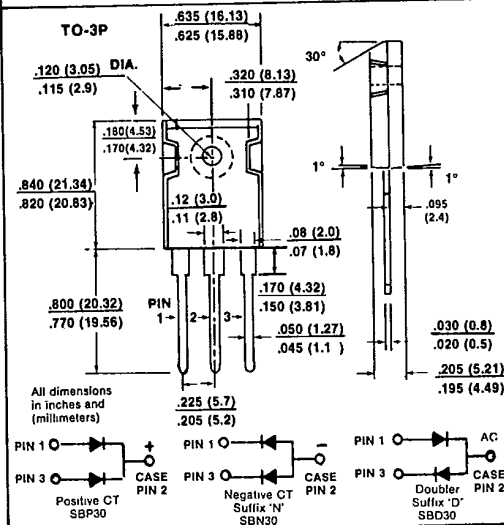
- Dual rectifier construction, positive center-tap
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low  $V_f$
- High surge capability
- Epitaxial construction
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High soldering temperature guaranteed: 250°C/10 seconds .17 (4.3mm) lead length 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: .47 ounces, 13.2 ounces

**VOLTAGE RANGE**  
20 to 60 Volts

**CURRENT**  
30 Amperes



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

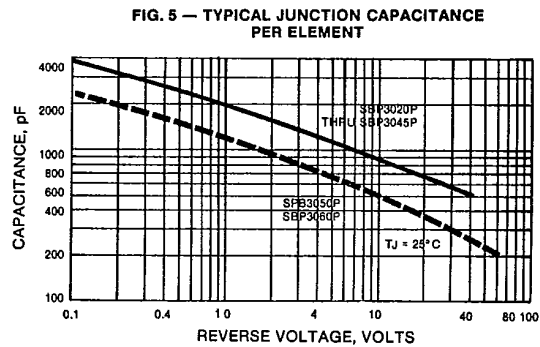
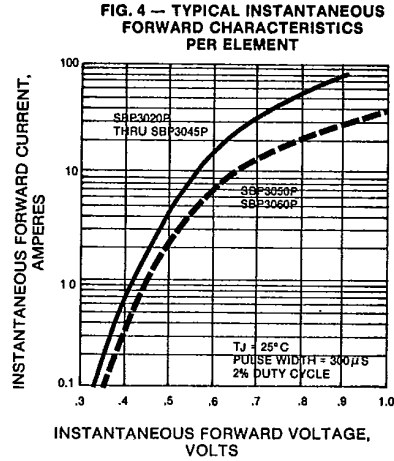
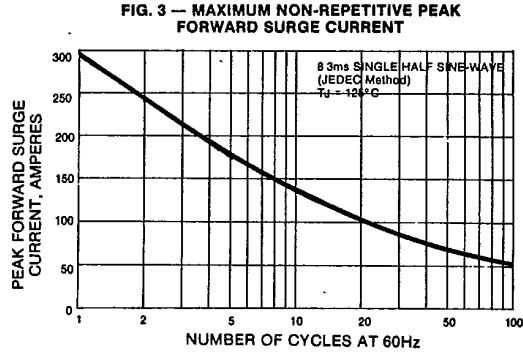
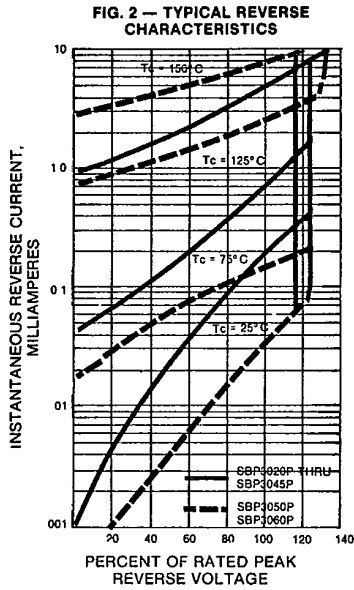
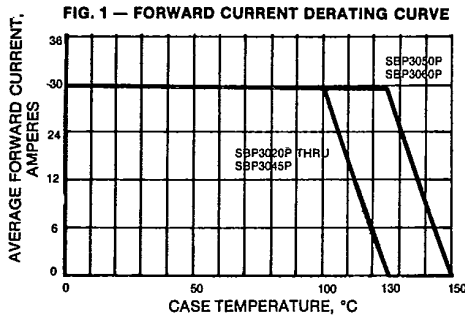
Ratings at 25°C ambient temperature unless otherwise specified.  
 Resistive or inductive load  
 For capacitive load, derate current by 20%.

	SBP3020P	SBP3030P	SBP3035P	SBP3040P	SBP3045P	SBP3050P	SBP3060P	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	35	40	45	50	60	$V_{RRM}$
Maximum RMS Voltage	14	21	24.5	28	31.5	35	42	$V_{RMS}$
Maximum DC Blocking Voltage	20	30	35	40	45	50	60	$V_{DC}$
Maximum Average Forward Rectified Current See Fig. 1	30							$A_{(AV)}$
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	300							$A_{pk}$
Maximum Instantaneous Forward Voltage Per Leg at $I_f = 15A$ , $T_c = 125^\circ C$ (Note 3) $I_f = 15A$ , $T_c = 25^\circ C$			.55				.65	$V_{pk}$ $V_{pk}$
Maximum Average Reverse Current at $T_c = 25^\circ C$ Rated DC Blocking Voltage per element $T_c = 100^\circ C$			10					$mA$
Maximum Thermal Resistance $R_{\theta JC}$ (Note 1)			2.0					$^\circ C/W$
Typical Junction Capacitance (Note 2)			1400			700		$pF$
Operating Temperature Range $T_j$			-65 to +125			-65 to +150		$^\circ C$
Storage Temperature Range, $T_{stg}$			-65 to +150					$^\circ C$

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

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**RATING AND CHARACTERISTIC CURVES  
SBP30-P SERIES**



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Datasheets for electronic components.