T-23-07

SBP40-P SERIES

SCHOTTKY RECTIFIER

GENERAL INSTRUMENT

VOLTAGE RANGE
20 to 60 Volts

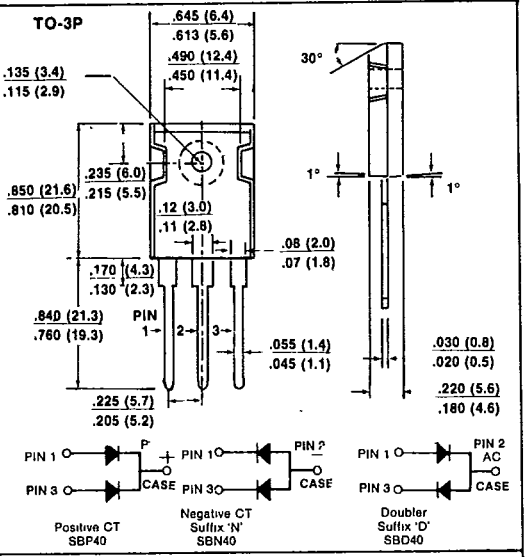
CURRENT
40 Amperes

FEATURES

- Dual rectifier construction, positive center-tap
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Exceeds environmental standards of MIL-STD-19500
- 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

MECHANICAL DATA

Case: TO-3P
Terminals: Leads solderable per MIL-STD-202, Method 208
Polarity: As marked
Mounting Position: Any
Weight: .47 ounces, 13.2 ounces



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%.

	SBP 4020P	SBP 4030P	SBP 4035P	SBP 4040P	SBP 4045P	SBP 4050P	SBP 4060P	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	35	40	45	50	60	V
Maximum RMS Voltage	14	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	20	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current See Fig. 1	40							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	300							A
Maximum Instantaneous Forward Voltage Per Leg I_F = 20A, Tc = 125°C (Note 3)	.60					.70		V
I_F = 20A, Tc = 25°C	.70					.80		V
Maximum Average Reverse Current at Tc = 25°C	10							mA
Rated DC Blocking Voltage per element Tc = 100°C	100							mA
Typical Thermal Resistance $R_{\theta JC}$ (Note 1)	1.4							°C/W
Typical Junction Capacitance (Note 2)	1400					700		pF
Operating Temperature Range Tc	-65 to +125					-65 to +150		°C
Storage Temperature Range, T_{STG}	-65 to +150							°C

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

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RATING AND CHARACTERISTIC CURVES SBP40-P SERIES

FIG. 1 — FORWARD CURRENT DERATING CURVE

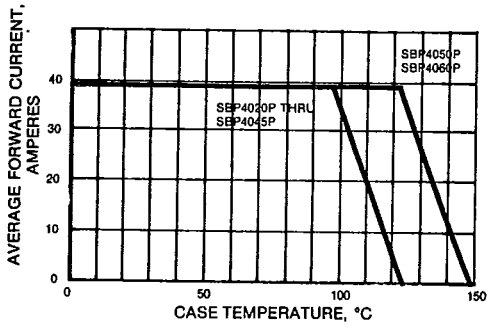

FIG. 3 — MAXIMUM NON-REPETITIVE SURGE CURRENT

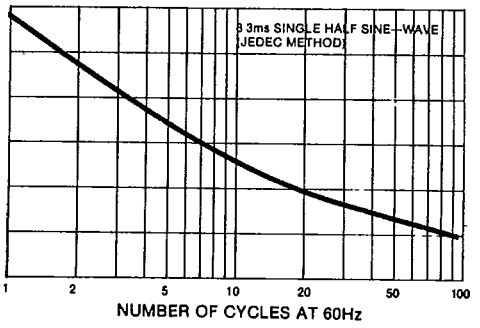

FIG. 2 — TYPICAL REVERSE CHARACTERISTICS

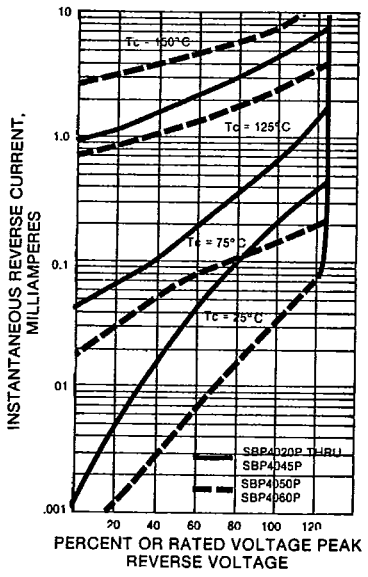

FIG. 4 — TYPICAL REVERSE CHARACTERISTICS

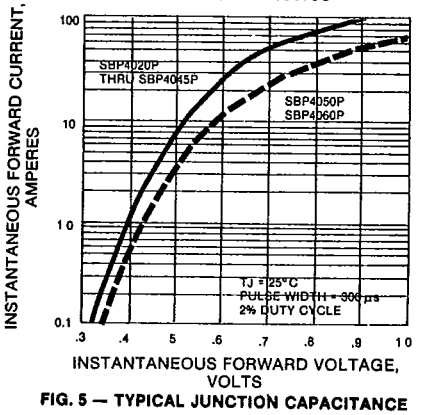

FIG. 5 — TYPICAL JUNCTION CAPACITANCE